

**PERSPECTIVE PLAN
OF BANGLADESH
2010-2021**

MAKING VISION 2021 A REALITY

**General Economics Division
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ABBREVIATIONS

ACC	Anti-Corruption Commission
ADA	Anti-Dumping Agreement
ADP	Annual Development Programme
AfT	Aid for Trade
AIDS	Acquired Immune Deficiency Syndrome
APTA	Asia Pacific Trade Agreement
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BCC	Bangladesh Computer Council
BCM	Billion Cubic Meter
BDCC	Buyer-Driven Commodity Chains
BDHS	Bangladesh Household Survey
BG	Broad Gauge
BIMSTEC	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
BIWTA	Bangladesh Inland Water Transport Authority
BEPZA	Bangladesh Export Processing Zones Authority
BJRI	Bangladesh Jute Research Institute
BMD	Bangladesh Meteorological Department
BPFA	Beijing Platform of Action
BPC	Bangladesh Petroleum Corporation
BPO	Business Process Outsourcing
BR	Bangladesh Railway
BRAC	Bangladesh Rural Advancement Centre
BRDB	Bangladesh Rural Development Board
BRT	Bus Rapid Transport
BSIC	Bangladesh Standard Industrial Classification
BTCL	Bangladesh Telephone Company Limited
BSTI	Bangladesh Standards and Testing Institution
CAG	Comptroller and Audit General
CBAs	Collective Bargaining Agents
CEDAW	Convention on the Elimination of all forms of Discrimination against Women
CFS	Country Freight Service
CHW	Community Health Workers
CNG	Compressed Natural Gas
CPP	Cyclone Preparedness Programme
CPR	Contraceptive Prevalence Rate
CSR	Corporate Social Responsibility
CYSMIS	Cyclone Shelter Management Information System
CGE	Computable General Equilibrium
DEMU	Diesel Electric Multiple Unit
DFQF	Duty-free Quota-free
DHMU	Diesel Hydraulic Multiple Unit
DoE	Department of Environment

DRO	Disaster Relief Operation
DRR	Disaster Risk Reduction
DCGE	Dynamic Computable General Equilibrium
ECNEC	Executive Committee of National Economic Council
EBA	European Banking Authority
ESM	Employment Satellite Matrix
EU	European Union
EPZ	Export Processing Zone
FDI	Foreign Direct Investment
FFWC	Flood Forecasting and Warning Centre
FP	Family Planning
FWC	Family Welfare Centre
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
GNI	Gross National Income
GNP	Gross National Product
GOB	Government of Bangladesh
GSP	General System of Preference
GWH	Giga Watt Per Hour
HDI	Human Development Index
HIV	Human Immune Virus
HSC	Higher Secondary Certificate
HIES	Income and Expenditure Survey
ICD	Inland Container Depot
IMED	Implementation Monitoring and Evaluation Division
ICT	Information Communication Technology
IPP	Independent Power producers
IT	Information Technology
IWRM	Integrated Water Resources Management
IWT	Inland Water Transport
IWTA	Inland Water Transport Authority
kcal	kilo calories
kg/d	Kilogram Per Day
KSS	Krishi Samabay Samity
LDC	Least Development Country
LGED	Local Government Engineering Department
LGD	Local Government Division
LGI	Local Government Institutions
LMI	Lower Middle Income
LNG	Liquefied Natural Gas
LOB	Lines of Business
LPG	Liquefied Petroleum Gases
MG	Meter Gauge
MMcft	Million cubic feet
MW	Mega watt
NAFTA	North Atlantic Free Trade Agreement
NAMA	Non-Agricultural Market Access

NEC	National Economic Council
NES	North Eastern States of India
NFE	Non-Formal Education
NGO	Non Government Organization
NRB	Non-Resident Bangladeshi
NWMP	National Water Management Plan
OMS	Open Market Sales
OPP	Outline of Perspective Plan
OECD	Organization of Economic Co-operation and Development
PDB	Power Development Board
PERC	Public Expenditure Review Commission
PKSF	Palli Karma Shahayak Foundation
PMO	Prime Minister's Office
POL	Petroleum Oil and Lubricant
PPP	Public Private Partnership
PPMO	Perspective Plan Management Office
PRSP	Poverty Reduction Strategy Paper
PSRRC	Pay Services and Regulatory Reforms Commission
QRs	Quantity Restrictions
R&D	Research and Development
RHD	Roads and Highways Department
RMP	Road Master Plan
RMG	Readymade Garments
RNFA	Rural Non Farm Activities
RoB	Rules of Business
RoO	Rules of Origin
RPP	Rental Power Plants
RRC	Regulatory Reforms Commission
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asia Free Trade Agreement
SBA	Skilled Birth Attendant
SEZs	Special Economic Zones
SME	Small Medium Enterprise
SPARRSO	Space Research and Remote Sensing Organization
SPP	Small Power Plants
SPS	Sanitary and Phytosanitary
S&D	Special and Differential
SMA	Statistical Metropolitan Area
S&T	Science and Technology
SRI	System of Rice Intensification
SSC	Secondary School Certificate
SOE	State Owned Enterprise
TAR	Trans Asian railway
TB	Tuberculosis
Tcf	Trillion Cubic Feet
TBT	Technical Barriers to Trade
TFR	Total Fertility Rate

TV	Television
TVET	Technical and Vocational Education and Training
U.S. \$	United States Dollar
UHC	Upazila Health Complex
UMI	Upper Middle Income
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNO	Upazila Nirbahi Officer
USA	United States of America
VGD	Vulnerable Group Development
VGf	Vulnerable Group Feeding
VOC	Vocational
VSAT	Very Small Aperture Terminals
WHO	World Health Organization
WTO	World Trade Organization
WiMax	Worldwide Interoperability for Microwave Access
YGM	Yield Gap Minimization

PREAMBLE of the Perspective Plan (2010-2021)

I. Context of the Perspective Plan

A nation without vision is a nation gone astray. Such is not the case for Bangladesh whose independence in 1971 was the culmination of a people's struggle, as much for political freedom as it was for their economic emancipation. In keeping with those aspirations, the Government's Vision 2021 is an articulation of where this nation needs to be in 2021 – the year which marks the 50th anniversary of Bangladesh's independence. That milestone, ten years away from 2011, will be a high point in Bangladesh's war against chronic poverty and the struggle to attain middle income country status, from its beginning as a low income country. This "Perspective Plan of Bangladesh (2010-2021): Making Vision 2021 a Reality" is a strategic articulation of the development vision, mission, and goals of the Government in achieving a prosperous Bangladesh grounded in political and economic freedoms a reality in 2021.

The Perspective Plan provides the road map for accelerated growth and lays down broad approaches for eradication of poverty, inequality, and human deprivation. Specific strategies and the task of implementation will be articulated through the two five-year plans: Sixth Five Year Plan (2011-2015) and the Seventh Five Year Plan (2016-2020). The expectation is that by 2021, the war against poverty will have been won, the country will have crossed the middle income threshold, with the basic needs of the population ensured, their basic rights respected, when everyone is adequately fed, clothed and housed, and have access to health care. And all this is achieved on a sustainable basis without damaging the environment. Furthermore, this progress will be ensured in an environment where every citizen has the opportunity fully and positively to contribute to the economy and society and equitably share the benefits from progress achieved.

II. Current state and Development Perspective

Bangladesh's progress is a mosaic of solid achievements with some disappointments. Over the past 40 years since independence, Bangladesh has increased its real per capita income by more than 130 percent, cut poverty by more than half, and is well set to achieve most of the millennium development goals. The economy today is a lot more flexible and resilient, as indicated by the ability to withstand the global financial crisis with minimum adverse effects. Bangladesh is now much more capable of handling natural disasters with minimum loss of life. This remarkable progress was achieved despite numerous internal and external constraints. Yet, after 40 years of independence, the country remains a low-income country; almost a third of the population remains below the poverty line, and some 40% are illiterate. This situation must change for the better. The Perspective Plan, a road map for achieving the targets of Vision 2021, lays down a long-term strategy to make that happen.

EXECUTIVE SUMMARY

The Vision. Bangladesh is a nation endowed with enormous potential that is yet to be realized. The year 2021 marks the 50th anniversary of independence. In recognition of the long-term development challenges, the Government under the leadership of Prime Minister Sheikh Hasina adopted the Vision 2021. The Vision 2021 and the associated Perspective Plan 2010-2021 have set solid development targets for Bangladesh by the end of 2021. Those targets if achieved will transform the socio-economic environment of Bangladesh from a low income economy to the first stages of a middle income economy. Along with higher per capita income, Vision 2021 lays down a development scenario where citizens will have a higher standard of living, will be better educated, will face better social justice, will have a more equitable socio-economic environment, and the sustainability of development will be ensured through better protection from climate change and natural disasters. The associated political environment will be based on democratic principles with emphasis on human rights, freedom of expression, rule of law, equality of citizens irrespective of race, religion and creed, and equality of opportunities. The Bangladesh economy will be managed within the framework of a market economy with appropriate government interventions to correct market distortions, to ensure equality of opportunities, and to ensure equity and social justice for all.

Development priorities of the Perspective Plan are distilled from the vision statement formulated to take Bangladesh to where it ought to be in the year 2021, given its human potential and natural resource endowments. Those development priorities include ensuring broad-based growth and reducing poverty; ensuring effective governance and sound institutions but creating a caring society; addressing globalization and regional cooperation; providing energy security for development and welfare; building a sound infrastructure and managing the urban challenge; mitigating the impacts of climate change; and promoting innovation in a knowledge-based society. These thematic approaches will shape and form the foundation on which specific strategies are developed over the period of two five-year plans (Sixth and Seventh Five Year Plans).

Institutional foundations. The goals of long run stability and prosperity cannot be achieved without building effective institutions for sound overall governance. The Government recognizes that without fundamental reforms of core institutions, improvement in public administration capacity and a strong anti-corruption strategy, the ability to implement Vision 2021 and the underlying five year development plans and the Perspective Plan will be seriously compromised. Vision 2021 places strong emphasis on establishing a legacy of good governance by focusing on three fundamental principles of governance: (a) ensuring the rule of law, (b) avoiding political partisanship, and (c) building a society free from corruption. These cardinal principles also guide the articulation and implementation of development programs thus forming the institutional framework for the Perspective Plan.

The government is determined to confront and root out the scourge of corruption from the body politic of Bangladesh. To this end, the Government intends to strengthen transparency and accountability of all government institutions as an integral part of a program of social change to curb corruption. With Vision 2021, the country aspires to an accountable and transparent governance system, with the right to information firmly established under the auspices of the Right to Information Act 2009 and the high-powered Right to Information Commission.

Towards middle income economy. Underlying Vision 2021 is the goal of turning Bangladesh into a middle income country by 2021. The macroeconomic framework of the Perspective Plan will support the strategies and policy guidelines to achieve the development vision through ensuring of macroeconomic stability over the long-term. For Bangladesh, the journey to middle

income country and high HDI status requires sustained growth and its equitable and inclusive nature. The technical framework designed to achieve growth and related dimensions of the macro economy shows that the economy needs to grow at a consistently high rate over the next eleven years for the vision to be realized. Accordingly, the Perspective Plan targets annual real GDP growth rate to rise to 8.0 per cent by 2015, and further to 10.0 per cent by 2021, significantly improving living standards of the population by drastically reducing unemployment and poverty, riding on substantially higher output and export growth, while maintaining macroeconomic stability. Per capita annual income is projected to rise to about USD 2,000 (at constant 2013 dollars) by 2021, thus crossing the middle income threshold. To achieve and sustain the high rates of growth, gross domestic investment will reach 38% of GDP, with gross national savings at 39%, and headcount poverty dropping to only 13.5%.

Among others, a prudent macroeconomic policy will be required to ensure internal and external stability, low inflation and high economic growth. A multi-sector Computable General Equilibrium (CGE) model is used to derive a broadly consistent macroeconomic framework for the Perspective Plan covering broad sectoral composition of growth, strategy for savings and investment, medium-term fiscal strategy and projections of balance of payments consistent with external viability.

Acceleration of economic growth and reduction of poverty – two principal goals of the Perspective Plan – will come about through the dynamism and inter-linkages among the three broad sectors of the economy: agriculture, industry, and services. A vibrant and highly productive agricultural sector is a prerequisite for the kind of growth acceleration envisaged in the Perspective Plan. Provision of food security is also a constitutional obligation.

Agriculture and rural development. With a view to enhancing agricultural production and ensuring food security, the target of agriculture sector is that, by 2021, food deficiency will be eliminated and the country will attain self-sufficiency in food production enabling to meet nutritional requirement of the population. In this context, the key targets are to achieve self-sufficiency in rice production, to diversify agricultural crops, to form production and marketing cooperatives, to encourage R&D for increasing productivity etc. In addition, for fisheries sector, the plan prioritizes on closed water fisheries production, promotion of technical knowledge among the educated youth in closed water cultivation as well as on the adoption and implementation of fishermen cooperatives. To promote development of livestock sector, the plan argues that, it is imperative to develop breed, to increase production and supply of feed and to extend veterinary services. For ensuring sustainability in development process, the plan will adopt strategies to increase productivity, to strengthen the Sundarbans and to promote agro and social forestry. In the context of rural development, the key strategies taken under the perspective plan are to establish a powerful autonomous local government body for providing coordination among private and public rural development institutes and to consider reviving the local government commission.

Industrial development. The Perspective Plan target of reaching 10 percent annual GDP growth by 2021 is premised on a prolific and competitive manufacturing sector growing at or near double digits during the 2010-21 decade. Consequently, the broad industrial sector will continue to account for a much larger share of GDP, approaching 37% by 2021, compensating for the secular decline in the share of agricultural sector, which falls to 15%. This trend is consistent with the stylized facts of structural change in the process of development. For Bangladesh to reach middle income threshold by 2021, industrial expansion must accompany hand-in-hand with highly productive farm and non-farm agriculture. Furthermore, a strong and competitive manufacturing sector is especially important for generating productive high income jobs.

Manufacturing is the predominant and leading sector within broad industry which also includes such activities as power generation, water and sewage, and mining and quarrying. Manufacturing is and will remain the driver of industrial growth and employment for years to come. Vision 2021 stipulates middle income status for Bangladesh by 2021, reaching annual GDP growth rate of 10% by that year and averaging 9.2% for the period 2011-21. Fulfillment of this vision requires superior double digit performance for manufacturing taking its share in GDP to 27 percent by 2021, and that of industry to 37 percent.

Accelerated pace of industrialization will be necessary to address the increasingly diminishing capacity of agriculture to absorb the incremental labour force, strengthen backward and forward linkages with agriculture and services sectors, cater to the growing domestic demand for industrial goods, and take advantage of emerging opportunities in the global market.

Manufacturing exports. The main driver of manufacturing growth will be the export markets, although growing domestic demand from higher income generation will also provide impetus to import substitute production. Low-cost labor with growing skills gives Bangladesh potential competitive advantage in most labor-intensive activities which will continue to drive manufacturing growth for at least another decade. It is projected that the share of exports in relation to GDP will rise to about 25% of GDP by 2021 reflecting a leading role that export sector is envisaged to play in the economy. The target with regard to the external sector is to ensure strengthened global integration of the Bangladesh economy by building necessary trade-related supply side capacities. This will be realized through raising the competitiveness of Bangladesh's exports, ensuring a larger share for the country in the global trade in goods and services, and by encouraging both product and market diversification. This will be done by renewing efforts at moving up market and by raising the efficacy of trade facilitation measures. Bangladesh's strong performance in the global labour services market will be continued and further consolidated. The overarching goal here will be to ensure that trade-GDP ratio rises to nearly 60% of GDP with export of goods and remittance earnings approaching 40 per cent by 2021.

In order to get the maximum leverage out of manufacturing sector and its competitiveness in the global marketplace, the government will focus on four strategic approaches: (a) export diversification, involving product and market diversification; (b) seizing opportunities in export markets created by eroding competitiveness of China in low cost labor intensive products; (c) restructuring export production by seizing opportunities from globalized production chains and forging intra-industry linkages in a globalized economy; and (d) working on market access issues in multilateral, bilateral and regional fora

Trade policy regime. Trade liberalization enacted thus far has improved manufacturing efficiency and competitiveness. Tariff reductions and QR removal introduced a substantial degree of import competition in the local manufacturing sector, forcing enterprises to restructure and raise productive efficiency. On balance, output and employment growth in manufacturing was robust in the post-liberalization period. Over the next decade, trade openness will deepen further so that only those manufacturing enterprises that remain globally competitive are expected to survive and prosper.

It is critical that the trade policy regime is geared to ensure productivity and export competitiveness while facilitating emergence and expansion of new export products. Such a trade policy regime is the backbone of a high-performing manufacturing sector. To cross the middle income threshold by 2021, Bangladesh will need to transform its trade regime to the kind seen in high-performing emerging market economies. To that end, Bangladesh will need, among other things, to reduce average tariffs to levels already reached by countries such as Vietnam,

Malaysia, India and China. This has to happen ideally by the close of the Sixth Plan in 2015, well before 2021.

Opportunities from globalization. Globalization presents opportunities as well as challenges for Bangladesh. What is clear is that missed opportunities in an age of globalization could be costly. The Bangladesh economy is more integrated with the global market today than ever before. This is largely due to rapid growth in trade, massive out-migration of labor and remittance inflows, liberalization of foreign exchange regime, financial sector reforms, and creation of a favorable FDI regime. Bangladesh having embraced globalization, the right policy framework and infrastructure will have to be put in place to seize opportunities coming its way and to address challenges.

Besides strengthening our balance of payments position, remittance inflows have had significant impact on poverty reduction. Remittance inflows in 2011, at \$11.5 billion, were about 10 per cent of GDP. Sustaining the growth of remittance inflows could be a major source of external finance in the march up to the country's middle income threshold by 2021. Strategic actions to ensure continued flow of remittances include (a) close monitoring and supervision of the activities and practices of recruitment agencies, (b) moving to technology-based system of effective practices for remitting money, (c) training workers in the vocations and skills that have a high future demand in global markets, and (d) making the Overseas Employment Policy more comprehensive so that it covers multiple aspects of migration, including workers' and employers' documentation, employment contracts, their implementation, and settlement of workers welfare.

Foreign investment. Bangladesh's projected needs for investment in infrastructure for an expanding transport network and burgeoning urban centres cannot and need not be met from domestic resources alone. With improved economic management and a highly liberalized investment regime, and with strategic locational shifts in labor-intensive industries, Bangladesh could become an attractive destination for private capital flows over the next decade. The Perspective Plan will consider the following strategic actions to stimulate inflow of FDI: (a) improve the investment climate by giving high priority to constraints in infrastructure, regulatory framework, and policy environment, (b) the general governance situation (and related high transactions costs) will be addressed to improve the country's image, (c) special effort will be made to encourage regional investment in emerging and potentially high return sectors (e.g. software development and IT from India, electronics from China), (d) a string of Special Economic Zones (SEZs) will be established along international borders to stimulate cross-border investments and trade, in line with the successful examples of China and Vietnam, and (e) the private sector will be encouraged to enter joint ventures and other forms of collaborative investment with NRBs and foreign partners in areas of high potential.

Multilateralism. Addressing the multilateral trading regime will mean coping with the challenges of asymmetric and inequitable trading rules that are prejudicial to the trading interests and performance of LDCs, including Bangladesh. Strategic actions to be pursued during the Perspective Plan will include (a) support negotiations for reduction and elimination of export and domestic subsidies and in favor of agricultural trade liberalization; (b) mainstreaming trade in the country's national development agenda, and should particularly incorporate Aid for Trade; (c) enhance Duty-Free Quota-Free access under provisions of NAMA; (d) as Bangladesh approaches middle income status, more effort should be focused on enhancing competitiveness of Bangladesh's exports; (e) regarding trade in services, try to secure "permanent, non-reciprocal, special priority", notwithstanding any provisions of the GATS; (f) negotiate for establishing simple, transparent, and preferential Rules of Origin; and (g) consolidate and expand capacity for trade negotiations.

Regional cooperation. In recent years, proposals for sub-regional cooperation between Bangladesh, India, Nepal and Bhutan have been gaining ground. Bangladesh, India, Nepal, Bhutan and Myanmar are endowed with rich complementary resources that offer significant opportunities for cooperation in several sectors. The framework for cooperation stipulates huge gains for Bangladesh in several areas, including trade and trade facilitation, regional transport, energy trade, water management, FDI and joint ventures, cooperation on road and railway projects. Long-term strategies for strengthening regional cooperation include (a) more vigorous efforts in multiple forums to make SAFTA, APTA and BIMSTEC more effective organizations, (b) forging effective cooperation in trade, cross-border investment and all the other areas of mutually beneficial activities, (c) initiatives to resolve cross-border issues and undertake joint projects, such as production and distribution of electricity, gas, coal, fertilizer and other products, all on a win-win basis, and (d) participation in the grand Asian Highway and Asian Railway Systems that generate win-win outcomes.

Digital Bangladesh. Much of the impetus to higher growth will come from additional private and public investment, particularly in the areas of agriculture, manufacturing, infrastructure and human development. Yet, the experience of Bangladesh shows that it has not benefitted much from productivity improvements. A key strategy and policy focus of the Perspective Plan is to enhance productivity in all sectors of the economy. Among other factors, productivity improvements depend on research and technology. The world has moved with new knowledge and technology; Bangladesh has a lot of catch up to do. Emphasis on knowledge economy is a key development priority for Bangladesh.

The ‘Vision 2021’ aims at developing Bangladesh into a resourceful and modern economy through efficient use of information and communication technology. This goal has eloquently been described by the Prime Minister as ‘Digital Bangladesh’. It is believed that through the successful implementation of the ICT policy and its principles it would be possible to create a Digital Bangladesh by 2021 as promised by the government.

With the onset of globalization the international environment for trade, business and investment, has become far more competitive than any time in the past and there is no option but for Bangladesh to be transformed into a knowledge-driven economy to survive in this fierce competition. Natural physical endowment and history will play a limited role; human ingenuity, ideas and skill will play the principal role in the creation of future wealth. Information and communication technologies (ICT) have greatly reduced the cost and increased the capacity of organizations to codify knowledge, process and communicate information. The national ICT Policy 2009 has expressed its vision which will assist Bangladesh to move towards a poverty-free middle income prosperous country by 2021. Its vision includes plans to expand the information and communication technology, and then take advantage of this to establish a transparent, committed and accountable government, develop skilled manpower, improve social justice and manage public services.

Energy security. Bangladesh is coping with a serious energy crisis which is the result of sluggish growth in energy supplies while the demand for energy has grown by leaps and bound attendant with higher economic growth. The situation calls for an urgent but well-crafted sustainable long-term strategy to address the energy crisis and increase the energy supply to support Bangladesh’s development. Accordingly, the Government has adopted a comprehensive energy development strategy. The strategy provides a balanced approach that looks at both supply increases and demand management aspects of the energy market in a long-term horizon. Energy options from domestic sources needs to be complemented with possible options for energy trade. Specifically, the strategy will address what the government can do about gas and power, and will look at

options for diversification of fuels for generation. The strategy also involves exploring of alternative solutions such as increased electricity imports from neighboring countries and LNG trade. Furthermore exploration of domestically available resources, such as coal, oil and gas from offshore drilling will be intensified. The supply side options will be balanced with policies for demand management that conserve energy and discourage inefficient use of electricity.

Transport and communication. Growth targets of the Perspective Plan and goals of improved living standards call for a vibrant and effective transport and communication network. Securing improvement in the transport system is therefore a major strategic objective to accelerate growth during the perspective plan period. The main objective of the perspective plan with respect to transportation is to develop an efficient, sustainable, safe and regionally balanced transportation system in which various modes complement each other, interface appropriately and, where possible, provide healthy competition to each other. Special emphasis, therefore, will be placed on introduction of modern technology for increasing capacity and improving quality and productivity of the system, development of the two sea ports with smooth transport links to Dhaka, establishment of effective railway linkages between the east and west zones of the country, integration of road, rail and inland water transport, and participation in global and regional transport connectivity initiatives that help develop the land route links between South Asia and East Asia through Bangladesh. Efforts will also be made to improve resource mobilization through introduction of user charges and fees, and promote greater private sector participation in transport services infrastructure building.

There has been impressive progress in telecommunication as well as digital and print media in recent years. The telecommunication sector has progressed significantly with the involvement of the private sector in the provision of mobile phones in the early 1990s. Private operators have started to get involved not only in mobile phones, but also in land phones thus improving their competitiveness in the sector. Like the telecommunications sector, the digital and print media have also advanced since the days of Bangladesh Betar and Bangladesh Television, which had a monopoly from 1972. The introduction of private television channels in 1997 has opened competition and the quality of programs has generally improved. Radio has also become popular among urban people, especially the young generation, with the introduction of FM channels since the middle of the last decade. The print media has also come a long way. There are many Bengali and English dailies published today. Readers around the globe have access to newspapers' internet editions. Bangladesh Post Office also offers a range of services, including Express Mail Service, an electronic mail service, e-post for internet and e-mail services. During the perspective plan period the post offices throughout the country will be converted into development and outreach centers to serve the special needs of the poor for information technology and banking services.

Urban challenge. Currently estimated at 40 million people, it is projected that by the year 2021 nearly one-third or 33% of the population of Bangladesh will be living in urban areas. One of the significant features of urbanization in Bangladesh is the predominance of a few metropolitan centers resulting in an uneven distribution of urban population in the country. A large proportion of the urban population is concentrated in Dhaka, Chittagong and Khulna Metropolitan areas. These three metropolitan areas account for about 54% of the total urban population of the country. Dhaka is expected to become a megacity by 2015.

The tremendous challenge of absorbing such a massive number of people in urban areas and providing them with food, shelter, employment, healthcare, education, municipal services and recreation facilities is made more difficult given shortage of existing urban facilities and resources, scarcity of skilled manpower and good governance. The urbanization challenge unless managed well could become a binding constraint choking off future growth acceleration

envisaged in the Perspective Plan. The Government is cognizant of this challenge and is well aware of the fact that the back-log of unmet demand and new demand for basic urban services require huge resources, sound planning, and strong implementation capacity. Ambitious urban development programs, therefore, will be taken up during the perspective plan period based on the policies and strategies that will cover spatial, economic, social, cultural, aesthetic and environmental aspects of urban life. It is expected that implementation of these programs will be instrumental in achieving an urban reality that can enhance capacity to live a healthy life; ensure access to education, shelter, and basic services, and lead to a secure and livable environment at home and at the workplace.

Human development. Promoting Human Development entails attaining three broad objectives of ensuring education, promoting and sustaining health and nutrition, and planning population. In this context, in light of government's vision 2021, the country aims at fulfilling the targets of: (i) removing deficiency in food and ensuring nutritional requirements of 85% of the population, (ii) ensuring minimum daily intake of 2,122 kilo calories of food, (iii) eliminating contagious diseases and ensuring primary health care and sanitation, (iv) increasing average longevity to 70 years, (v) reducing under five mortality to 45 per 1000 live births and maternal mortality into 100 in 100,000, (vi) increasing net enrolment at the primary level to 100% by year 2010, (vii) removing illiteracy by year 2014, and (viii) improving quality of education with emphasis on science and technology.

With a view to attaining these targets, the perspective plan attempts to encourage population planning through providing financial incentives to those with single child and discriminate against parents with more than two children. It also entails to take necessary actions to increase coverage of all types of health care, to strengthen health administration and to increase the number of skilled professionals in the health sector. In the context of the goal of improving nutritional status of the population, the perspective plan aims at ensuring pure drinking water, improving knowledge of balanced diets and nutrition and diversifying dietary pattern of the population through diversification of agriculture. In order to strengthen the human capital of the country, the plan emphasizes on upgrading curricula and improving teaching-learning methods at all levels of education and to encourage education of mathematics, science and information technology, decentralizing administration and management of primary education to ensure better supervision and monitoring, ensuring inclusiveness and access to primary education and finally to ensure and sustain gender parity at primary and secondary levels.

Poverty reduction. While the Perspective Plan stipulates acceleration of economic growth, the underlying policies stress the inclusiveness and pro-poor approach to growth so that in the process of reaching the Vision 2021 goal of reaching middle income status, there is substantial eradication of poverty through a comprehensive scheme of social inclusion.

Bangladesh has been successful in achieving significant reduction in poverty since 1990. National poverty headcount declined from 58.8 percent in 1991-92 to 31.5 percent in 2010, while extreme poverty rate declined from 41 to 17.6 percent over the same period. The Perspective Plan puts in place strategies for inclusive growth such that the past trends in poverty reduction will be maintained and even accentuated so that by 2021 headcount poverty is reduced to barely 13.5%.

Social protection. Even with higher growth, better jobs and better access to essential services, a part of the under-privileged population - among them poor women and people from ethnic groups and socially excluded groups - still will likely be left out. Additionally, substantial risks are posed by natural disasters and climate change for this vulnerable population. To address this challenge, the Sixth Plan aims at significantly strengthening the social protection programs. The strategy will be to design and implement a range of social protection programs that meets the needs of this under-privileged group. In this regard, existing programs will be reviewed and

reformed to establish better targeting with a view to ensuring that all under-privileged groups including the disable, the elderly, the tribal population, and children and women at risk are given priority in the distribution of benefits. Particular attention will be given to strengthening the underlying institutions. In view of large financing needs for social protection programs, options will be explored to move towards contributory social protection schemes including participation by the private sector. Emphasis will also be given to design social protection programs that create assets and employment opportunities.

Sustainable development. Economic advancement, accompanied with rapid urbanization and industrialization, had also left its toll on Bangladesh's own ecosystem. This was evident from natural calamities, loss of bio-diversity, deforestation, destruction of wetlands and inland fisheries, arsenic contamination in the ground water in the southern part of the country, soil nutrient depletion and inland salinity intrusion in the South West region, and creeping desertification in the Northern region. Bangladesh is also one of the most natural disaster prone areas that suffer from ravages of floods, cyclones, storm surges and drought. In urban areas, air pollution, sound pollution and waste load from industries, hospitals, and municipalities are a matter of great concern.

Understandably, the adverse interactions of environmental degradation and climate change could have severe consequences for citizen's welfare, especially for the poorer segment that may not have adequate access to coping mechanisms. Indeed degradation of land, water pollution and arsenic in water, floods and cyclones, rising levels of sea water can easily threaten the sustainability of poverty reduction strategies unless appropriate measures are taken to protect the environment and address the climate change issues. Equally important is the need to have an effective disaster management strategy to tackle associated challenges when natural disasters happen.

The goal of the perspective plan is to implement strategies to protect Bangladesh from unpleasant effects of climate change and global warming. The plan targets to take all necessary actions to protect the vulnerable people from natural calamities, to take actions for the prevention of industry and transport related air pollution and to ensure disposal of waste in a scientific manner. Required steps will also be taken to make Bangladesh an ecologically attractive place and to promote environment-friendly tourism.

CHAPTER 1: VISION FOR A PROSPEROUS FUTURE

1.1 The Vision

Bangladesh is a country with enormous potential that is yet to be realized. Mindful of the fact that people of Bangladesh deserve a future that is significantly better than their lot today, Vision 2021 and the supporting Perspective Plan, lays down goals and strategies together with a framework for mobilizing our natural and human resources to achieve those goals.

Vision 2021 calls for Bangladeshi socio-economic environment to be transformed from a low income economy to the first stages of a middle-income nation by the year 2021, when poverty would have all but disappeared, where society would be full of caring and educated people living healthy and happy lives. In line with constitutional obligations and international commitments to human rights, Bangladesh in 2021 shall be a country in which (i) every citizen has equal opportunities to achieve his/her fullest potential; (ii) all citizens enjoy a quality of life where basic health care and adequate nutrition are assured; (iii) all citizens have access to a modern, technical, and vocational education tailored to meet the human resource needs of a technologically advancing nation; (iv) sustainability of development is ensured through better protection from climate change and natural disasters; (v) there is respect for the principles of democracy, rule of law, and human rights; (vi) gender equality is assured; so are the rights of ethnic populations and of all other disadvantaged groups including persons with disability; and (vii) the diversity and creativity of all people are valued and nurtured.

Thus in 2021, Bangladesh will take its place amongst middle income nations of the world, where progress is not just reflected in higher living standards but also in a wide range of human development indicators. And all this will be achieved with the recognition that the state must play a key role in sustaining economic development.

But that role will not be one of control and ownership of enterprise but that of facilitator of private initiatives and innovation, through provision of infrastructure and effective regulation of markets, with the goal of creating an enabling environment for the private sector to invest and serve as an engine of growth. The government will be service-driven through cost-effective public sector delivery systems fully enabled by adoption of modern technology and it will be held accountable to the highest standards of governance in the operation of all public and private sector institutions.

The private sector will operate in a policy environment that encourages investments in innovation and enterprise, where ideas and talents have the scope to flourish. Financial intermediation and the legal system will have been made effective through reforms that give impetus to private entrepreneurship and actively encourage business start-ups. Special encouragement to women entrepreneurs will be the hallmark of micro, small, and medium enterprise development programs.

Finally, the public and private sectors will collaborate effectively and efficiently through public private partnership (PPP) projects and other innovative models to deliver infrastructure, utility and other services in an environment-friendly manner.

1.2 Promoting Democratic Institutions

The vision of Bangladesh in 2021 is not merely of a middle-income country replete with signs of economic progress but a country where democratic institutions have taken root, and citizens enjoy fundamental rights and freedoms guaranteed by the constitution.

Nurturing political maturity and a culture of democracy will have to be a primary focus of governance over the next decade. Political maturity will come through greater tolerance and

cooperation in politics symbolized by mutual respect and trust. Consistent with Westminster form of government, Parliament will be responsible for law making and ensuring accountability of government. Parliamentary Standing Committees will be made more effective.

Public accountability will be ensured through greater transparency of public actions as the Right to Information Act 2009 is duly implemented as citizens get easier access to all information in the public domain. Finally, independence of the judiciary will be the hallmark of progress.

The judiciary has already been separated from the executive. What remains to be done is to ensure the full complement of judges at all levels with competent investigation and prosecuting staff appointed to enable the judiciary to carry out their duties without interference.

1.3 Promoting Gender Balance

Ensuring gender balance is a fundamental principle of state policy. A system of reserved seats for women has been introduced, **increased from 45 to 50 seats, in the National Parliament**. Similar measures are being introduced in many sectors to empower and mainstream women in national life. Institutionalization of gender responsive planning and budgeting with a view to promoting gender balance is also in progress. Programs are afoot to give women their rightful share in skill development training both at home and abroad. Due attention will be given to enhancing the participation rate of women in the labor force from 29 per cent to at least 40 per cent by 2021. All laws relating to gender inequality will be reviewed to ensure gender sensitive good governance, with due respect for personal laws and community specific customs.

1.4 Technical Framework for Achieving Middle Income Country Status

A centerpiece of the Perspective Plan is the delineation of the country's macroeconomic and sectoral outlook during the plan period. Macroeconomic outcomes, sectoral outlooks as well as employment and poverty implications for the perspective plan have been generated from an integrated technical framework involving following four linked models.

- (i) A macroeconomic framework containing five accounts delineating the economy to generate consistent macroeconomic outlook over 2003 to 2021 period.
- (ii) A dynamic computable general equilibrium (DCGE) model based on an updated input-output table and a social accounting matrix for Bangladesh for FY07. The key outcomes of the macroeconomic framework are fed into the DCGE model to derive the sectoral implications over the perspective plan period.
- (iii) An Employment Satellite Matrix (ESM), constructed for FY07. The sectoral value additions and outputs are linked with the ESM to calculate sectoral employment impacts under perspective plan period.
- (iv) The Distribution and Poverty Module has been developed using the information of Household Income and Expenditure Survey (HIES) 2010. Household income, consumption and sectoral price information generated in the DCGE are linked with this module to assess the poverty situation.

1.5 Development Priorities

Development priorities of the Perspective Plan are distilled from the vision statement formulated to take Bangladesh to where it needs to be in the year 2021.

Those **development priorities** may be articulated as follows:

- Ensuring broad-based growth and food security.
- Addressing globalization and regional cooperation
- Providing energy security for development and welfare.

- Establishing a knowledge based society
- Building a sound infrastructure.
- Ensuring effective governance.
- Mitigating the impacts of climate change.
- Creating a caring society.
- Promoting innovation under a digital Bangladesh.

These thematic approaches will shape and form the foundation on which specific strategies are developed over the period of two five-year plans (Sixth and Seventh Five Year Plans). While development priorities are elaborated in the following chapters, it is clear that the nation needs to harness all its resources and skills, moving forward with an integrated approach in each priority area, because these crosscutting goals are underpinned by culture, diversity, and physical differences. The combined efforts of public and private initiative will be needed to create the critical mass necessary to support the development efforts.

Broad-based growth and food security will provide the basis for raising incomes and creating employment opportunities. The employment intensity and broad-based nature of growth will play a pivotal role in reducing poverty and raising the living standards of poor and disadvantaged people. The Perspective Plan envisages a far more **dynamic industrial sector**, creating an export environment that is broad-based, skills-intensive, and competitive. The quality of economic growth will be enhanced by creating demand for labour supplied by poor and disadvantaged people, and by expanding the market for their products and services. It will also serve to raise their productivity and will be key to reducing income inequalities. Addressing economic disparities between regions and between urban and rural areas will receive priority attention through policies that promote dispersion of industries and other economic activities for which regional considerations will be built into the national development framework. To ensure food security, access to food will be assured with particular attention given to addressing the multiple food insecurities that women, disabled, and girl children face. The government will support the participation of small-scale food producers in a new green revolution that gives high priority to revitalizing small-scale food production based on ecologically viable systems.

Addressing globalization and regional cooperation challenges are important for Bangladesh to sustain improvements in living standards through productivity and income growth. There is urgency in the need to expand external resources – particularly in raising remittances – and that will require the application of technology-based and user-friendly systems for remitting money, providing good skills training for existing and emerging markets, and aggressive bilateral negotiations for outbound migrant workers. Addressing globalization and regional cooperation issues will entail negotiations that give Bangladesh better access to global and regional markets. Effective engagement in multilateral trade liberalization is important, and offers real opportunities for Bangladesh to take advantage of its unique geographical location.

Instituting a prudent macroeconomic policy framework conducive to achieving high economic growth with stability; ensuring the availability of, and access to, appropriate financial services and entrepreneurship in agriculture, industry and services; promoting international trade and economic relations via multilateral, regional and sub-regional cooperation; and expanding tourism are among the areas where facilitating policies will create new opportunities and promote innovation. That in turn will help the country move to a higher productivity and investment regime.

Energy security will be one of the critical elements for realizing the Perspective Plan’s vision. The Plan aims to develop an integrated and developed energy sector with a diversified fuel mix that will be the key driver of a sustainable local and national economy, while attaining global competitiveness in all sectors by 2021. The Plan will ensure prompt and timely decisions to

steadily encourage greater private sector role in the energy sector; ensure transparent governance of energy-related public sector institutions; enhance the development of human capital; support development of the energy sector through physical and systemic structures; and contribute to the protection and enhancement of the natural environment. It will also promote renewable energy, such as solar and biogas; and ensure access to power and energy to all.

Sound infrastructure is essential to realizing the Vision. The efficient and safe movement of people and goods needs well-built efficiently operated and maintained physical infrastructure and transportation systems, along with reliable and affordable supplies of water, electricity and power, telecommunications, postal and waste management services. In addition to well-planned urbanization, attention will be given to multi-modal transport, integration of roads and highways, railways, water transport, rural transport and airports. Railways will receive much higher attention as a means of passenger and goods transportation throughout the country.

Effective governance is the strongest means to achieving the goals of the Perspective Plan. The administration of justice, good governance, effective institutional structures for development, law administration and legal affairs, national security, and public safety are essential for fair contracts, dispute resolution, promotion of entrepreneurship, and to encourage businesses and individuals to take risks. Without upholding rights and adhering to basic tenets of justice, the poor and disadvantaged groups will remain unable to seize economic and social opportunities for economic growth. Effective governance will employ public resources efficiently in activities with high social returns, will strengthen public institutions, take steps to eliminate corruption, terrorism, and extortion, and encourage citizen compliance and respect for the rule of law.

Mitigating the impacts of climate change is crucial for sustainable development. Environment and climate change concerns relate to floods, tropical cyclones, drought, desertification, water supply and salinity management, deforestation, water and air pollution, and contamination of water by arsenic. Climate change holds the potential to radically alter agro-ecosystems in Bangladesh. Along with encouraging adaptation to climate change, supportive measures will be introduced to strengthen regional and national mechanisms for scientific assessment, forecasting and information sharing, while building national and local capacities for greater ecological literacy, agro-ecosystem monitoring, and for assessing and managing risks. Disaster management is intimately connected to the environment and climate change. This requires mitigation, preparedness, response, and recovery.

A caring society as envisaged in 2021 will nurture the seeds of progress and patriotism. It will compel individuals, communities, and institutions to work towards stamping out poverty, discrimination, economic and social marginalization, disease and poor health, and sub-standard living conditions. This will create new possibilities and take advantage of existing ones for the communities to work collaboratively with trust, goodwill, integrity, and civic pride so that none is left behind. Nurturing such a society requires actions in the related areas of health, housing, labour and social security, gender and development, youth and culture, sports and recreation, sustainable communities, and social services.

An innovative people will be the backbone of the envisioned society in 2021. These individuals will acquire appropriate knowledge, skills, and abilities through a strong learning system consisting of pre-primary, primary, secondary, and tertiary education; and through the application of research, science, technology, and innovation. Innovation will be fostered in education and at work. Creative citizens will be the driver of Bangladesh's journey to middle income and high HDI country status by 2021. The creation of this innovative people will demand vast information technology efforts during the Perspective Plan period. ICT will be the vehicle through which a **Digital Bangladesh** will be created. This will raise efficiency and productivity across all sectors of the economy, including agriculture, health, education, training, and e-governance, and will help to bring greater transparency in governance.

1.6 Making Vision 2021 a Reality

Generating the Will and Skill: The implementation of the Perspective Plan envisages the full commitment of will, skill, and resources from all stakeholders to developing the nation into a middle income country by 2021. The government will make the long-term perspective a central element of the decision making process and service culture. But the government alone cannot achieve the Vision. It will have to be a collective effort in which the private sector, civil society, and all other stakeholders will share responsibility to reshape the nation's future. The consultative process in formulating the Plan must continue throughout the implementation holding Vision 2021 not as a destination in itself but a journey. The Plan will no doubt inspire great vision but the challenge is not to let it fall short of expectations due to implementation failures.

Institutionalizing Plan Implementation: The preparation of the Perspective Plan is only the first step along the challenging road to "Making the Vision 2021 A Reality". Effective and efficient execution of the Plan is the key, its success will be judged by progress made against the goals, and targets set in the Plan. This Plan presents the broad framework, allowing considerable latitude for the Sixth Five Year Plan (2011-2015) and the Seventh Five Year Plan (2016-2020) to work out strategic and operational details on how the country should move forward.

The broad goals of the Perspective Plan for a *Transformed Bangladesh* by 2021 may be described as follows:

- Achieve middle-income country status by 2021 through sustained annual rate of GDP at 10 per cent by 2021.
- Eradicate illiteracy after 2014, by ensuring 100 per cent net enrolment at primary level as soon as possible after 2010, providing free tuition to degree level as soon as possible after 2013, and turn Bangladesh into a country of educated people with adequate skills in information technology.
- Substantially eradicate poverty by bringing down the number of people living below the poverty line to 15 percent of the population estimated at no more than 25 million.
- Ensure a minimum intake of 2,122 k. cal/person/day of food for all and standard nutritional food to at least 85 per cent of the population by 2021.
- Achieve self sufficiency in food by 2012.
- Change the sectoral composition of output with the shares of agriculture, industry, and services approximating 15 percent, 38 percent, and 47 percent respectively by 2021.
- Reduce the unemployment rate to 15 per cent; change the shares of agriculture, industry, and services in employment to 30 per cent, 25 per cent, and 45 per cent respectively by 2021.
- Provide living accommodation for the entire population as soon as possible after 2015, supply of pure drinking water for the entire population as soon as possible after 2011, and bring all household under hygienic sanitation by 2013.
- Reduce maternal mortality to 1.5 per cent, raise the use of birth control methods to 80 per cent, and bring down infant mortality to 15 per thousand live births by 2021.
- Eradicate all contagious diseases and increase life expectancy to 70 years by 2021.
- Generate 8,500 MW of electricity by 2013, 11,500 MW by 2015, and make provisions to meet the expected demand for power of 20,000 MW by 2021, such that it ensures per capita energy consumption to rise to 600 kwh.
- Promote and deepen the application of information technology towards a digital Bangladesh.
- Ensure preservation, conservation, and restoration of all the historical monument/mass graves of martyred war veterans.
- Ensure protection of the environment by effectively meeting the challenges arising from climate change and preventing environmental degradation.

CHAPTER 2: INSTITUTIONAL FOUNDATIONS OF STABILITY AND PROSPERITY

The Government recognizes that without fundamental reforms of core institutions, improvement in public administration capacity and a strong anti-corruption strategy, the ability to implement Vision 2021 and the underlying five year development plans and the Perspective Plan will be seriously compromised. Vision 2021 places strong emphasis on establishing a legacy of good governance by focusing on three fundamental principles of governance: (a) ensuring the rule of law, (b) avoiding political partisanship, and (c) building a society free from corruption. These cardinal principles also guide the articulation and implementation of development programs thus forming the institutional framework for the Perspective Plan.

Broadly defined governance reflects all rules and procedures, formal and informal, in economic, political and administrative spheres, and in organizational entities entrusted with formulating and implementing such rules of the game including the management of macro, micro, or economy wide policies. The principal dimensions of governance or institutional quality may include: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption.

From a pragmatic point of view the quality of governance depends on the quality of institutions. A country that has good governance also has good institutions. Effectiveness of government institutions is imperative for good governance through which a country could achieve its policy targets and development goals. The governance issues, particularly the quality of government institutions, have important implications for long-term economic growth and poverty reduction in Bangladesh.

2.1 Institutional Foundations of Governance

Article 11 of the Constitution states: “The Republic shall be a democracy in which fundamental human rights and freedom and respect for the dignity and worth of the human person shall be guaranteed.” There is little doubt that these noble aspirations can only be secured in an atmosphere of good governance. Therefore, Vision 2021, and the Perspective Plan, makes achieving good governance the centerpiece of state policy.

In the current scheme of things, a long and arduous road lies ahead in the pursuit of good governance for the populace. For one, realizing the Constitution’s democratic ideals begins with peoples’ effective participation as a symbol of good governance, which is an outcome of cumulative inputs from free and fair elections, transparency and accountability of public institutions, independence of judiciary, an effective parliament, an independent media, decentralization of power and fiscal authority, equitable access to basic services, and quality education and health care. In such a state of governance, adequate safeguards develop to contain corruption.

2.2 Law and Order

Law and Order: Prevalence of law and order in society is a sine qua non for economic progress. All institutions of law enforcement and justice will work with greater fairness and efficiency resulting in greater public confidence in the rule of law. Laws relating to commitments to international conventions and agreements, such as the Convention on the Elimination of all forms of Discrimination against Women, the Beijing Platform for Action, and the Convention on the Rights of the Child, will be adhered to in keeping with the fundamental principles of state policy as enshrined in the constitution.

The Police force must be strengthened so that it is able to regain confidence of the people. Police will maintain a working level of public order, preventing, detecting and investigating crime. The perception of police being only protective of the wealthy, and indifferent or contemptuous to the poor or the working class, must be changed. A system of gender sensitization training (covering violence against women issues and other laws to protect human rights) will be established for all legal and police officers. The concept of community police will be reinforced.

2.3 Development Governance

Over time, economic governance in Bangladesh has shifted focus away from state control and doctrinal neo-liberalism to pragmatic realism and flexibility consistent with the ground realities management of economic activities. The state plays the role of facilitator. While state-owned enterprises continue, their importance has diminished through progressive privatization – the private sector now accounts for 80 percent of aggregate investment and assets. As such planning is only indicative in nature.

The National Economic Council is the architect of national goals and priorities in development management. NEC is the apex institution, headed by the Prime Minister, and operating through the ECNEC and the Planning Division of Ministry of Planning. The Planning Commission is responsible for formulating the long-term Perspective Plan, the medium-term Five Year (sometimes Three-year) Plans and the Annual Development Programmes (ADP). This is done in consultation with line ministries which carry on regular functions of government as well as implement development projects.

Fulfillment of developmental goals lies in the effectiveness of implementation through the line ministries. The Implementation Monitoring and Evaluation Division (IMED) is charged with the functions of monitoring and evaluating progress of, or lack of progress, in development projects/programmes. This task is expected to be strengthened in the course of implementing the SFYP and the Perspective Plan. The constitutional mandate of monitoring and auditing of financial transactions of government rests with the office of the Comptroller and Auditor General (a constitutional position) under the guidance of Parliament's Public Accounts Committee. All the ministries/divisions have been brought under MTBF and budget implementation is regularly monitored by the Finance Division to ensure quality of the public expenditures.

2.4 The Civil Service

Vision 2021 on good governance enjoins that institutions of the State and Administration will be freed from partisan influence. The basis of appointment and promotion will be performance, commitment, efficiency, honesty and loyalty to the Republic. The civil service/bureaucracy has a distinguished record of professionalism and commitment, which has suffered erosion because of politicization. During the Perspective Plan period, the Government will make all out efforts not only to revive but enhance competence and professional ethics in the civil service using sanction for performance.

2.5 Local Governance

According to Vision 2021, local government will be given due importance with a view to effecting radical change of the political system. Local government institutions will play a critical role in governance as well as in development programmes. Vision 2021 envisages devolution of power, function, and fiscal authority to local government in accordance with constitutional provision for elected bodies at each level of administration. However, in devolving fiscal authority due consideration will have to be made of the scope for resource mobilization at the local level as well as the capacity of local bodies to manage expenditures. Clearly, large national

projects involving power generation, bridges, national highways, irrigation and water management, will have to be left with national level institutions.

2.6 The Private Sector

The government has adopted a pro-market stance in pursuit of its short- and long-term development objectives. In that scheme, the private sector is recognized as the primary engine of growth, owning and operating production systems, and accounting for most of the investment in the economy. However, the facilitating role of the state in building infrastructure, regulating markets, and creating an enabling environment for business and investment is also duly recognized. Private businesses and corporations are expanding and some are allocating significant resources in CSR activities which will have to be given proper tax treatment over time.

2.7 The Civil Society

There is also an appropriate role for civil society and NGOs in supplementing and promoting development at the grassroots and ensuring that the fruits of development are equitably shared. The civil society organisations can discharge this role by coordinating their programmes with the national policy framework and acting in a fully transparent and accountable manner.

2.8 Anti -Corruption Movement

Corruption and abuse of power not only impairs the governance process but, as empirical evidence suggests, also shaves a few percentage off the rate of growth of the economy. The government is determined to confront and root out the scourge of corruption from the body politic of Bangladesh. To this end, the Government intends to strengthen transparency and accountability of all government institutions as an integral part of a program of social change to curb corruption.

Anti Corruption Stance: The Anti-Corruption Commission, mandated to function as an independent, self-governed and neutral entity, and having duly acceded to the United Nation's convention against corruption that was adopted by the General Assembly in October 2003, will have the freedom to take a range of effective measures to bring the corrupt to justice, without fear or favor.

Accountability and Transparency: With Vision 2021, the country aspires to an accountable and transparent governance system, with the right to information firmly established under the auspices of the Right to Information Act 2009 and the high-powered Right to Information Commission. As an important component of Digital Bangladesh, the RIOA provides for free flow of information on the government's financial transactions and records, except those which involve national security and criminal investigation. The law will contribute to further independence of the media, both electronic and print. As the Bangladesh Constitution provides for the post of Ombudsman, this post should be filled and the incumbent provided full scope to function effectively and independently.

A Transparent Procurement System: A faulty public procurement system, particularly for large purchases both at home and abroad, is widely seen as the single most important source of leakage of public funds. Reducing opportunities for corruption in procurement will enhance the effectiveness and quality of public expenditure. The large sums that are provided in the development budgets could be brought under public scrutiny, especially in the floating and award of tenders for public infrastructures and donor financed projects. An e-procurement culture, or system of computerized tendering, should be able to deal with these issues of transparency in public procurement.

Ethics and Values: Achieving the humanitarian goals of Vision 2021 will require a revival of ethics and values permeating the nation's social fabric. These must be inculcated in society, with educational and training institutions acting as the primary medium for their dissemination to young and future leaders.

2.9 Towards Fast-Track Governance

(i) Agency Performance Ranking: A composite set of Agency Performance Indicators will be initiated for ministries and agencies to facilitate public disclosure of performance data for each and every agency. It will set a standard for performance, transparency and accountability and will be helpful tool in policy making.

(ii) Building Capacity for Policy Planning: A comprehensive capacity for economic and social development policy, one that is consistent and coherent, will be developed for both the public and the private sector. The policy will form an integral part of a macro policy framework as a basis for which development strategies and plan of action can be prepared with a home-grown perspective.

(iii) Developing Critical Institutional Capacity: Improvement in the policy planning capacity implies corresponding improvement of institutional capacities. The existing institutional arrangement for policy planning consists of: (a) Cabinet Division, (b) Administrative ministries, (c) Planning Commission, and (d) Ministry of Public Administration. The Planning Commission will play a coordinating role in steering Vision 2021. The Cabinet Division will [i] oversee the performance of other ministries, divisions and agencies by initiating civil service reform including regulatory reform and reform of the Rules of Business, and [ii] redesign, and overhauling the field administration that links the field and the centre. The role of IMED arises with respect to [i] monitoring and evaluation of the public sector development projects included in the Annual Development Programme and [ii] policy formulation, coordination, monitoring and improvement of the public procurement process. And the role of the Ministry of Public Administration includes [i] reform of the civil service, and [ii] providing training and career planning for a competent civil service.

(iv) Regulatory Framework: Vision 2021 and the Perspective Plan envisage the private sector to be the engine of growth in a market driven economic system. In this context, the public sector will be playing the role of a friendly regulator and facilitator. In the circumstances, many burdensome regulations will have to be streamlined within a reformed regulatory framework which promotes rather than hinders private initiative and risk-taking. Only then the vision of accelerated growth and poverty reduction can be achieved by 2021. To this end, the public sector will have (a) to reform the existing regulations in the service delivery system of ministries and departments, and the agencies they manage, (b) to facilitate citizens' access to government services, and (c) to keep the operation of the private sector and civil society within a transparent framework. Strengthening the capacity of the office of C & AG, currently under implementation shall embrace the oversight function of the Public Accounts Committee of the Jaty Sangsad. The capacity of regulatory authorities like Bangladesh Bank, Bangladesh Energy Regularity Commission, and the Telecom Regulatory Commission, Security Exchange Commission, Insurance Development & Regulatory Authority will be further strengthened.

CHAPTER 3: TOWARDS MIDDLE INCOME ECONOMY

Prudent Macroeconomic framework

The Perspective Plan targets annual real GDP growth rate to rise to 8.0 per cent by 2015, and further to 10.0 per cent by 2021, significantly improving living standards of the population by drastically reducing unemployment and poverty, riding on substantially higher output and export growth. Per capita annual income is projected to rise to about USD 2,000 (at constant 2013 dollars) by 2021, thus crossing the middle income threshold. Among others, a prudent macroeconomic policy will be required to ensure internal and external stability, low inflation and high economic growth. Accordingly, this chapter presents a macroeconomic framework, spelling out the key targets, and articulating strategies and policy guidelines underlying the Perspective Plan FY2010-FY2021.

3.1 Strategic Goals

The following strategic goals will be pursued as the essential components of economic policy over the long-term:

- Promotion of equitable, environment friendly, inclusive and socially sustainable pro-poor accelerated growth;
- Enhancement of productivity growth across all sectors of the economy;
- Acceleration of investment with domestic as well as foreign resources;
- Speeding up of employment keeping in view the gender dimension;
- Stabilization of general price level; and
- Promotion of structural transformation of the economy.

3.2 Macroeconomic Framework

The macroeconomic framework of the Perspective Plan will support the strategies and policy guidelines to achieve the development vision through ensuring of macroeconomic stability over the long-term. For Bangladesh, the journey to middle income country and high HDI status requires sustained growth and its equitable and inclusive nature. The technical framework designed to achieve growth and related dimensions of the macro economy shows that the economy needs to grow at a consistently high rate over the next eleven years for the vision to be realized (Table 3.1).

Trends of all the key domestic and external sector indicators such as the rates of real GDP growth, inflation, unemployment, savings, investment, and the level of poverty, imports, exports and capital flows (including inward remittances) have been examined in a longer-term perspective using a multi-sector Computable General Equilibrium (CGE) model to derive a broadly consistent macroeconomic framework covering broad sectoral composition of growth, strategy for savings and investment, medium-term fiscal strategy and projections of balance of payments consistent with external viability.

The higher growth rate in the Perspective Plan is predicated upon a substantial increase in the investment rate in the economy from the current level of 24.7% of GDP to 38% by the end of the Plan, averaging 32.7% of GDP per year during the Plan period. Much of the increase in investment could be financed through national savings, and foreign direct investment (FDI). The incremental Capital Output Ratio (ICOR) is expected to improve due to increased competitiveness and productivity engendered through expected improvements in infrastructure and greater economic openness as well as through technological progress resulting from partnership with foreign investors in strategic areas and the implementation of the ICT strategy (digital Bangladesh).

Table 3.1: Key Macroeconomic Indicators¹

	Benchmark FY10	Target FY15	Target FY21
Real GDP Growth (%)	6.1	8.0	10.0
CPI inflation (%)	7.5	6.0	5.2
As per cent of GDP			
Gross Investment (%)	24.4	32.5	38.0
Gross National Savings (%)	30.0	32.1	39.1
Total government revenue (%)	10.9	14.6	20.0
Total government expenditure (%)	14.6	19.6	25.0
Exports (billion US\$)	16.2	38.8	82.0
Imports (billion US\$)	21.4	52.8	110.5
Remittances (billion US\$)	10.9	17.8	38.5
Unemployment rate (%)	30.0	20.0	15.0
Poverty (head count, %)	31.5	22.5	13.5

Source: Perspective Plan projections

Growth in real GDP will rise to 8.0 per cent in 2015, and then to 10.0 per cent in 2021, to provide the required reduction in unemployment and poverty and improve people's living standards. While factor accumulation, especially capital, will act as the major stimulus to growth, for which gross investment rate will rise to about 38 per cent of GDP in 2021, productivity growth will begin to play an increasing role and is expected to contribute about 20 per cent of economic growth by 2021. The new initiatives proposed in the areas of education, IT, R&D and science and technology will be key to this outcome.

Along with pursuing a high growth strategy, measures will be taken to ensure that fast growth does not lead to serious imbalances in fiscal operations, inflation, or balance of payments. The private sector will be the leading agent in raising economic growth, and public investment will be restructured to become more effective in promoting growth and development. Although the

¹ Annex A to this chapter gives projections of various macroeconomic indicators beyond SFYP targets and up to 2021.

domestic savings rate has improved, it needs to be further geared up for which several strategies will be adopted, e.g. reforms in the financial system to provide easy access of rural population and small savers to formal financial institutions; and low inflation to facilitate more savings.

Above all, high growth will have to be inclusive and pro-poor so that its benefits reach all sections of the population. The thrust on employment generation, promotion of human resource development, and wider network of safety nets for the poor, elderly and disabled population will address this objective.

3.3 Public Revenue and Expenditure strategy

The revenue-GDP ratio has stagnated, which stands at around 11 per cent. Low revenue-GDP ratio is a strong impediment to meeting resource required for the public sector. Moreover, the bulk of the revenue is generated by indirect tax system, mostly value added tax, at domestic and import stages, and the contribution of direct taxes is only 25 per cent. Low revenue productivity aside, tax evasion remains high. The target is to raise the contribution of direct taxes to the total tax revenue to 40 per cent in 2021. The strategies to collect the required public revenues shall include:

- Broadening of the tax base, raising both direct and indirect taxes with appropriate rationalization and reforms;
- Modernization of the VAT and income tax administration, including computerization of tax administration and much greater reliance on accounts based audit will play central roles in this regard.
- Strengthen the professional and technical capacity of the revenue administration to monitor potential tax payers, countering tax evasion, and making available strengthened and effective services to tax payers to raise tax compliance;
- Deepen organizational and other reforms of revenue collecting organizations to transform into quality institutions to meet the revenue needs, service requirement of tax payers, and facilitation of productive activities.

In general, a pro-poor bias is observed in public expenditure due to large spending in relative terms on social sectors including education, health, social safety nets. Total public expenditure is, however low at around 14 per cent of GDP which is not enough to meet the public sector's expanding needs. In addition, the need during the Perspective Plan will be to make the budget an effective instrument of economic management. The thrust will be to make public expenditure more pro-poor, gender sensitive and environment friendly; to improve the effectiveness of public spending; and to establish accountability and transparency of public expenditure.

3.4 Inflation control

Bangladesh has generally succeeded in maintaining reasonable price stability. Occasional spikes in the inflation rate arose mainly as a result of supply disruptions due to natural disasters, and global price shocks. Since high inflation, especially led by food price inflation directly hurts poor people, the target will be to maintain a moderate rate of inflation of around 5-7 per cent per year by ensuring well coordinated monetary and fiscal policies; improvements in productivity; attention to supply augmentation; enhanced public sector role and strengthened competition policies.

3.5 Monetary Management for growth and stability

Monetary management will play a central role in ensuring macroeconomic stability and allocating adequate levels of credit for private sector economic activity/expansion. Effects will be made to broaden and deepen stock market and reduce dependence on credit finance transaction. Thus the key objective of the monetary policy during the Plan period will be to allow monetary aggregates to expand in a manner consistent with the growth and inflation targets

envisaged under the Plan. Consistent with this strategy, broad money (M2) in nominal terms is projected to increase at around 16% percent per annum in line with GDP growth rates and inflation targets.

Ensuring adequate levels of domestic credit for the private sector over the Plan period, within the aggregate limits of the targeted broad money expansion will require containing credit to the government (net) and other public entities within reasonable limits. The fiscal deficit targets under the Plan, while sustainable will however require sizable new borrowing from the banking system. If needed, the Government may have to seek additional external financing to avoid any crowding out of the private sector. Particularly important in this respect will be to limit credit to the loss making public enterprises which would potentially crowd out private sector credit and at the same time lead to the accumulation of nonperforming assets of the state-owned commercial banks.

In addition to the existing policies to attract Foreign Direct and Portfolio Investments, the introduction and promotion of newer dimensions in credit and equity markets, such as debt trading and debt securitization, venture capital and private equity funds, will be promoted. Moreover crop insurance for agriculture and partial guarantee scheme for SME will be initiated such that SMEs can raise money from the market.

3.6 Exchange rate policy for external stability

Bangladesh Bank has been following a flexible market-based exchange rate policy since the adoption of the floating exchange rate regime in 2003. This policy has generally served the economy very well by allowing the rate to be determined in the interbank foreign exchange market with some interventions from Bangladesh Bank to minimize the exchange market volatility. This policy has enabled Bangladesh Bank to ensure stability in the exchange rate, primarily against the US dollar, while at the same time enabling it to build up foreign exchange reserves to a very comfortable level.

The policy of exchange rate flexibility with limited interventions to ensure market stability will be continued during the Plan period. While maintaining the exchange market stability, the rate will be allowed to be determined by economic fundamentals and taking into account the objective of maintaining comfortable reserve levels throughout the Plan period. The Government will follow a policy that will ensure satisfactory level of reserve taking into account the international economic environment. Given the balance of payments outlook, characterized by moderate external current account deficits and surpluses in the overall balance, there should not be any major instability in the exchange market. The current comfortable reserve position of Bangladesh Bank should help fending off any speculative pressure in the exchange market. The comfortable external position will also allow Bangladesh Bank to consider easing some of the capital accounts restrictions in a phased manner. Such a phased liberalization of the capital account, in a stable macroeconomic and strong external environment, would help boost investor confidence in the economy and promote inflow of FDI.

3.7 Investment to boost productivity and growth

Productivity: Growth accounting reveals a modest contribution (about 8 per cent per annum) thus far of technological change to growth in Bangladesh. Improvements in total factor productivity contributed as much as 25-50 per cent of post World War II growth in East Asia, and in the recent high growth of some neighbouring countries. This will therefore be a major potential growth source for Bangladesh as well, over and beyond the Plan period.

Target by 2021, total factor productivity enhancement to contribute about 20 per cent of economic growth in Bangladesh. The strategies for productivity enhancement include

- Initiatives planned in education, Information Technology, Science and Technology, Research and Development. Innovations in production techniques and processes will be promoted and supported. There will be co-ordination in public and private sector programmes and initiatives; and there will be joint public and private sector collaboration initiatives wherever appropriate.
- Integration and coordination of input-output activities in the agriculture, and inter-sectoral allocations among these agriculture, industry and service sectors.

Public Investment: One of the major problems Bangladesh economy is facing today is the stagnation of the overall level of investment in the domestic economy. Aggregate investment has stagnated in the 24%-25% of GDP range in recent years compared with the national savings rate of 30%². Although private sector investment has been increasing at a pace slightly above the rate of growth of GDP, a secular decline in public investment in relation to GDP largely offsets that, keeping total investment broadly stagnant in relation to GDP. The declining trend in public investment in relation to GDP is a matter of concern. Past difficulties in ADP implementation prevented the government from investing in many critical areas such as infrastructure and agriculture. Over the years the infrastructure gap has been widening and has become a binding constraint by choking Bangladesh's economic growth potential. It has also become clear that the past practice of relying solely on the ADP for providing the required infrastructure must give way to the adoption of Public Private Partnership arrangements in delivering large infrastructure projects. Strategy to improve investment environment:

- To ensure the quality of spending and better ADP implementation, all ministries are being brought under the Medium Term Budget Framework (MTBF). The planning and budgeting processes are being strengthened to improve the quality of public investment.
- In addition to launching a bigger ADP in relation to GDP during the plan period, the Plan also envisages bigger public sector investment in infrastructure programs under the newly approved PPP framework. The Government has also announced a major initiative for boosting power generation and expand power distribution network to alleviate the ongoing energy crisis in the country.

Private Investment: As in the past, much of the additional increase in the growth of investment is projected to come from the private sector. The growing share of private sector investment during the last two decades reflects favorable private sector response to the improved investment climate. However, the rate of growth of private sector growth in investment has slowed down in

recent years due to infrastructure constraints which tended to intensify on account of declining public investment and the inability of the public sector to undertake large infrastructure projects. Against this backdrop, public investments and policies outlined above would create the necessary investment climate and heighten investors' (both national and foreign) confidence to undertake the required investments. Some key areas of improvement in this respect are: (i) energy supply including electricity and gas; (ii) infrastructure including roads, railways, bridges, embankments and dykes; (iii) telecommunications; (iv) ports; (v) legal and administrative systems including property rights issues; (vi) socioeconomic environment including law and order situation; and (vii) sound monetary policy and sustainable management of public finances.

3.8 Savings mobilization for higher investment

The sharp rise in investment projected in the plan period will be largely supported by a significant increase in national savings. National savings, comprising domestic savings and inflow of workers' remittances, have been on a rising trend owing to increased domestic saving but also because of rapid growth in the inflow of remittances. Building on the recent positive performance on the national savings front, the Plan aims to increase national savings rate by 9.1 percentage points to 39.1% of GDP.

The increase in national savings projected under the Plan will depend on the continued growth in remittances, albeit at a slower pace, as discussed in the balance of payments section below. Improved investment climate and more attractive rates of return on domestic investment, in part augmented by increased demand for investment, would also encourage transfer of savings held by expatriate Bangladeshi workers abroad. A part of the increased national savings would come from the public sector through increased revenue mobilization efforts.

3.9 Reducing Poverty and Inequality

The poverty profile measured by head count ratio using the cost of basic needs approach revealed that 31.5 per cent of the 2010 population, lived below the poverty line. It also indicated a 1.8 per cent annual poverty decline between 2005 and 2010. At this rate, the head count ratio of national poverty will stand at 22.5 per cent of the population in 2015, thereby achieving one of the major MDGs. The projected higher growth of around 9.2 percent during FY16 and FY21 is expected to reduce head count poverty rate to about 13.5 percent of 2021 population. Anti-poverty, anti-inequality measures need to target removal or reduction of inequalities in advancing opportunities for people in different income brackets. This particularly includes targeting the opening of blocked advancement opportunities for disadvantaged rural and urban poor people. These cross sectoral issues and measures are dealt within the various relevant chapters of this Plan document.

² Remittance is treated as saving. However, the recipients of remittance use the receipt for consumption as well as investment. Reflection of the use of the remittance by the recipients can remove the discrepancy of investment being lower than saving.

Bangladesh: Key Economic Indicators (From FY09 to FY21)

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21
Components:	(Actual)		(Projection)										
Real GDP Growth	5.9	6.1	6.70	7.0	7.2	7.6	8.0	8.3	8.7	9.1	9.4	9.7	10.0
Nominal GDP Growth	12.6	12.9	13.4	14.3	13.8	14.1	14.3	14.4	14.7	15.0	15.3	15.4	15.5
CPI Inflation (Average)	6.7	7.3	8.0	7.5	7.0	6.5	6.0	5.8	5.7	5.5	5.4	5.3	5.2
Gross investment	24.4	24.4	24.7	28.8	29.6	31.0	32.5	33.3	34.1	35.0	36.1	37.0	38.0
Private	19.7	19.4	19.5	22.2	22.7	23.8	25	26	27	28.1	29.3	30.4	31.5
Public	4.7	5.0	5.2	6.6	6.9	7.2	7.5	7.3	7.1	6.9	6.8	6.6	6.5
National Savings	27.1	30.0	28.4	28.6	29.4	30.7	32.1	33.2	34.2	35.3	36.6	37.8	39.1
Total Revenue and Grants (% of GDP)													
Total Revenue	10.4	10.9	12.0	13.2	13.4	14.0	14.6	15.6	16.6	17.4	18.2	19.1	20.0
Tax	8.6	9.0	10.0	10.6	11.2	11.8	12.4	13.3	14.2	15.0	15.8	16.6	17.5
Non Tax	1.8	1.9	2.0	2.5	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.5	2.5
Grants	0.3	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total Expenditures	14.3	14.6	16.4	18.2	18.4	19.0	19.6	20.6	21.6	22.4	23.2	24.1	25.0
Current Expenditures	9.5	9.6	9.8	9.8	10.3	10.5	10.8	11.8	13.0	14.0	14.9	15.9	16.9
ADP (PPP + Public entities)	3.2	3.7	4.4	5.1	5.3	5.7	6.1	5.9	5.7	5.5	5.4	5.3	5.2
Others Expenditures	1.6	1.3	2.2	3.3	2.7	2.7	2.7	2.9	2.9	2.9	2.9	2.9	2.9
Overall balance (including grants)	3.6	3.1	3.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Overall balance (Excluding grants)	3.9	3.7	4.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Primary balance	1.5	1.6	2.5	3.0	3.1	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing (net)	3.9	3.7	4.4	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
External	0.8	1.5	1.2	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Domestic	3.1	2.2	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total debt	42.2	40.0	39.7	39.8	40.0	40.1	40.1	40.1	39.9	39.6	39.3	38.9	38.5
External	23.8	20.3	19.2	18.9	18.6	18.3	18.1	17.8	17.4	17.1	16.7	16.4	16.0

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21
Domestic	18.4	19.7	20.5	20.9	21.4	21.8	22.1	22.3	22.4	22.5	22.5	22.5	22.5
Money and Credit (End of fiscal year in billion TK), percentage change)													
Net foreign assets	479	671	655	722	822	950	1078	1276	1587	2028	2626	3421	4497
(% Change)	27.2	39.9	-2.3	10.2	13.7	15.6	13.5	18.3	24.4	27.8	29.5	30.3	31.4
Credit to private sector	2179	2708	3439	4126	4869	5746	6780	8000	9440	11139	13144	15510	18302
(% Change)	16.5	24.2	27.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Broad money(M2)	2965	3630	4357	5054	5862	6800	7888	9111	10477	12049	13856	15935	18325
(% Change)	18.9	22.4	20.0	16.0	16.0	16.0	16.0	15.5	15.0	15.0	15.0	15.0	15.0
Balance of payments													
Exports (In billions US\$)	15.6	16.2	22.4	25.7	29.4	33.8	38.8	44.3	50.3	56.8	64.2	72.5	82.0
(annual percentage change)	10.2	4.2	38.0	14.5	14.5	15.0	15.0	14.0	13.5	13.0	13.0	13.0	13.0
Import (In billions US\$)	20.3	21.4	31.0	35.4	40.3	46.1	52.8	60.0	67.8	76.6	86.5	97.8	110.5
(annual percentage change)	4.1	5.4	45.0	14.0	14.0	14.5	14.5	13.5	13.0	13.0	13.0	13.0	13.0
Current Account Balance(in billions US\$)	2.5	3.7	-0.4	-0.2	-0.2	-0.4	-0.6	-0.2	0.3	0.7	1.3	2.2	3.5
(percent of GDP)	2.8	3.7	-0.3	-0.2	-0.2	-0.3	-0.4	-0.1	0.15	0.3	0.5	0.8	1.1
Capital Account Balance(In billions US\$)	-0.4	-0.9	0.2	1.1	1.5	2.1	2.2	2.6	3.3	4.2	5.1	6.3	7.6
Overall balance	2.2	2.9	-0.2	0.9	1.3	1.6	1.6	2.3	3.6	4.9	6.5	8.4	11.1
Gross official reserves in billion US\$)	7.5	10.7	10.7	11.6	12.9	14.5	16.1	18.4	22.0	26.9	33.4	41.8	52.9
In months of imports	3.6	5.1	3.6	3.6	3.5	3.5	3.3	3.4	3.6	3.9	4.2	4.7	5.3
Exchange rate (Taka per US\$ Par)	69.06	69.29	71.51	74.29	76.97	79.60	82.17	84.65	87.13	89.59	92.13	94.55	96.86
Memorandum:													
Nominal GDP (In billions taka)	6149	6943	7875	8999	10245	11685	13351	15269	17511	20136	23218	26795	30948
Gross investments(in billion taka)	1500	1694	1945	2592	3032	3622	4339	5085	5971	7048	8382	9914	11760
current account balance(in million US\$)	2536	3734	-375	-192	-229	-439	-649	-237	300	692	1348	2162	3485
Current account balance(in billion US\$)	2.5	3.7	-0.4	-0.2	-0.2	-0.4	-0.6	-0.2	0.3	0.7	1.3	2.2	3.5
current account balance(in billion tk)	175.1	258.7	-26.8	-14.3	-17.7	-34.9	-53.3	-20.0	26.1	62.0	124.2	204.4	337.6
Gross national savings(In billion Taka)	1666	1953	1918	2577	3015	3587	4286	5065	5997	7109	8506	10118	12098

Sources: Actual Data have been obtained from BBS, Bangladesh Bank and Ministry of Finance, Bangladesh. Projections based on actual data.

CHAPTER 4: STRATEGY FOR FOOD SECURITY: AGRICULTURE AND RURAL DEVELOPMENT

4.1 Strategic goals

Ensuring food security for the poor is a fundamental objective of the Government. It involves the physical availability of food at all times and its access to all at affordable prices. Seventy per cent people of Bangladesh live in rural areas and draw their income and employment from agriculture and related activities. Food security is ensured through an optimal level of stock, by undertaking special programmes for subsidized food marketing (e.g. OMS) in poverty and disaster prone areas in times of scarcity and while maintaining a public food distribution system.

Agricultural land is limited and is reducing at 1 per cent per annum. Modern methods of production, including water resource management, high yielding drought and submergence resistant seeds, increase in land productivity through efficient irrigation, flood control and drainage, are among the key factors in achieving a higher level of self-sufficiency in food production to feed the ever increasing population and to save foreign exchange for food imports.

Future growth in agricultural production will depend, among other things, on increase in irrigation efficiency. Therefore, water resource management is a crucial issue to ensure self-sufficiency in food production.

Despite a spectacular increase in food production, Bangladesh has faced persistent challenges in achieving food security due to (a) natural disasters and consequent crop losses; (b) fluctuations in food prices caused by volatility in the international markets; (c) failure to steady maintenance of domestic stocks; (d) inept monitoring of markets to prevent syndication that creates an artificial scarcity of food items and increases prices; and (e) absence of income generating activities that could add to the purchasing power of poor people.

With a view to enhance agriculture production and ensuring food security, the target is that, by 2021, food deficiency will be eliminated and the country will attain self-sufficiency in food production enabling to meet nutritional requirement of the population.

4.2 Crop Sector

Progress

The crop sector accounts for 12 per cent of GDP, 60 per cent of the agricultural value addition and occupies over three-quarters of the cropped area. Rice production tripled from 11 million tonnes in 1972 to 32 million tonnes in 2009. The other major crops are jute, wheat, potato, rapeseed/mustard, pulses, chillies, onions, vegetables, sugarcane, tobacco, tea and cotton. Jute is showing signs of re-emergence in the global market. Maize production has been increasing in an agroecological environment and has been a feed for the expanding poultry industry. Potato and vegetable production has also made good progress.

Challenges

- Rice production must increase by over 300,000 tonnes annually to feed the additional population.
- Growth-induced demand due to high income elasticity, according to the National Commission of Agriculture Report, will mean a 3.1 per cent increase in demand for food crops for every 7 per cent growth in GDP.

- With the decline in soil fertility and loss of land and water resources as well as a spread in the contamination by arsenic of drinking water, agronomic techniques should be used to increase water efficiency towards a System of Rice Intensification.
- Producers continue to face low harvest prices, because of market intermediaries and because large farmers capture most of the farm surplus for speculative price release during dry periods.
- Large and middle-sized farmers are abandoning farming in favour of non-farm activities leaving cultivation of land by marginal land owners, *bargadar* (share-croppers) and agricultural labourers. In the absence of land reforms and due to a shortage of savings, there is very little incentive to private investment to increase productivity and production.
- Pragmatic and proactive policy measures such as input subsidies and price support, provision of electricity for rural irrigation, availability of highly concessional agricultural credit mainly through the public sector banks, have all helped to bring the country to attain self-sufficiency in rice. Most other food items such as wheat, pulses, edible oils, onions and sugar, which account for nearly 10 per cent of the imports bill, will have to be imported.

Table 4.1: Production and Demand Projection of Rice (million tonnes)

Rice	2007/08	2015	2021
	60%	60%	60%
	YGM ²	YGM	YGM
Total Production	30.7	35.39	36.81
Total Demand	-	28.8	32.8

Table 4.2: Production Projection of Some Crops

Crop	Production Projection (in million tonnes)			Minimization of yield gap (per cent)
	2007	2015	2021	
Wheat	0.84	1.16	1.4	50
Potato	6.65	8.76	10.34	80
Oilseeds	0.36	0.45	0.52	70
Pulses	0.20	0.26	0.31	25
Maize	1.35	1.63	1.85	70

Strategies

- Sustainable achievement of self-sufficiency in the production of rice.
- Diversification of agricultural crops by adopting a system based on dissemination of information on agro ecological zoning to identify areas suitable for different crops.
- Priority attention in planned crop intensification in the coastal zone, the Sylhet region and the char areas in the northern poverty stricken region.

²YGM – Yield Gap Minimization. Demand projection assumes an annual population growth rate gradually getting to 1.2 per cent and reduction in income elasticity of demand

- Ecologically favorable, months November - February maybe devoted for growing high-profit non-rice crops leaving the remaining eight months for growing two rice crops, Aman in particular.
- Motivate farmers to use recommended/balanced doses of chemical fertilizers, extensive production and use of organic fertilizer, and proper utilization of soil guide and soil testing facilities to enhance soil fertility.
- R&D for productivity increase yielding up to 20 per cent higher production of hybrid rice through technological progress, stress tolerant varieties (salt, submergence and drought tolerance for rice as well as heat tolerance for wheat) will be developed.
- Exploring reduction in yield gap for existing technologies and better seeds, efficient management of seed beds and adoption of the System of Rice Intensification (SRI), involving young seedlings, one seedling per hill, larger spacing, alternate wet and dry irrigation, use of compost/farm yard manure and direct seedling.
- Steps will be taken for distribution of khas land to the landless and the marginal farmers easing the rental system, computerized land records and transfer, safeguards against eviction of the bargadars and granting them the right of pre-emption in land transfer.
- ICT for extension will be widely used for regular weather forecasts through TV, community radio and cell phones.
- Services of SPARSO will be extensively used in forecasting.
- Increase of storage capacities by building additional capacities, 50,000 tonnes by 2015 and 1 million tonnes by 2021 and explored to facilitate safe storage of rice and perishables.
- Production and marketing cooperatives may be formed and concessional credit given to facilitate the growers purchase their own output during the harvest season and release to the market throughout the year; this will reduce the growers' dependence on the middlemen.

4.3 Fisheries

Progress

The Bengal delta comprising Ganges, Brahmaputra and Meghna flood plains is the world's largest flooded wetland, containing more than 800 species of fish. Bangladesh is amongst top ten fish producing countries of the world. The vast flood plain of Bangladesh currently remains underutilized for fish production. The goal of the plan is to meet the increasing demand for fishes of through efficient management of water bodies.

Fish production has increased rapidly since the 1990s through (a) pond aquaculture (fish raised in ponds) using hatchery-reared fish fingerlings; and (b) conversion of fish ponds by raising embankments around low-lying lands. Embankments are also used as orchards and vegetable gardens.

Challenges

Fisheries products have high income elasticity of demand. The Report of the National Agriculture Commission projected that demand for fish will grow at 4.7 per cent between 2000 and 2010, and by 4.1 per cent from 2010 to 2020. However, production under capture fisheries has stagnated because of underinvestment in fishing in the flood plains. The fish habitat in rivers, creeks, and canals has been reduced steadily by siltation and drying of the perennial water bodies. Fish hatcheries in coastal areas have expanded to suboptimal levels. The landless and marginal farmers affected by shrimp culture will be accommodated in a strategy of small holder aquaculture with greater attention to hazards from cyclone surges and tidal bores.

Table 4.3: Projection of Fisheries Production

	Area (thousand ha)	Production (thousand tonnes)		
		FY08	FY15	FY 21
Inland open water	4,237	1,060	1,690	1,764
Closed water bodies	528	1,006	1,409	1,761
Marine	-	498	566	614
Total fish production	-	2563	3,665	4,139
Total demand	-		3540	3,910

Strategies

- High priority given to closed water fisheries production.
- Increasing fresh water, (rather than brackish water) golda production in coastal areas.
- Potential use of cage culture in flood plains, with individual ownership.
- Emphasis on supply of inputs and promotion of technical knowledge among the educated youth, in pond and other closed water bodies culture.
- Adoption and implementation of the concept of fishermen cooperatives towards ‘Jal jar jala taar’ in government-owned water bodies.

4.4 Livestock and Poultry**Progress**

There has been significant growth in the livestock sector, much of it coming from the commercial poultry sector. Rising population, growth of per capita income and higher income elasticity of demand for livestock products are likely to bring a further increase in the demand for livestock products. The demand for milk, eggs, and mutton has increased by 6, 5.2, and 5.6 per cent respectively which is well above national average in the past. These rates are well above the national production/consumption growth rates. But growth in the consumption of poultry was relatively close to the projection, i.e. 4.41 per cent per annum. Annual growth for sheep and goat estimated to grow to about 2.00 per cent. Based on a per capita daily milk requirement of 120 gm, the total demand for milk in 2002 was estimated at two and half times the country's production level. Bridging this huge gap is a major challenge.

Challenges

Livestock density in Bangladesh is one of the highest in the world. The number of cattle and goats remain fairly constant, or is declining, according to the Agricultural Censuses of 1960, 1977, 1983-84 and 1996. However, poultry population is increasing. Production of livestock can be increased if nutritional constraints, parasitic constraints, infectious diseases such as foot and mouth disease or Peste de Petits Ruminants are controlled effectively.

Carcass yields in Bangladesh are 70-100, 7-8 and 7-8 kg respectively, for cattle, goat and sheep. This is very low, for good financial return. Similarly, average milk yields from indigenous cows range from 1-2 kg/d. Crossbreeding of indigenous dams with Jersey sires to improve milk production is ongoing. However, crossbreeding with beef sires to improve meat yields should also be considered.

Opportunities for Increasing Livestock Production

The nine most critical areas for livestock development in the country have been described as:

- (i) dairy development and meat production,
- (ii) poultry development,
- (iii) veterinary services and animal health,
- (iv) feeds and animal management,
- (v) breed development,
- (vi) hides and skins,
- (vii) marketing of livestock products;
- (viii) international trade management; and
- (ix) institutional development for research and extension.

Strategy Breed development, feed production and supply, extension and supply of veterinary services, including vaccinations, shall be promoted.

4.5 Forestry

Progress

Recorded state-owned forest land (not necessarily supporting tree cover), and potential forest/tree growing areas, has been identified at 7 million acres, which is 20 per cent of the land area. Trees are reported to cover 12 per cent of the land where considerable prospects for improvement exists.

Ecological balance and bio-diversity conservation are in critical state. In Hill forests, the most common problems are erosion, over-exploitation and loss of soil fertility. In mangrove forests, the main problems are poor water and pests and in the mixed broad-leaved/bamboo forests, erosion and over-exploitation. In the plantations, the key environmental problems are loss of soil fertility, erosion, over grazing, flooding, poor water and drought.

Productivity per unit of time or area is unacceptably low. This is largely due to social and institutional constraints, such as economic activities that neglect the basic needs of local people who then sought revenge through deliberate forest damage. Potential productivity has been marred by lack of technological innovations and administrative limitations. The major deficit is in the fuel wood sector, which is met by using agricultural residue and dung. The scope for social forestry and agro-forestry will be emphasized.

Targets, Policies and Strategies

The target is to raise productive forest coverage to 15% from 13% by 2021.

Increasing the tree coverage on 2.84 million hectares designated for forest, diversification of tree species to sustain ecological balance, increasing employment from forestry (particularly for women) under expanded social- and agro-forestry, reverting cow dung to use as organic fertilizer

and obtaining fuel wood from forests, giving priority to the creation of a coastal green belt and increasing accountability and transparency in public forest management.

Strategies under the perspective plan is increasing productivity; higher efficiency; a bias towards agro and social-forestry; sustaining ecological balances; and strengthening the Sundarbans as a barrier between the sea and the South Asian landmass.

4.6 Rural Development and Institutions

Strategy for Rural Development

- To establish a powerful autonomous local government body. This is imperative to initiate and provide coordination among private and public rural development institutes.

Rural Non-Farm Activities (RNFA)

The rural non-farm sector accounts for 40 per cent of rural employment, and more than 50 per cent of rural income. With growing population, rural non-farm activities are a potential vehicle for poverty reduction in rural areas. Government will need to create a framework conducive for the development of the rural non-farm sector through (a) business development; (b) escalating women's participation; (c) improving market access and infrastructure; (d) standardization and quality assurance of marketable products; (e) targeting vulnerable rural populations and scaling up their activities; and (f) increasing budget allocation to rural areas, and (g) implementation through a strong autonomous local government.

Marketing Agricultural Products

In Bangladesh, small, medium, and even large farmers are vulnerable to the exercise and influence of market power by rural traders, wholesalers, retailers, and processors. These petty traders are poorly rewarded for their efforts and the risks they take in an environment of inadequate quality control, gross returns as well as increasing product wastage. The plan considers the following interventions for marketing:

- Encourage establishment of collection centers/packing facilities for sorting grading and packaging.
- Develop markets for agro commodities for both local and export markets.
- Utilize huge water bodies for fish production and link them to urban markets.
- Develop packaging materials for agro-commodities in consultation with stakeholders for export markets.
- Help establish cold storage facilities at wholesale markets and in rural collection centres.
- Establish cooperative warehousing facilities at village/union level.
- Develop modern testing facilities and arrange accreditation so that consumers can be assured of product quality.
- Develop awareness campaigns on SPS and quality assurance systems.
- Develop training for the exporters on rules and regulations for international markets.
- Help create markets and competitiveness at every stage of marketing.

Rural Credit

Resources must be infused into the rural economy to strengthen the base of the national economy. During the fiscal 2009-10, agricultural credit of Tk. 12,000 crore is being distributed, which is substantially larger than in the preceding year. At the initiative of Bangladesh Bank, the banking system, mainly Krishi Bank, Rajshahi Krishi Unnayan Bank, and BRAC refinanced by the Bangladesh Bank distributed the amount. The momentum will be sustained in future, with increased supplies of credit and wider coverage of farmers. Private commercial banks have also started providing agricultural credit, as encouraged by the government. In addition, the Small Farmers' Development Foundation has been established as an autonomous institution by the government to provide micro-finance to small and marginal farmers in Bangladesh. However, problems remain with regard to targeting, timely delivery, proper utilization of funds, and collection. The recent steps taken by the present government of issuing identity cards to farmers and enabling them to open bank accounts with a deposit of only Tk.10 (Taka ten) can help overcome these deficiencies. Also monitoring will be improved. There will be flexibility, as appropriate, by way of, for example, rescheduling repayments at times of devastations caused by national disasters.

Banks are being called upon and encouraged to increase their SME loans in rural areas. There is now a large number of micro finance institutions (MFIs) in the country, which have expanded their operations phenomenally over the past two decades or so. But given the manner of its operation, questions are now being raised whether the effective interest rates are too high; benefits, in terms of net profit, of the borrowers are too low or even negative in cases. Other issues such as whether access to assets, health, and education is increasing; and sustainable employment is occurring need to be addressed. The Micro Credit Regulatory Authority should, in consultation with the stakeholders, sort out these issues and help improve the micro credit operations for genuine benefit of the borrowers.

Strategies to pursue

Expansion of retail banking for small farmers, by incorporating successful features of financial intermediation for small clients, monitor performance and enforce contracts; decentralized decision making and performance based remuneration system; non-traditional collateral and dependence on social hierarchies for contract enforcement.

Increase oversight of NGOs in terms of their accountability, transparency, high interest rates, inappropriately designed weekly recovery, nepotism-prone management, and political causes.

The Microcredit Regulatory Authority may have to be made independent of the government and of the NGO influence as originally envisaged.

Cooperatives

Cooperatives in Bangladesh have pioneered the introduction and administration of rural credit programmes involving farmers. Initially, three tier and subsequently both three and two tier cooperatives were formed to channel government-financed rural credit, which played a vital role in increasing agricultural production, especially of winter crops. Considering the increasing importance of rural institutions as viable platforms for service delivery of, for example, subsidies, agricultural input support, credit support, technology transfer and marketing of agricultural products, the formation of restructured multipurpose cooperatives may be a good option. Therefore, the aim of the policy shall be to streamline cooperatives to achieve an

effective rural financing and support service delivery system, especially in agricultural marketing, production and storage of fruits and vegetables, milk and SME based products.

4.7 Water Resource Management

Integrated Water Resource Management

Although agriculture is the foremost user of the country's water resources, it is important to recognize the multifarious uses of water: industry, forestry, fishery, inland navigation, and domestic use including for drinking. The approach is, therefore, guided by the concept of integrated water resource management, aimed at optimizing water development and the way it is allocated to its various users. The principles, policy and action guidelines for water resource management are laid down in The National Water Policy 1999 supported by the National Water Management Plan 2004.

Water Management for Irrigation

Bangladesh's water sector is characterized by abundance of water during the rainy season (June-October) and scarcity of water during the dry season (January-May, particularly March-April). The point to note is that Bangladesh has little control over the annual run-off flowing through the country into the Bay of Bengal, as over 92 per cent enters the country from beyond its borders. Bangladesh is the lower riparian in all the country's 57 trans-boundary rivers (54 coming from India, and 3 from Myanmar) so that cooperative regional water management becomes crucial for Bangladesh. A Water Sharing Treaty exists only in respect of the Ganges but progressive treaties on other rivers, though contemplated, have not come about. The Government is taking initiative to reach such agreements on Teesta and other rivers.

Innovations in mechanical irrigation have led to a rapid expansion of irrigated agriculture in Bangladesh. The demand for water for irrigation is the greatest and the fastest growing. Water holds the key to agricultural development, especially for food crops such as rice. According to the NWMP, demand for irrigation is expected to increase by 25 per cent to about 20 BCM between 2000 and 2025 – and that under a best case scenario for irrigation efficiency. The goals for the irrigation sector include:

- Increase irrigation efficiency to 50 per cent from the current 30 per cent;
- Effectively address the overwhelming dependence on groundwater, focusing on increasing the use of surface water;
- Increase the irrigated area from 5 million ha in 2009 to 7.0 million ha by 2021 by using water saved from improvements in irrigation efficiency;
- Monitor the quality and quantity of groundwater through continuous surveys and investigation.

But there are challenges to achieving these goals, which include:

Water scarcity: There will be less water available for irrigation in future, so water efficiency needs to improve. Efforts will also be made to augment flows through trans-boundary rivers by negotiating and undertaking joint actions with neighbouring countries – for example, with India and Nepal over the Ganges. For the long haul, the growing scarcity and competition for water for diverse uses may dramatically change the way water is valued and utilized, and the way it is mobilized and managed.

Climate change: Bangladesh agriculture is likely to be adversely affected as a result of the ongoing global climate change which is causing major changes in seasonal and spatial patterns of water availability, as well as a deterioration in water quality (through salinization, for example) and disturbance in hydrological processes. Appropriate adaptation measures therefore need to be developed through research and put to use widely over the Perspective Plan period.

Long-term Water Resource Management Strategies

Given the characteristics of Bangladesh's water sector, water demand, and the likely climate change impacts, the major Perspective Plan strategies include:

- Follow the IWRM framework for best allocation of water to various uses;
- Encourage research and development in designing appropriate adaptive activities to manage climate change impacts on and through the water sector;
- Encourage research on crop varieties that are water efficient and resistant to salinity;
- Focus on surface water irrigation and stabilize a reduced use of groundwater;
- Increase irrigation efficiency and reduce wastage and losses through better technology and better management;
- Encourage greater use of rainwater and its local storage for use in the dry season;
- Develop and implement efficient and effective measures to improve the knowledge gap of farmers on Farm Water Management technology;
- Examine large-scale O&M activities in embankments and polders to prevent salinity intrusion along the coast, and identify and implement the best option for the purpose; undertake desalinization activities;
- Rehabilitate coastal embankments to help adapt to climate change;
- Protect rivers from erosion of water courses and enhancement of land reclamation;
- Undertake planned and phased dredging and river training activities;
- Examine the government's water sector agencies and institutions and, if necessary, redesign, reorient and further equip them for more effective implementation of policies and strategies;
- Resume negotiations with India and other upper riparian states for equitable water sharing arrangements for all trans-boundary rivers, particularly major rivers.

CHAPTER 5: INDUSTRIALIZATION IN A COMPETITIVE WORLD

These are times of intense global competition for business and industry. Being globally competitive will be the only *mantra* for survival and progress. The Perspective Plan target of reaching 10 percent annual GDP growth by 2021 is premised on a competitive manufacturing sector growing at or near double digits during the 2011-21 decade. Consequently, the broad industrial sector will continue to account for a larger share of GDP - 37% by 2021 - compensating for the secular decline in the share of agricultural sector, which falls to 15%. This trend is consistent with the stylized facts of structural change in the process of development articulated by development economists. Thus the strategy for achieving the high growth target under the Perspective Plan includes further industrial deepening supported by a highly-productive agriculture sector. This was the basic thrust of the high-performing East Asian economies in the 1970s and 1980s. For Bangladesh to reach middle income threshold by 2021, industrial expansion must accompany hand-in-hand with highly productive farm and non-farm agriculture. Furthermore, a strong and competitive manufacturing sector is especially important for generating productive high income jobs.

5.1 The Challenges

The country's industries sector has tended to remain narrow-based, with spatial concentration and a small share of the country's total workforce. Accelerated pace of industrialization will be necessary to address the increasingly diminishing capacity of agriculture to absorb the incremental labour force, strengthen backward and forward linkages with agriculture and services sectors, cater to the growing domestic demand for industrial goods, and take advantage of emerging opportunities in the global market.

The textile and readymade garment sector employs about 6.5 million people and accounts for over one-half of manufacturing production. Diversification of manufacturing production and exports will be key to sustained growth and employment creation. Initiatives will be needed to strengthen small and medium scale enterprises, as well as to create conditions for raising productivity and competitiveness of large-scale manufacturing industries to enable them to compete in global and domestic markets. This will necessitate a broadening of the industrial base by creating a conducive environment for private sector investment, through targeted initiatives towards technology transfer, upgraded skills and development of appropriate human resources, development of knowledge-based industries and by raising labour and capital productivity at the enterprise level. Rationalization and restructuring of SOEs will need to be continued so that strategically placed SOEs can run profitably on a commercial basis, and others are handed over to the private sector.

5.2 Targets, Strategies and Policies for the Manufacturing Sector

Manufacturing is the predominant and leading sector within broad industry which also includes such activities as power generation, water and sewage, and mining and quarrying. Manufacturing is and will remain the driver of industrial growth and employment for years to come. Vision 2021 stipulates middle income status for Bangladesh by 2021, reaching annual GDP growth rate of 10% by that year and averaging 8% for the period 2011-21. Fulfillment of this vision requires superior double digit performance for manufacturing taking its share in GDP to 28 percent by 2021, and that of industry to 37% percent.

A possible growth path that is consistent with this target is presented in Tables 5.1 and 5.2.

Table 5.1: Projection of Sectoral Growth and shares in GDP

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2021
	Growth Rate (%)					
Agriculture	5.0	4.5	4.4	4.3	4.3	4.5
Industry	9.2	9.6	9.9	10.5	11.5	12.0
of which Manufacturing	9.5	9.8	10.1	10.7	11.7	14.0
Services	6.6	6.8	7.1	7.3	7.8	8.0
GDP	6.7	7.0	7.2	7.6	8.0	10.0
	Share as % of GDP					
Agriculture	18.4	17.7	16.9	16.2	15.5	15.0
Industry	28.7	28.9	30.4	31.3	32.0	37.0
of which Manufacturing	18.2	18.7	19.6	20.4	21.1	28.0
Services	52.9	52.9	52.7	52.5	52.5	48.0

Source: BBS and PP Projections

Table 5.2 Projections of Structural change to 2021

(percentage share of GDP)

Sectors	Average (FY04-FY10)	Target FY2015	Target FY2021
Agriculture	19.5	15.5	15.0
Industry	28.0	32.0	37.0
Of which Manufacturing	17.3	21.1	28.0
Service	52.5	52.5	48.0

Source: BBS and Vision 2021

Among the manufacturing activities sectors such as ‘food processing’; ‘leather and footwear’, ‘textile and clothing’, ‘pharmaceutical’, ‘ship building’, toys, ceramics and furniture are likely to be the main growth generators. Low-cost labor with growing skills gives Bangladesh potential competitive advantage in most labor-intensive activities which will continue to drive manufacturing growth for at least another decade.

Diversification of the manufacturing base will be promoted by keeping import channels open and facilitating Bangladeshi firms to vertically integrate within the global production chains. It is likely that we will see the emergence of new products such as auto parts, electronics, and light engineering in a big way over the coming decade resulting in gradual diversification of exports. One of the thrusts of the industrial policy during SYFP will be to create scope for emergence of new activities (in exports or domestic production) and expansion of SMEs to take advantage of scale economies. Removal of critical infrastructure bottlenecks in power and transport sectors through massive new investments will be critical for planned acceleration of manufacturing sector growth.

5.3 Strategic Policies for the Manufacturing Sector

- In view of emerging opportunities in the global market, and by making best use of the preferential market access treatment offered to Bangladesh as an LDC, initiatives will be

taken to ensure competitiveness of potential labour-intensive manufactures beyond textiles and RMG or leather goods, into products such as toys, agro-processing, auto parts, electronics and light engineering.

- Thrust will be given to SME-based industrialization that will be labour-intensive, spatially decentralized, users of indigenous raw materials, and will be serviced by adequate human resources and technology adoption and transfer. The aim will be to cater to the growing domestic market, and to enable SMEs to link-up with foreign markets through a package of support including credit, common services, upgrading of skills and institutional support. The SME strategy will network the short gestational and highly job intensive micro and small industries in the agro-based, poultry, livestock and fish related projects aiming to produce balanced fertilizer, biogas energy, milk products, poultry products, handicrafts, and horticultural goods for markets at home and abroad.
- Policy support and promotional initiatives will be put in place to realize emerging opportunities in new sectors identified as thrust sectors in the Industrial Policy 2010. These include ICT -based sectors, food, beverages, light engineering, high-end readymade garments, pharmaceuticals, ship-building and others. Export incentives such as bonded warehouse facilities, duty drawback, and infrastructural support in the form of establishment of industrial park, dedicated private sector EPZs and SEZs will be put in place to stimulate their growth.
- FDI will be encouraged through various policy incentives to stimulate access to technology and frontier knowhow, to access global market opportunities and take advantage of the growing regional market.
- Developing Bangladesh as an exotic tourist destination in Asia and increase tourism's contribution to GDP from 0.70 to 2 per cent by 2015 and then to 5 per cent by 2021. .
- The capital market will be further liberalized, reformed and deepened to create opportunities for raising equity capital to support industrial sector growth. Appropriate mechanisms will be put in place to stimulate, and promote mobilization of resources from small domestic savers in the country's capital markets and to attract portfolio investment from foreign investors.
- Adequate support will be given to service-sector based industries. In view of the developing demand, both in the domestic and global markets, appropriate support will be given to the development of ICT based industries. A credible standardization and certification mechanism of international standard will be established.
- Whilst privatization of identified SOEs will continue, strategically placed SOEs will be provided with adequate support to run as commercially viable, profitable organizations, if need be with blending of public sector ownership and private-sector management.
- Institutions related to industrial development (such as BOI and BEPZA) will be provided with adequate resources to enable them to function efficiently so as to stimulate domestic investment, FDI and joint ventures.
- The jute industry is expected to grow further in view of the eco-friendliness and biodegradability of jute products. Developing diversified jute products through appropriate use of technology, developing different product mix of jute and other natural fibres will be encouraged, and Bangladesh Jute Research Institute (BJRI) will be strengthened.

5.4 Exports – the driver of manufacturing growth

The main driver of manufacturing growth will be the export markets. This is based on the assumption that external sector will continue to be liberalized and new trade barriers are not imposed by our importing nations. However, growing domestic demand from higher income generation will also provide impetus to import substitute production. The case for exports is very clear. In spite of a burgeoning domestic market, its size is limited when it comes to the need for creating over a million additional jobs every year with decent wages. The export market is vast allowing industries to take advantage of economies of scale and the scope for creating jobs and income is unlimited. Already manufacturing exports make up more than 90% of our export basket. High manufacturing growth over the next decade will hinge on continuation and improvement on the superb export performance of the past 15 years. The key is to produce competitively products in which Bangladesh has comparative advantage and formulate strategies to open export markets. Based on the recent performance, export sector under the Sixth and Seventh Plan period is projected to grow by 12-15% per annum in US dollar terms. The projection entails an increase in the share of exports in relation to GDP to rise to about 26% of GDP by 2021 reflecting a leading role that export sector is envisaged to play in the economy.

The target with regard to the external sector is to ensure strengthened global integration of the Bangladesh economy by building necessary trade-related supply side capacities. This will be realized through raising the competitiveness of Bangladesh's exports, ensuring a larger share for the country in the global trade in goods and services, and by encouraging both product and market diversification. This will be done by renewing efforts at moving up market and by raising the efficacy of trade facilitation measures. Bangladesh's strong performance in the global labour services market will be continued and further consolidated. The overarching goal here will be to ensure that trade-GDP ratio rises to nearly 60% of GDP with export of goods and remittance earnings approaching 40 per cent by 2021 (Table 5.3).

Table 5.3: External sector targets (% of GDP)

Activities	Average (FY05-10)	Target 2015	Target 2021
Exports		22.0	26.0
Imports		30.0	32.0
Trade balance		-8.0	-6.0
Remittance		8.0	12.0
Current account balance		-0.7	-1.0

Source: Perspective Plan projections

Strategic Policies for Manufacturing Exports over the long-term

In order to get the maximum leverage out of manufacturing sector and its competitiveness in the global marketplace, the government will focus on four strategic approaches.

Export diversification. Bangladesh experienced double digit export growth over the past two decades. Yet this superior performance masks the fact that the surge was limited to one product group – readymade garments – aided not least by the MFA regime. With over two million jobs

and 77% of export earnings from the RMG sector, too much of the nation's fortune is riding on this one sector. Export concentration in readymade garments makes the economy, jobs and income, extremely vulnerable to external shocks arising from changes in global demand for RMG. The government's focus on export diversification as a cornerstone of its export policy will continue and intensify during the Sixth Plan period and beyond. While RMG exports would continue to dominate the export outlook, some important non-traditional exports like footwear and leather products, light engineering products (bicycle and electronics), pharmaceuticals, ceramics, jute goods, ocean-going ships, and some labor-intensive products not yet on the export radar, are likely to grow at a much faster rate. This diversification is a key objective underlying the strategy for manufacturing growth.

Export concentration is not a new phenomenon for Bangladesh. For many decades prior to the emergence of RMG exports, jute and jute goods dominated the export sector making up 70 percent of exports until 1981. The shift into manufactured exports materialized for the Bangladesh economy thanks largely due to an external event – the multi-fiber arrangement (MFA) of 1974 – that offered a lifeline for the emergence and rapid expansion of the RMG industry. By 1990, RMG exports had overtaken Bangladesh's traditional exports and, by the close of the 1990s, *export concentration* emerged afresh, with RMG exports reaching a share of 77 percent. While Bangladesh's export growth for the last decade and a half could be characterized as robust, a sudden decline in demand for Bangladeshi RMG would send shock waves throughout the economy. Such a prospect can be avoided through the creation of a diversified export basket. Herein lies the rationale for an effective strategy for export diversification.

But the strategy of export diversification will not be limited to product diversification in the export basket. Rather, the strategy will embrace many different facets, each of which addresses the vulnerability aspect of export concentration, as summarized below:

- Product diversification – introducing range of new products in the export basket.
- Geographical diversification – widening the range of destination markets for exports.
- Quality diversification – upgrading the value of existing products, i.e. moving up market from low end to high end products (described as moving up the value chain).
- Goods-to-services diversification - seeking opportunities to expand non-merchandise exports.
- Intermediate goods diversification - product diversification need not imply adding only final consumer goods in the export basket - as is popularly understood in Bangladesh. There are global opportunities for plugging into the supply chain of export powerhouses like China, something that East Asian economies have done successfully. That requires Bangladesh to diversify its manufacturing base into backward linkage industries producing a wide range of intermediate goods for exports within the globalized production chain.

Finally, it is critical that the trade policy regime is geared to ensure export competitiveness in general while facilitating emergence and expansion of new export products. Bangladesh's labor cost advantage remains strong though productivity is a question mark. Yet this advantage, properly harnessed, could yield surprising rewards within the current scheme of globalized

production and supply chains, provided the trade regime is right. The success of RMG is clear evidence of this phenomenon.

If export diversification is to be the cornerstone of an export strategy, at least three aspects of the trade policy regime will deserve close attention:

- Ensuring export competitiveness in general – by addressing border barriers (e.g. tariffs) and beyond-the border constraints (e.g. trade infrastructure, energy and telecommunications, regulations, finance).
- Reducing anti-export bias of the trade regime – several researches provided ample evidence of anti-export bias of the current import, tariff and subsidy regime that favors import-substituting production over exports. The duty-drawback scheme to provide world-priced inputs for export production has proved inadequate. Eliminating or reducing the built-in anti-export bias that still remain will be key to switching the incentive regime in favor of exports.
- Reducing anti-diversification bias – because of the stellar success of RMG exports, trade policy and incentive regime have a clear focus on this sector which is provided a free trade channel plus logistic support (duty free import of inputs, bonded warehousing facilities, back-to-back LC, rapid custom clearance). While such a policy is appropriate for making RMG exports competitive on a global scale, attention needs to be focused on similar policy environment for emerging and potential exports without which they face formidable barriers in the context of a high-tariff and restrictive import regime in Bangladesh. This particular feature of anti-diversification bias could be unique to Bangladesh and will be addressed during the Sixth Plan.

The China opportunity: A window of opportunity that beckons Bangladesh has its roots in what is going on in China known to the world as the export powerhouse, as the biggest source of cheap exports of all manner of goods, from clothing and toys to consumer electronics and durable goods like air conditioners and refrigerators.

Abundant, cheap, and productive labor was the main strengths of China's global competitive advantage. As a natural consequence of industrial success, that advantage is fast eroding; wages are fast rising in China to the advantage of countries like Bangladesh. In addition, acute labor shortages have appeared in key economic zones. This is particularly true for the labor intensive commodities like readymade garments, shoes, electrical goods, car parts, toys, kitchenware, and multifarious consumer goods whose fabrication is less complex and demands relatively low-skilled workers. This opens up Bangladesh's opportunity to increase export volume as well as diversify of export basket.

That is not all. Pressure is mounting on China to revalue the Yuan – a measure that will make its exports less competitive. Though China has not wilted under this pressure, analysts believe gradual Yuan appreciation is a very real possibility. This adds the third element in the erosion of Chinese cost competitiveness. In the current scheme of global competition, the loss in competitive advantage of one country creates opportunity for one or more countries which can be realized through overcoming the internal weaknesses and enhancing competitiveness of the latter group of

countries. Those ready to gain from China's falling competitive edge in labor-intensive products are countries like Bangladesh, Vietnam, Cambodia, Indonesia, Philippines, and to some extent India.

What is notable is that developments in China have set in motion some dynamic adjustments in global sourcing pattern. Investors are scurrying for the next best location for manufacturing clothing, shoes, toys and other labor-intensive manufactures. Labor costs, investment climate, and trade policy will be the critical factors in determining location and source. Here lies the advantage of Bangladesh.

During the Sixth and Seventh Plan period, Bangladesh will position itself comprehensively - with supportive incentive schemes, investment incentives, and liberal import regime- for a solid berth in the new alignment of exporters. In terms of attractive trade and investment policies, Bangladesh will match countries like Vietnam and Indonesia which are vying to take a bigger chunk of the Chinese pie. This once-in-a-lifetime window of opportunity may not last for long. Success in this effort will ensure Bangladesh's claim for middle income status by 2021.

Export restructuring in a globalized economy: Global production sharing has been a striking feature of world trade in recent years. It generally entails the breaking up of the production process into vertically separate stages carried out in more than one country, involving both backward and forward linkages from the production stage in the commodity chain. Analysts have pointed out that the superior export performance of East Asian countries can be partly attributed to their strategic use of cross-national production networks within a globalized production system. Bangladesh manufacturing exports could also get a strong boost if it positions itself suitably within the global production and supply chain.

Two types of commodity chains have been identified:

Producer-driven commodity chains (PDCC): PDCC tends to be characterized in capital and technology intensive industries (e.g. automobiles, computers, semiconductors, and heavy machinery). Transnational corporations play a central role in coordinating production networks. International sub-contracting of components is common for most labor-intensive production processes. The main barrier to entry for this type of production network is capital and propriety know-how. Moreover out sourced production is controlled by TNC mainly through equity investment.

Buyer-driven commodity chains (BDCC): These types of chains are most prevalent in industries which are characterized by large retailers, branded marketers and trading companies. The large retailers usually set up decentralized production networks in a variety of exporting countries. The branded companies usually provide the design and order the goods and supply the specification. This pattern is common in labor-intensive consumer goods such as garments, toys, footwear etc as well. Control of production is ensured through non-equity arrangements with local firms through sub contracting. The world largest retailers like Wal Marts and Nikes are sourcing product under this type of arrangement. Indeed the new aspect of globalization is the ability of producers to slice up the value chain by breaking up the production process into many geographically separated steps such that a good is produced in a number of stages in a variety of locations, adding value at each stage. The assembly stage is a labor intensive activity using unskilled labor in which countries like Bangladesh have a comparative advantage. In readymade

garment exports, Bangladesh has already taken advantage of the BDCC system, but could reap similar benefits in other products such as toys, footwear, auto parts, TV parts and components. Trade in parts and components in the machinery sector are also fastest growing segment of world trade. During 2005-06 components manufacturing trade in Asia were above the world average by 15 percent and made up almost 75% of East Asian trade. During the Sixth and Seventh Plan period Bangladesh will have to position itself as a player in the global production chain based on its comparative advantage within a market niche. Its long experience with garment production chain gives it a competitive edge over newcomers.

Working on market access issues: Producing products of export interest and in accordance with Bangladesh's comparative advantage based on its factor endowments is only the first albeit the key step for export growth. Yet being competitive in exports is only a necessary condition for export success. Global trade is subject to various tariff and non-tariff measures that serve as barriers to market access, particularly for an LDC like Bangladesh seeking new export destinations and trying to open existing markets wider. For export success to be ensured on a sustainable basis, the government will be playing a proactive role in continuing efforts under the bilateral and multilateral umbrella to obtain Bangladesh's rightful claim to market access for diversified products and destinations.

It is well known that the Uruguay Round of trade negotiations opened global trade and reduced overall tariffs, but left the peak tariffs on products of export interest to LDCs like Bangladesh (e.g. tariff peaks on textiles and clothing). Although this has been partly compensated by various preferential schemes offered by OECD countries, such as GSP and EU's EBA, there are formidable challenges to be faced in reducing tariffs on Bangladesh's major export product (RMG) and emerging products that might be subject to WTO-compliant rules under SPS and TBT. A two-track initiative is visualized: (a) the government in partnership with chambers and think tanks will vigorously pursue the LDC option for S&D preferential market access under WTO's Doha Development Round; (b) on a bilateral basis, the government will continue to work on obtaining duty-free access for Bangladesh exports into developed markets such as USA, Japan, and Australia, while pursuing low-tariff market access options via reaching free trade agreements with individual emerging market countries or groups.

Furthermore, Bangladesh will also pursue the regional option to open markets and expand trade with neighboring countries in South and East Asia, under various regional or bilateral trading arrangements (e.g. through SAFTA, BIMSTEC or potential bilateral FTAs). Given Bangladesh's current tariff regime, most research indicate high cost of trade diversion from these initiatives, thus requiring further rationalization of tariffs so that benefits of trade creation offset trade diversion costs from regional FTAs. To gain market access through RTAs Bangladesh will have to reduce tariffs further, without which it would be difficult to forge regional trade alliances.

5.5 Challenges and Future Direction of Trade Policy Reforms

It is critical that the trade policy regime is geared to ensure productivity and export competitiveness while facilitating emergence and expansion of new export products. Such a trade policy regime is the backbone of a high-performing manufacturing sector.

The trade regime in Bangladesh also went through a series of reforms during the 1990s, resulting in a shift of regime from an inward-looking import-substituting bias to an outward-looking export-orientation bias with higher integration of the economy in the global economy. Bangladesh made significant progress in reforming the foreign trade regime to reduce import-substitution bias and make it pro-export. This is reflected in the simplification of trade licensing, removal of quantitative restrictions, reduction in custom duties, and the implementation of a flexible exchange rate policy. As a result the trade to GDP ratio has more than doubled since FY91, reaching 40 percent of GDP in FY10. This progress with trade liberalization has served Bangladesh well in terms of growth and poverty reduction. Nevertheless, the average tariff protection in Bangladesh is still very high (Table 5.4) as compared to most other South Asian countries, and even in comparison to regional comparators and high-performing economies like China, Vietnam and Malaysia (Table 5.5).

Table 5.4: Current Trade Regimes in South Asian Countries

Trade Policies	India (FY09)	Pakistan (FY08)	Bangladesh (FY11)	Sri Lanka (FY09)	Nepal (FY08)
Some QRs on imports	Yes	Yes	No	Yes (minor)	Yes (minor)
Some direct export subsidies	Yes	No	Yes	Yes	No
Indirect exports subsidies	Yes	Yes	Yes	Yes	Yes
Trade/GDP (%)	33.4	28.1	41.9	40.9	32.5
Avg. Custom duty	10	n.a	13.6	n.a	n.a
Customs duty+ Other Para-tariffs	10	16	22.1	27	12.5

Source: Policy Research Institute.

Table 5.5: Trade Regimes in comparator countries

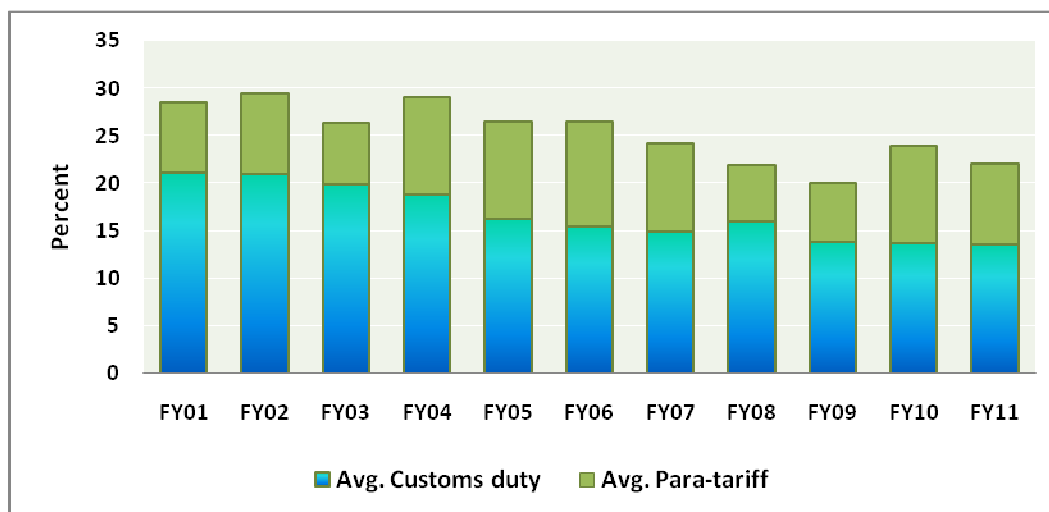
Trade Policies	China (2009)	Malaysia (2009)	Vietnam (2009)
Some QRs on imports	No	No	No
Some direct export subsidies	No	No	No
Indirect exports subsidies	Yes	Yes	Yes
Trade/GDP (%)	49.1	171.3	147.0
Avg. Custom duty	8.6*	5.9**	11.7**

Source: World Bank; Policy Research Institute; Google

One worrisome development in Bangladesh budgetary management is the growing importance of a range of supplementary duties (para-tariffs) that have grown in significance and are almost inversely correlated with the reduction in custom duties (Figure 5.1). These para-tariffs have tended to offset much of the gains intended for productivity enhancement and export promotion through the impact of lower customs duties on protection. Importantly, the current tariff regime undermines export competitiveness and impedes growth of new exports, thus restraining export

diversification. These tariff anomalies have to be removed sooner rather than later in order for Bangladesh to attain its vision of a high-performing export-oriented economy. Next, Bangladesh must, among other things, reduce average tariffs to levels already reached by countries such as Vietnam, Malaysia and China. This has to happen ideally by the close of the Sixth Plan in 2015, well before 2021.

Figure 5.1: Average Nominal Protection and Para-tariffs



Source: National Board of Revenue

Over time the Government has employed different measures to provide incentives to manufactured exports. As indicated earlier the reforms of the trade regime initiated in the early eighties continued to be undertaken by successive governments for greater outward-orientation. However, although the export sector has flourished, the momentum in export has been dominated by Ready Made Garments (RMG). Other export items failed to replicate the impressive success of this sector, primarily because the tariff and import regime precluded the absorption of world priced inputs. Exclusive facilities enjoyed by the RMG sector essentially allowed it to exploit Bangladesh's labor cost advantage to the fullest. Recently, footwear and ship-building have been given the RMG treatment and they are booming. Other non-RMG exports still face an adverse policy environment which will have to be addressed early on during the SYFP in order to achieve the export and growth targets over the long haul.

Trade liberalization has improved manufacturing efficiency and competitiveness. Tariff reductions and QR removal introduced a substantial degree of import competition in the local manufacturing sector, forcing enterprises to restructure and raise productive efficiency. Many did, such as ceramics, textiles (new spinning capacities), RMG accessories, electrical goods, etc. Those that failed to adjust including many public and private firms had to close down and lay off workers. Over the next decade, trade openness will deepen further so that only those manufacturing enterprises that remain globally competitive will survive and prosper.

The change in trade regime and opportunities created in the world market as part of these developments have been possible also because of the dynamism of the entrepreneurs who could exploit the opportunities in the international market and deal with the risks. The trade regime of Bangladesh has also contributed greatly towards efficient operation of the industry. Import

liberalization and the abolition of import licensing improved access of small enterprises to capital machinery, raw materials and implements that could now be purchased readily and at low cost. Though manufacturing growth averaged 7% per annum during the past two decades, this average masks the fact that it was the RMG enterprises that grew by over 20 percent per year and drove manufacturing growth.

The most remarkable feature of the export basket is the emergence of readymade garment (RMG) in the late 70s as export and its increasing dominance in the basket over the years. Readymade garment has replaced jute and jute goods in importance. Thus while the contribution of jute and jute goods declined from about 69 percent in FY81 to about 3 percent in FY09, readymade garment constitutes more than 75 percent of total exports in recent years. Equally striking is the fact that by the turn of the century, manufactured goods made up over 90% of our exports. While the predominance of manufactures is a positive development which needs to be sustained, export concentration in RMG imparts vulnerability to future export performance and has to be minimized through the emergence of new products and new export markets. The kind of free trade channel (duty-free imported inputs) provided to RMG would have to be extended to new and potential export products of the future. Ideally, a low duty and seamless import regime is the best compliment for export diversification. To cross the middle income threshold by 2021, Bangladesh will be transforming its trade regime to the kind we see in high-performing emerging market economies.

CHAPTER 6: OPPORTUNITIES FROM GLOBALIZATION AND REGIONAL COOPERATION

6.1 Globalization and Bangladesh

Globalization embraces diverse forms of international integration, including foreign trade, multinational direct foreign investment, movements of short-term portfolio funds, technological diffusion, and cross-border migration. The Bangladesh economy is more integrated with the global market today than ever before. This is largely due to rapid growth in trade, massive out-migration of labor and remittance inflows, liberalization of foreign exchange regime, financial sector reforms, and creation of a favorable FDI regime. In terms of real trade growth, Bangladesh has done well (13th of 130 countries) with trade-GDP ratio rising from 20 percent in 1990 to around 42 percent in 2011. Yet Bangladesh is regarded as a ‘least liberalized’ country ranking 140 out of 152, suggesting a large unfinished agenda. Its capital account, for example, remains restricted with complex capital controls and no convertibility; and there is widespread and arbitrary use of supplementary duties, taxes and other levies on imports, while both domestic and foreign investors find the cost of doing business very high.

Globalization presents opportunities as well as challenges for Bangladesh. Through expanding access to ideas, technology, goods, services and capital, globalization certainly creates the conditions for faster growth. Managed wisely, the new wealth generated by globalization creates the scope to lift millions of Bangladeshis out of poverty. Managed badly, it could lead to their further marginalization and impoverishment. What is clear is that missed opportunities in an age of globalization could be costly. Bangladesh having embraced globalization, the right policy framework and infrastructure will be put in place to seize opportunities coming its way and to address challenges.

6.2 Remittance Inflows

Besides strengthening our balance of payments position, remittance inflows have had significant impact on poverty reduction. Remittance inflows in 2011, at \$11.5 billion, were about 10 per cent of GDP. Sustaining the growth of remittance inflows could be a major source of external finance in the march up to the country’s middle income threshold by 2021. Government is strengthening institutional arrangements to facilitate remittance. However, increase of remittance flow will depend on the speed of economic recovery of the labour taking countries.

The Challenges

Three issues are involved in expanding remittances: training and recruitment of labor for overseas employment, ensuring rightful earnings, job security and wellbeing at workplace abroad, and speedy facilities for sending home remittances. A number of incentive measures has helped to accelerate the inflow of remittances: quicker delivery process, rapid transmission of messages, enactment of the Money Laundering Prevention Act 2002 (to be amended over time to meet emerging needs), exemption of remittance and return thereon from taxes, 10 per cent quota in initial public offers of local companies to non-resident Bangladeshis and allowing interest-

bearing foreign currency accounts in major currencies in Bangladesh, offering priority in industrial facilities – land, electricity, and import of machine and materials. Some more issues will be addressed during the Sixth Five Year Plan – regulation of private manpower agencies, evaluation and review of the system of licensing of the manpower recruiting agencies, strengthening management of the wage earners’ fund at important overseas workplaces and simplification of immigration procedures. A major challenge that will have to be addressed relates to the channeling of remittance into productive investment. To this end, migrants’ access to bank credit will be enhanced through appropriate institutional mechanisms such as the establishment of banks catering to the specific needs of NRBs.

Strategic Actions

- Close monitoring and supervision of the activities and practices of recruitment agencies in their provision of information of skill requirement, working condition, accommodation, benefits and obligations to migrants.
- Moving to technology-based system of effective practices for remitting money. This may include effective use of ICT-based networks including that of large NGOs subject to appropriate regularity framework in rural areas monitored and regulated within the framework of a modernized banking system.
- Giving labourers training in the vocations and skills that have a high future demand in global markets.
- The functions, roles, and staffing of foreign missions should be redefined to make such assessments and protect the rights of migrant workers.
- Making the Overseas Employment Policy more comprehensive so that it covers multiple aspects of migration, including workers’ and employers’ documentation, employment contracts, their implementation, and settlement of workers welfare claim.

6.3 Foreign Direct Investment

Properly harnessed, long-term foreign investment can bring important benefits to the Bangladesh economy. Bangladesh’s projected needs for investment in infrastructure for an expanding transport network and burgeoning urban centres cannot and need not be met from domestic resources alone. With improved economic management and a highly liberalized investment regime, and with strategic locational shifts in labor-intensive industries, Bangladesh could become an attractive destination for private capital flows over the next decade. This would be in addition to official bilateral and multilateral assistance to finance development projects.

The investment climate of a country is very important determinant of the countries attractiveness to foreign investment. For the longer-term, FDI must be encouraged for the technology transfer and spillover effects from improved management and productivity. Low levels of FDI so far have meant that Bangladesh has missed out on positive technology spillover.

FDI policy framework: During the Sixth Plan and beyond, foreign direct investment is encouraged in all industrial activities in Bangladesh excluding those on the list of reserved industries excluded on grounds of national security. Gas and electricity, roads, ports and telecommunications are priority areas for foreign capital.

Incentives to foreign investment. The government has liberalized its industrial and investment policies in recent years by reducing bureaucratic control over private investment and opening up many areas. Some of the major incentives are tax exemptions for power generation, import duty exemptions for export processing, an exemption of import duties for export oriented industries, and tax holidays for different industries. Double taxation can be avoided by foreign investors on the basis of bilateral agreements. Facilities for the full repatriation of invested capital, profit and dividend exist.

Strategic Actions

The Perspective Plan will consider the following strategic actions:

- A concerted and focused effort will have to be made during the Sixth and Seventh Plan to change the investment climate by giving high priority to constraints in infrastructure, regulatory framework, and policy environment.
- The general governance situation will be addressed. Efforts will be made to reduce cost of doing business to improve the country's image and stimulate foreign investment.
- A special effort will be made to encourage regional investment in emerging and potentially high return sectors (e.g. software development and IT from India, electronics from China).
- A major effort will be made to establish a string of Special Economic Zones (SEZs) along international borders. This is designed to stimulate cross-border investments and trade, in line with the successful examples of China and Vietnam.
- The private sector will be encouraged to enter joint ventures and other forms of collaborative investment with NRBs and foreign partners in areas of high potential.

6.4 Addressing the Multilateral Trading Regime

Addressing the multilateral trading regime will mean coping with the challenges of asymmetric and inequitable trading rules that are prejudicial to the trading interests and performance of LDCs, including Bangladesh. However, it must be borne in mind that Bangladesh's long-term interest lies in adopting a trading regime that enhances competitiveness as the economy moves towards middle income status.

Major Areas of Negotiation

Major areas of negotiation include duty-free quota-free market access, nonagricultural market access, and trade in services. Other important issues include rules of origin, anti-dumping and aid for trade.

The strategy to seek duty-free quota-free market access in developed economies is intended to open opportunities for a more diversified basket of labor-intensive exports from Bangladesh, beyond RMG, thus generating jobs for low and semi-skilled workforce. In non-agricultural market access, the existing tariff preference margin is not sufficient to cover the administrative costs associated with fulfilling Rules of Origin requirements. For trade in services, the most important issues include the temporary movement of natural persons under Mode 4 as well as on the cross border supply of services under Mode 1.

Under Rules of Origin, Bangladesh is often unable to fully utilize preferential market access provided to them, because of stringent Rules of Origin requirements, which have to be fulfilled.

The use of simple and transparent Rules of Origin criteria would undoubtedly enhance market access for Bangladeshi exports, as evidenced by the 25% value addition criteria set by Canada and the new one-stage fabrication requirement implemented by EU. The imposition of anti-dumping measures creates hurdles to achieving better market access. Developing countries, including Bangladesh, have not received the special consideration mandated by the ADA, and this has undermined their potential to benefit from trade liberalization. The WTO anti-dumping rules therefore need to be amended. The benefits of Aid for trade, which was incorporated in the Hong Kong Ministerial Declaration for the first time as a special and committed assistance, are yet to accrue to LDCs including Bangladesh due to the lack of trade-related infrastructure facilities and deficiency of knowledge on market access possibilities.

Strategic Actions

Specific strategic actions with regards to the areas and issues mentioned include:

Agricultural Trade

- As a net food-importing LDC, Bangladesh should support negotiations for reduction and elimination of export and domestic subsidies and in favor of agricultural trade liberalization.
- Food aid is essential in supporting the poor section of the population. However, when an LDC needs cash support, there should be flexibility in the monetization of food aid. Bangladesh should negotiate along these lines.

Aid for Trade

Trade should be mainstreamed in the country's national development agenda, and should particularly incorporate Aid for Trade.

Duty and Quota Free Trade

- Bangladesh has a list of products covering 97 per cent of exports qualifying for DFQF market access. Many potential exports lie within this broad list. Policy support can be provided for developing export products from this list while efforts are on to reduce tariff peaks on the remaining 3 percent.
- Bangladesh needs to strengthen its negotiation capacity at multilateral platforms to enhance Duty-Free Quota-Free access under Annex 4 of NAMA.

Non-Agricultural Market Access

- Bangladesh will play an active role in the global community for establishing a "competitiveness fund", or other development assistance, due to preference erosion, which will help to undertake adjustment programmes.
- As Bangladesh approaches middle income status, more effort should be focused on enhancing competitiveness of Bangladesh's exports.

Trade in Services

- Support negotiation for a mechanism to secure "permanent, non-reciprocal, special priority", consistent with the provision of GATS.
- Strong negotiation for market access for natural persons in Mode 4.

Rules of Origin

- Negotiate for establishing simple, transparent and preferential Rules of Origin and a lower value addition (e.g. Canadian GSP required 25% domestic value addition)

Anti-dumping

- Until ADA rules are suitably reformed, it is necessary to seek a moratorium on anti-dumping action (A provision for imposing penalty/extra tariff by the importing country on suspicion of low-priced exports to protect local industry from unfair competition) on exports for a certain period.

Capacity Development in Trade Negotiations

- Measures will be taken to consolidate and expand capacity for trade negotiations.

6.5 Strengthening Regional Cooperation

In recent past, regional cooperation has gained momentum as countries in South Asia recognize the enormous potential of raising living standards and eradicating poverty by harnessing the region's potential in areas of water, energy, transport, trade and investment. The range of possible areas of cooperation is large; but such cooperation to be sustainable must emerge from national interests and must be win-win for all countries. During the period of the Perspective Plan, Bangladesh intends to play a proactive role in seeking out opportunities for beneficial cooperation in the South Asia region and beyond. Other openings for such cooperation have come from its membership of the Asia Pacific Trade Agreement (APTA) and Bay of Bengal Initiatives for Multi-sectoral Technical and Economic Cooperation.

Case for Sub-Regional Cooperation

In recent years, proposals for sub-regional cooperation between Bangladesh, India, Nepal and Bhutan have been gaining ground. Bangladesh, India, Nepal, Bhutan and Myanmar are endowed with rich complementary resources that offer significant opportunities for cooperation in several sectors. The framework for cooperation indicated below stipulates huge gains for Bangladesh in several areas.

Trade and trade facilitation: Presently, Bangladesh annually exports goods worth only \$350 million approximately through official channels to Bhutan, India, Myanmar and Nepal. The potential is much larger. A major constraint is non-tariff barriers (NTBs) in terms of negative lists, quality controls, customs procedures, border facilities, transport and transit arrangements, and the like. Removal of these restrictions and upgrading of border facilities will likely facilitate trade substantially in the sub-region and help boost Bangladeshi exports.

Regional transport: A major constraint on trade and exports is transport costs due to primitive and restrictive transport arrangements within the sub-region as well as poor infrastructure. Bangladesh has limited natural resources, but one major asset is its access to sea. It has two sea ports (Chittagong and Mongla) that are not used to their true potential. Examples of countries that have successfully converted such assets to substantial development gains include Rotterdam port in the Netherlands, Singapore port, and the Hongkong port. Bangladesh can also strive to convert this advantage into national economic gains by modernizing and upgrading these sea ports to serve as international ports with traffic open to all including the regional neighbors of Bhutan, Nepal and India. Even Western China stands to benefit from an opening to the Bay of Bengal. Additionally, investments will be needed to modernize and upgrade related rail, road and

inland waterway linkages. The benefits for Bangladesh in terms of investment, trade, transit fees and port charges can be enormous.

Energy trade: With higher growth in South Asia, demand for energy has grown tremendously. In the North East sub-region, both India and Bangladesh are energy deficit. On the other hand, Bhutan and Nepal have tremendous hydro-power potential. Bhutan is already engaged in very successful hydro-power exports to India. Nepal's hydro-power potential is estimated at around 80,000 MW and of this some 40,000 MW is believed to be economically viable. As compared to this, Nepal has developed less than a 1000 MW of power so far. Parts of India's North East along the Brahmaputra and Meghna River Basins also have hydro-power potential. Given the outlook for international oil prices and the adverse effects of fossil fuel use on climate change, a sustainable long-term solution to power needs in the North East sub-region including Bangladesh will require development of hydro-power in Nepal and Bhutan as well as parts of North East India for exports to Bangladesh and India. Other sources of clean energy, such as gas, need also to be developed for conversion to power with possibility for trade. Yet another possibility is regional power trade based on varying patterns of demand and capacities. This requires compatible grid interconnections between Bhutan, Bangladesh, India and Nepal along the bordering areas. Preliminary technical analysis suggests considerable potential here and a win-win for all.

Water management: The biggest potential gains are in water management, particularly for the poor. This is also the area where vulnerability is most serious, especially for Bangladesh that lies furthest downstream before the three mighty rivers Ganges, Brahmaputra and Meghna meet the sea. The range of issues include cooperative arrangements to address long-term vulnerability emerging from climate change (e.g. availability of water, coastal belt flooding from rising sea level) to immediate solutions to reduce flooding, making more water available for irrigation, and producing hydro-power for regional use. In the past water agreements have been difficult to come by because of the tendency to think of this resource as a zero-sum game: more for my neighbor means less for me. This need not always be the case. A package deal that looks at hydro-power, irrigation and flood control together based on an equitable sharing of financial costs and benefits will likely show that a cooperative solution is indeed a win-win.

FDI and Joint Venture: Foreign Direct Investment in Bangladesh has been less than the potential in relation to the South Asian region. There are some Indian investments in Bangladesh, but their volume is not substantial. The main constraints to FDI are inadequate and inefficient infrastructure facilities, such as power, transport and communications, and port facilities. Even if these were to be addressed, substantial challenges would remain that need to be handled at the political and diplomatic arena. Potentially promising areas of investment cooperation include gas exploration, petrochemicals, textile machinery, electrical, electronic and leather goods. Health, education and tourism also offer potential. Existing cooperation in jointly combating terrorism, militancy and illegal drugs/arms trafficking can be strengthened to every country's benefit.

Cooperation on Road and Highway Projects: The idea of greater transport connectivity among the Ganges- Brahmaputra - Meghna basin countries – Bangladesh, Nepal, Bhutan and north-eastern India was conceptualized as early as 1959 but gained traction under UN-ESCAP sponsored proposal of the Asian Highway System in the 1960s. In the late 1990s, the Bangladesh government endorsed the following objectives of the Ganges-Brahmaputra-Meghna triangle: joint development and management of water and other resources, development of physical

infrastructure such as roads, railways and ports, and cooperation in other areas such as environment protection and tourism. It was clearly felt that Bangladesh should not be left out of the opportunity of developing links with other parts of the region and beyond. Hence, the support for the grand Asian Highway System (which is a roadmap for further regional, sub-regional and bilateral cooperation) gained momentum. The system is expected to open the gateway to domestic investments and FDI in Bangladesh. A very specific benefit relates to Bangladesh's strategic location for use as valuable route for trade and commerce of India, Nepal and Bhutan.

Strategic Actions

Long-term strategies for strengthening regional cooperation include:

- More vigorous efforts in multiple forums to make SAFTA, APTA and BIMSTEC more effective organizations.
- Forging effective cooperation in trade, cross-border investment and all the other areas of mutually beneficial activities.
- Initiatives to resolve cross-border issues and undertake joint projects, such as production and distribution of electricity, gas, coal, fertilizer and other products, all on a win-win basis.
- Participation in the grand Asian Highway and Asian Railway Systems that generate win-win outcomes. This however calls for development common standards through establishment of institutions backed by adequate financing from participating governments.

CHAPTER 7: TOWARDS A DIGITAL BANGLADESH BY 2021

Much of the impetus to higher growth will come from additional private and public investment, particularly in the areas of agriculture, manufacturing, infrastructure and human development. Yet, the experience of Bangladesh shows that it has not benefitted much from productivity improvements. A key strategy and policy focus of the Perspective Plan is to enhance productivity in all sectors of the economy. Among other factors, productivity improvements depend on research and technology. The world has moved with new knowledge and technology; Bangladesh has a lot of catch up to do. Emphasis on knowledge economy is a key development priority for Bangladesh.

Vision 2021 focuses on the Digital Bangladesh strategy to highlight the tremendous capacity of information and communication technology to help steer the country's development during the Perspective Plan. The national ICT Policy 2009 has expressed its vision in terms of expansion of information and communication technology and its huge potential in establishing a transparent, committed and accountable government, the development of skilled manpower, improvement of social justice, and management of public services. Put together, this will generate the impetus to move Bangladesh towards a poverty-free middle income prosperous country by 2021.

7.1 Knowledge Economy

Talk of labour or capital intensity has now evolved into talk of knowledge intensity. In the 21st Century, comparative advantage will become much less a function of natural resource endowment (such as coal or iron) and capital-labour ratios; it will be much more a function of technology and skills.

The IT revolution has intensified the move towards knowledge codification, and increased the share of codified knowledge in advanced economies' knowledge stock. Information and communication technologies have greatly reduced the cost and increased the capacity of organizations to codify knowledge, process and communicate information. In short, ICT is the vehicle of the knowledge economy.

7.2 ICT and Science and Technology for National Development

Science and Technology. World over, science and technology (S&T) has become not only a way of life, but has been identified as an instrument of change, in the globalized world. Flood-resistant crops are a must for the country with chronic floods, dwindling arable land and rapidly growing population; all these plays a determining role in economic development as well as sustainable development – all these cannot happen without S&T.

The new Science and Technology Policy focuses on scientific research and production using indigenous resources as much as possible. It focuses on finding solutions to the emerging problems in agriculture, health, environment and climate change. The new Policy suggested access to quality educational materials for studying science, mathematics, engineering and other subjects requiring instruments. At the same time provision may be made for attracting Bangladeshi researchers living abroad. To encourage innovation and production of new technology a proper institutional system of copyright and patent should be established. In view

of the expanded agenda for research in science and technology, a higher share of GDP will be allocated for research and development.

It is crucial to strike the right balance between science and technology. In fact, to reverse the trend that science education has been attracting less number of students in secondary, higher secondary and higher education, an overemphasis may be necessary for a limited period of time in the form of special incentives, recognition, further education and employment opportunities for students choosing this stream of the education system.

ICT in Bangladesh. The importance of science and technology in general, and of ICT in particular, has led the Government to formulate the National Science and Technology Policy and National ICT Policy 2009.

In pursuance of this policy Bangladesh's ICT sector is growing at an estimated 20% per year. From the perspective of policy reform and development, the Access to Information (A2I) Programme (based at the Prime Minister's Office) identified over 53 e-citizen services which were termed as quick-win activities. 21 of these quick-win activities have already been launched, while the rest are being pursued either independently by the implementing ministry/implementing agency. The project has already provided technical assistance to ministries and divisions to develop their websites and imparted training to key officials. As part of the Digital Bangladesh strategy's formulation and planning, the project developed a concept note on Digital Bangladesh and assisted the Ministry of Science and ICT to develop a five-year budget to implement Digital Bangladesh projects.

The ICT Policy cuts across numerous thematic groups, including Education, Science and Technology, Infrastructural Development, Employment Generation, Private Sector Development, Agriculture, Health including Nutrition, and Small and Medium Enterprises. The Science and Technology Policy, including ICT, will deal primarily with overall policy, leaving details to the appropriate thematic groups.

The main goals of Science, Technology, and ICT Policy are:

- Establishing more institutes of higher learning in science and technology.
- Allocation of a higher share of GDP to research and development.
- Productivity increase in all spheres of the economy, including Micro, Small and Medium Enterprises.
- Inclusion of ICT in education and research to expand the scope and standard of knowledge on ICT throughout the country; to ensure computer literacy at all levels of education and government; to encourage creativity.

7.3 Constraints to ICT related activity and priorities:

Constraints

- Lack of capacity: The teachers of universities are not sufficiently trained to adopt current changes in science and technology.
- Limited access to scientific sources
- Electricity and power instability
- Lack of coordination among ministries

Priorities in ICT strategy:

- Development of a comprehensive master plan
- Framing of a universal access policy
- Developing legal and regulatory environment for ICT development
- Ensuring access to Government information
- Promotion of e-commerce and automation of financial sector
- Establishing E-citizen services
- Enabling E- participation in decision making
- Developing curriculum based computer labs for education institutions
- Expanding digital content in Government websites
- Attracting local investment and FDI in ICT sector through PPP initiative

The above strategies are to be implemented in the short and medium term (5 years) along with some complementary strategies to be stretched in the 10 year time frame.

7.4 Issues Relating to ICT and Digital Bangladesh

While acknowledging the many contributions that ICT can make to development in Bangladesh, a few words on the balancing of ICT and Digital Bangladesh with other areas of the economy are in order.

Leapfrogging with Digital Economy and Balanced Growth: Large infrastructures are also necessary along with ICT and knowledge based strategy for growth. The productivity of agricultural labor accelerated with the use of industrial and biological innovations. Knowledge helps an economy through technological innovations and their application to different sectors of economy- in our case particularly to agriculture and industry. Bangladesh could pursue manufacturing and agro-based industries more aggressively to build a robust industrial economy that could be made more efficient with ICT.

Software market: There is much enthusiasm among educated people in Bangladesh for the software market in the United States and Europe. Indian software successes are attributed to in-depth IT training in India with the US Silicon Valley, and to some extent on the standard of English language in the Indian IT community. With the necessary support and training, Bangladesh can position itself as outsourcing supplier.

The rapid growth of IT will likely lead to a digital divide in the short term, where the rich and educated are empowered and enriched by IT, while the poor do not benefit. The challenge for government is to create access across social divides.

7.5 E-governance

E-government is related to the delivery of government services and information to the public using electronic devices. E-governance will manage the way that citizens deal with the government and with each other, allow citizens to communicate with government, participate in government policy making and planning, and to communicate with each other.

Strategy for E-Government: A sound e-government policy should include a focus on end-users and demand-driven services. Government services will be made available through e-government. Government should prioritize the services that they will initially offer online, such as (i) revenue collection, (ii) improved financial management, and (iii) creation of a better investment environment.

E-Governance Promoting Digital Democracy: Digital democracy is the computerization of political discourse, policy-making and the political process. It ultimately increases, enhances and deepens citizen participation in government policy and decision-making processes through electoral campaigns, voting, consultation, public opinion polling and communication exchange between elected officials and constituents.

ICT will contribute to the improvement of E-agriculture, E-medicine, E-learning, and many other knowledge areas. Mutual reinforcement and linkages will allow everyone to benefit.

7.6 Strategic goals for the long-term

- Research and development will be greatly promoted to promote science. Allocation for R &D will be raised significantly from the current 0.6 percent of GDP.
- ICT education will be made compulsory at the secondary level by 2013 and at the primary level by 2021.
- Tele-centre/community e-centers with internet facilities in unions will reach 50 per cent by 2015, and 100 percent by 2020.
- Computer laboratories will be established in government primary schools, first with 5 by 2014, then with 10 by 2017 and finally with 20 computer sets by 2021.
- The E-governance model will be developed and implemented. It will begin with e-tenders and e-bill payments.
- Introduction of E-governance at all executive levels of government by 2015.
- Arrangement for electronic GD and FIR at all Police Stations, initially in Dhaka and then in other metropolitan areas by 2015, and in all police stations by 2021.
- Increase teledensity to 70 per cent in 2015 and 90 per cent in 2021.
- Expansion of broadband to 30 per cent in 2015 and to 40 per cent in 2021.
- Introduction of wireless broadband (Woman) across the country by 2015.

It is hoped that by implementing plans set out in the Digital Bangladesh policy, the country will move towards the status of a poverty- free middle income prosperous country by 2021.

CHAPTER 8: ENERGY SECURITY FOR DEVELOPMENT

8.1 Energy Strategy for the long-term

Per capita consumption of energy in Bangladesh is on an average 160 kgoe (kilogram oil equivalent) compared with 640 kgoe in Asia and far less than 530 kgoe in India, 510 kgoe in Pakistan, 470 kgoe in Sri Lanka and 340 kgoe in Nepal. It is evident that per capita average consumption of energy in Bangladesh is significantly lower than the average for Asia, and it is even lower than those of South Asian countries. On top of this low level of consumption, there is already a serious energy crisis which is the result of sluggish growth in energy supplies while the demand for energy has grown by leaps and bound attendant with higher economic growth.

Clearly, the situation calls for an urgent but well-crafted sustainable long-term strategy to address the energy crisis and increase the energy supply to support Bangladesh's development. Accordingly, the Government has adopted a comprehensive energy development strategy². The strategy provides a balanced approach that looks at both supply increases and demand management aspects of the energy market in a long-term horizon. Energy options from domestic sources needs to be complemented with possible options for energy trade. Specifically, the strategy will address what the government can do about gas and power, and will look at options for diversification of fuels for generation. The strategy will also explore alternative solutions such as increased electricity imports from neighboring countries and LNG trade. Furthermore exploration of domestically available resources, such as coal and oil and gas from offshore drilling will be intensified. The supply side options will be balanced with policies for demand management that conserve energy and discourage inefficient use of electricity.

8.2 The Present Electricity Situation

The country appears to be experiencing a power and energy crisis owing to neglect of the sector in the past. The present electricity crisis is manifest in costly load shedding. The stalemate over the use of fine quality coal available in the country is yet another aspect of this power and energy crisis. There should be a government effort to find solution to the technical issues of surface versus deep mining and social implications thereof.

The crisis has, however, been neglected. The demand for power has increased, but its generation has not. Small power plants have been installed through private sector. Reform programmes to resolve the emergency, and development of the power sector are in progress. Foreign funds have been made available to implement the programme for reform.

Current Challenges in Power sector

- Matching supply and growing demand for electricity;
- To ensure energy security for all;
- To economize consumption of natural gas, thereby releasing gas for use as fertilizer, or to increase the use of coal for electricity production to release gas for alternative use;
- Finalization of the coal extraction plan;
- Reasonable cost-effective price policy for gas, coal and electricity, these being under government control;

³ Power Sector Future Rolling Plan (draft), Power Division, MOEMR; Sixth Five Year Plan 2011-2015, Energy and Mineral Resources Division, MOEMR.

- Energy mix for electricity generation;
- Energy conservation;
- Promotion of renewable energy;
- Efficiency of the power sector; and
- Reduction of system loss.

The Strategies, Constraints, and Possibilities of the Sector Strategies

- Strategies to diversify the use of primary fuels, such as gas, coal and liquid fuel, for power generations while containing cost thereof;
- To have provision for dual fuel in power plants wherever possible;
- To increase power generation through renewable sources, such as solar, wind, small hydro;
- To implement nuclear fuel based power plant ensuring adequate safeguards;
- To finance power generation projects through Public–Private Partnerships;
- To increase sector efficiency, reform measures must be implemented.
- To adjust price with a view to reducing burden of budgetary subsidy while ensuring affordability to consumers.
- To raise efficiency of power sector to contain cost and as well as technical and operational.

Constraints

- Absence of adequate public and private investment in power generation;
- Absence of Cost Reflective Tariffs;
- Absence of Primary Fuel Supply Chain.

Possibilities for long-term development

- Coal-based power plants using domestic and imported coal;
- Ruppoor Nuclear Power Plant;
- Availability of new gas both offshore and onshore;
- Public-Private Partnership Projects;
- Prospect of participation of local investors in the sector.

8.3 Energy Security and Electricity for all by 2021

Targets of the Power Sector in the Perspective Plan:

Vision 2021 targets for electricity production

Electricity generation in the country by **2013**: 11,959 MW

Electricity generation in the country by **2015**: 15,357 MW

Electricity generation in the country by **2021**: 20,000 MW

Electricity for all by **2021**

Objectives during the Perspective Plan

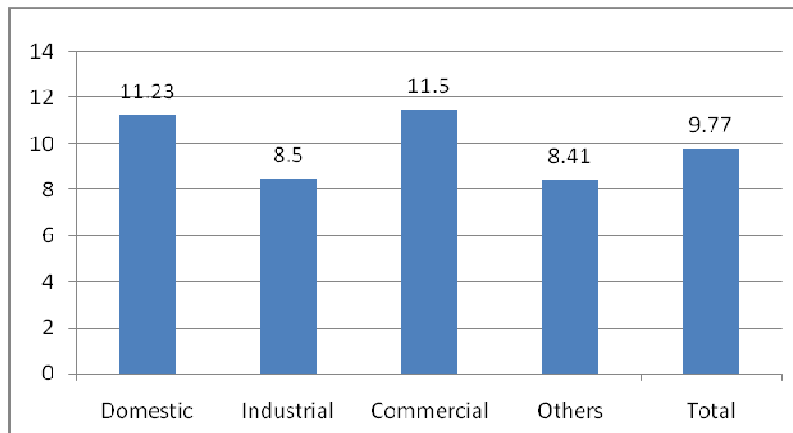
The following objectives for the sector have been envisioned:

- To ensure energy security,
- Making the power sector financially viable for facilitating economic growth;
- Increasing the sector's efficiency;
- Introducing a new corporate culture in the power sector entities;
- Improving the reliability and quality of electricity supply;
- Economize use of natural gas, coal and oil as the primary fuels for electricity generation;
- Increasing private sector participation to mobilize finance;
- Ensuring a reasonable and affordable price for electricity by pursuing least cost options;
- Promoting competition among public –private entities.

8.4 Demand for Electricity

Electricity is the cleanest source of energy. Demand for electricity rises as income rises and as people desire a better quality of life. During 2000 and 2007, the overall demand for electricity has risen by about 10 per cent annually. Demands from residential and commercial consumption have risen more rapidly than those from industrial and other sectors. (Figure 8.1).

Figure 8.1: Growth (%) of Power Consumption by Sector, 2000-07



The intensity of use of electricity has risen tremendously over time. In the early 1980s, it stood at about 30 GWH per thousand crore taka of GDP. This increased to over 80 GWH by 2002. The change in the structure of GDP in favour of manufacturing and services, as well as rapid urbanization and wasteful consumption, are among the major reasons for the increase.

With an average 12 per cent rate of growth, generation should double in about every six years. That means that by 2021, the need for gross generation shall be more or less four times the present demand. In December 2009, the installed capacity of power plants was 5,803 MW and the de-rated capacity was 5,250 MW. In these circumstances, the Vision 2021 figures, i.e. 15,357 MW of power generation by 2015 and 20,000 MW by 2021 are the minimum that should be accomplished.

Efficient energy use: Energy saving bulbs are already in the market. Future energy saving household gadgets and equipments may have the potential to reduce electricity consumption. Under the circumstances, the figures of Vision 2021, i.e. 20,000 MW of power generation by 2021 (which is around 600 kwh per capita consumption, compared to 146 kwh in 2007) looks feasible. This will indicate a power generation development growth rate of around 10 per cent over the period of the OPP. This may be considered respectable for a sector that has been playing truant over the last decades.

8.5 Supply of Electricity

In order to achieve these goals in the Vision 2021 period, governance of the sector has to be strengthened, keeping efficiency and integrity at a very high level. The sector is highly import-dependent for its machinery and maintenance equipment. They are expensive and demand much high-technical inputs in an oligopoly market situation, which distorts price and complicates procurement processes.

Power supply has consistently lagged behind demand in recent decades. This cannot be allowed to persist if the economy's goal of reaching middle income status by 2021 is to be attained. Bold decisions have to be made on procurement of power plants. Principles on the pricing of electricity have to be based on the true alternative cost of gas, the main input for electricity generation today. Maintenance and depreciation of the plants and machinery must also be factored in. System loss in distribution must be addressed. In seeking to achieve double-digit GDP growth, private investment including FDI has to be depended on. The availability of an even flow of electricity at competitive price must be ensured.

Balanced Generation, Transmission, and Distribution

In power sector planning for the long-term, there should be a balanced growth of generation, transmission and distribution capacities. Even within the regime of generation, the availability of gas or coal should be taken into consideration.

There is a long list of projects and programmes under implementation or negotiation that could increase the generation, transmission, and distribution of electricity. These would be better considered under the Sixth Five-Year Plan with appropriate projections for 2021. Generation of electricity is mainly related to non-renewable energy consumption (coal, gas, and others). As a result, the emission of greenhouse gases, such as carbon dioxide, increases environmental degradation and pollution. But more power for development is needed; therefore, saving power as well as renewable energy for future generations is needed. To increase energy efficiency and capacity, renewable energy sources e.g. solar, small-hydro, geo-thermal, wave, wind and tidal energy, particularly in the coastal belt area will be promoted.

8.6 Contribution of the Private Sector to Power Generation

Within the purview of the Private Power Generation Policy, independent power producers began power generation from 1998-99. Purchasing rental-based power started in 2007 to cope with the power crisis. Gas-based power generation capacity through small power plants and rental power shall be contained to reduce cost.

Power sector policy has been revamped to encourage private investors to take a lead role in power generation. Presently the private sector accounts for almost one-third of the country's power generation. However by 2021, it is estimated that the private sector will be in a position to account for two-third of the total power generation.

Public private partnership is another option that is being encouraged. This could help to keep private sector price increases within reasonable limits, assuming that public sector efficiency and integrity can be ensured. Its best contribution could be initiatives jointly led by the public and

private sector to predict power demand and plan generation accordingly, thereby helping to ensure energy security. This will also reduce pressure on the government budget.

System Loss

System loss of more than 4 per cent in power generation is not acceptable. It has been stated that average system loss of power generation by the PDB is 6.35 per cent. The government will plan to reduce system loss to a specified limit.

Cost of Electricity

The preceding discussion shows that the purchase, operation, and maintenance of plants at the generation stage, and system loss and power purchase from private sector, will lead to increased spending on generation and consequent higher cost of power supply. Ultimately, the price per unit of electricity needs enhancement. While some enhancement will be necessary in the immediate future, causes for the increases in cost shall be examined and corrective measure taken.

Much of the PDB's loss is attributable to rental power, in addition to its own system loss. A strong Energy Regulatory Commission will have to address these issues.

8.7 Energy Mix for the long-term

The present energy mix in Bangladesh compared to global position is shown in Table 9.1.

Table 8.1: Energy Mix in Bangladesh Compared to Global Position

Energy	Bangladesh		Global	
	Current	2021	Current	2030
Gas	87.5%	30%	18%	28%
Oil	6%	3%	10%	5%
Coal	3.7%	53%	37%	38%
Hydro	2.7%	1%	17%	4%
Nuclear	0%	10%	17%	19%
Renewable	0.5%	3%	1%	6%

About 88 per cent of the country's power is currently generated from gas and about 50 per cent of the consumed commercial energy is used for power generation. A more balanced fuel-mix will be needed to ensure energy security by 2021.

Coal: Although 37 per cent of global power is currently generated from coal, the contribution of coal in Bangladesh's power generation is very meager at only 3.7 per cent – and this despite Bangladesh wealth of coal reserves. There is little scope for additional power generation from gas. Therefore, there is no alternative than to depend on coal for future power generation.

The country's coal reserves remain largely unexploited. Power generating capacity should reach 20,000 MW by 2021 to meet the projected power demand. Presently, gas can contribute just 3115 MW to power generation. Bangladesh can easily meet its energy demands until 2021 from coal reserves. The estimated coal reserve for Bangladesh is 3300 million tonnes in Barapukuria, Khalashpir, Phulbari, Jamalgonj and Dighipara fields.

Carbon-trading: In line with the Kyoto Protocol, there are procedures for reducing carbon emissions through carbon-trading. Countries that emit more carbon dioxide than agreed have an opportunity to compensate for that extra use. This involves financial transactions that emit more than the agreed amount of carbon dioxide and those that use less. Reports suggest that, in 2008, this type of carbon trading was worth US\$ 92 billion. Bangladesh's carbon trading projects may

result in an annual reduction of about 300,859 tonnes of carbon emission. Therefore Bangladesh could potentially earn US\$ 5,415 million per year through carbon trading.

Gas: There has been both optimism and pessimism over Bangladesh's gas resources. There had been an impression that Bangladesh was floating on natural gas, but it is now understood that Bangladesh's known gas reserves are sufficient to meet national demands until 2019.

It is widely felt that Bangladesh's gas resources should first be used for domestic purposes, such as electric power generation, fertilizer production, and transportation. There is more pressure for greater use of coal for electricity generation, releasing gas for very many other economic uses.

8.8 Non-traditional/Renewable Energy

The power generated from renewable sources is now 1 per cent of total power generation in the world. This it may reach 3 per cent in 2021. The power now generated in Bangladesh from renewable sources is only about 20 MW, which is some 0.5 per cent of the total energy mix. Provided that foreign investment becomes available to implement a renewable 500 MW power generation project by 2021, its share in power generation may then reach 3 per cent. Bangladesh is currently negotiating with the Russian Federation to set up a nuclear based energy plant. The outcome, in terms of production would be 2000 MW, which is expected to come on stream by 2021. Solar energy, hydroelectricity, bio-gas, ethanol from zatropa seeds, windmills, and other sources of renewable energy will be explored as the use of hydro-carbon based fuels reduces.

The prospects for **hydroelectric power** generation in co-operation with Nepal, Bhutan and India deserve to be explored further. A 20-year hydro-power development plan is planned for the Himalayan region. This plan will be implemented by the year 2027. It is thought that through regional cooperation this hydro-power will be the prime regulator in meeting the regional power deficit. But there is little possibility of this power contributing to the regional grid by the year 2021.

Solar energy has real prospects in Bangladesh. In the long run, solar energy appears to have an unlimited supply. Research and experimentation, including wind power, should be encouraged. The government will also take advantage of clean development mechanism policies to secure external funding in energy efficiency, development of alternative sources of energy and enhancing carbon storage capacity.

Power Imports

The import of electricity from India and Bhutan are worth exploring. Myanmar has satisfactory gas reserves. Bangladesh could negotiate for import of gas from Myanmar.

8.9 Fuel: Oil, Gas, and Coal

The objectives of the oil and gas sector/sub-sector in the Perspective Plan period (2010-21) will include:

- Increase the reserve base and production of gas through accelerated exploration, appraisal and development of gas fields, production augmentation and optimization of recovery. The transmission and distribution network will be developed in line with that.
- Give priority to the conversion of probable and possible reserves to proven ones and also to converting delineated gas resources into reserves.
- Reduction of system loss, both technical and non-technical, and improvement of end use efficiency.
- Promoting geographically equitable or balanced development in terms of equitable development opportunities through gradual expansion of pipelines and supply of gas to southern, western, and northern areas of the country.

- Improving the security of petroleum product supplies.
- Popularization and expansion of domestic LPG use to discourage new domestic gas pipeline connections.
- BPC will prioritize the enhancement of its import/refining, storage and distribution capacity.
- To meet energy demand, efforts will be made for regional energy cooperation in addition to exploring internal sources.

Distribution of energy in different regions of the country and production of LPG

The present production of gas in the country is about 2,000 MMcft. Efforts should be taken to supply more LPG to the western part of the country.

The growth of demand for gas

The demand for gas for power generation has risen in recent years, while demand for fertilizer rose until the mid 1990s. Since the mid 1990s, the consumption of gas by the fertilizer industry has remained largely static. All other sectors have experienced rising trends. The fastest growth in demand of natural gas is from industry, with an annual increase in demand of about 13 per cent (Table 8.2), which may double in less than six years.

Table 8.2: Demand for Natural Gas, 1991-2007

Sector	Average annual growth rate (%)
Power	8.2
Fertilizer	3.9
Industry	12.6
Domestic	12.0
Total	7.7

The country has 22 gas fields, of which 13 have producing wells and three have suspended production. Six fields have not yet started production. The total reserve (proven and probable) is 28.40 Tcf of which the total recoverable reserve, according to latest estimates, is 20.50 Tcf. Of this recoverable reserve, by December 2009, 8.73 Tcf has been extracted, leaving a maximum of 11.77 Tcf to be produced.

While sustained energy supply is a prerequisite for economic development, estimates indicate a gap in demand and supply of gas. As the current reserve (11.77 Tcf) is not sufficient to meet the increasing demand, strengthening of exploration, development and transmission network expansion is necessary.

There are prospects of discovering more gas in the country. Some reports suggest a 95 per cent probability of finding at least 8.43 Tcf of new gas discoveries. The maximum that may be

discovered are respectively 65.7 Tcf (with 5 per cent probability) and 64 Tcf (with 10 per cent probability). The mean expected discovery level (with 50 per cent probability) is 32 Tcf. Overpressure has been observed in many gas wells, which may be indicative of further large hydrocarbon pools in Bangladesh.

Energy Conservation

Energy conservation is one of the most important issues of the sector due to economic and environmental reason. However, until very recent past no serious attempts were made to take up and implement energy conservation programmes which has been given due importance in the National Energy Policy of Bangladesh (1996).

8.10 Long-term Strategies

Reaching middle income status by 2021, while ensuring energy security calls for adoption of a coherent and long-term approach to managing the demand and supply of energy resources. With this end, the following long-term strategies are being pursued:

- Serious efforts are being made to keep energy supply in line with the rapidly increasing demand.
- Construction of power plants must proceed, and contract negotiations must be transparent and accountable.
- Private sector involvement in electricity generation shall take account of the cost price aspect in relation to the public sector. This will also lead to generation of enough revenues and resources for further investment.
- The energy mix shall make more use of coal, if necessary imported coal, in the short and medium term.
- Nuclear energy must be explored.
- Priority will be given to regional cooperation for the import of electricity.
- There must be a deliberate policy of energy conservation and the policy should be effectively enforced.
- Pragmatic approach will be taken for exploration, production and utilization of natural gas and accordingly implement short, medium, and long term programmes.
- As the energy sector is highly import-oriented, transparency must be assured, including through parliamentary oversight. Energy efficiency and performance auditing will be promoted.

CHAPTER 9: TRANSPORT AND COMMUNICATION FOR THE FUTURE

9.1 Transport

Introduction

Transport is vital in fostering economic growth and development. Securing improvement in transport system is therefore a major strategic objective to accelerate growth during the perspective plan period. The vision of the perspective plan is to establish a safe, low cost, modern and technologically dependable, environmentally friendly inter-modal transport system with a view to reducing the financial cost and time for both commercial traffic, cargo and for public transportation. Transport infrastructure development contributes to the expansion of markets, enhancement of regional trade and investment, all of which are conducive to economic growth and poverty reduction.

9.2 Policy Objectives

The main objective of the perspective plan with respect to transportation is to develop an efficient, sustainable, safe and regionally balanced transportation system in which various modes complement each other, interface appropriately and, where possible, provide healthy competition to each other. The broad policy objectives can be summarized as follows:

- Meeting the transport demand generated by higher rate of growth of GDP.
- Introduction of modern technology for increasing capacity and improving quality and productivity
- Development of the two sea ports. Establishment of effective railway linkages between the east and west zones of the country.
- Re-orientation of the development strategy for rural transport for efficient external access through optimal integration of road and inland water transport and off-road internal accesses.
- Efforts will be made to develop some of the critical inter-modal transport network that allows connectivity of neighboring countries to the two sea ports of Bangladesh.
- Efforts will also be made to fully participate in global and regional transport connectivity initiatives that help develop the land route links between South Asia and East Asia through Bangladesh.
- Improvement in resource mobilization will be made through introduction of user charges and fees.
- Provision of required incentive packages for the private sector for greater participation will be ensured, not only in transport services, but also for infrastructure building.
- Transport development strategy framework will be broadened by incorporating the vital urban transport dimension starting with improvement in transport services of greater Dhaka city.
- Adequate care will be taken while developing transport network and service so that these do not cause environmental pollution and affect ecological balance.

9.3 Sub-Sectoral Goals, Objectives and Strategies

Roads

The primary road network consists of national highways, regional highways and zila roads (former Feeder Road Type A). The network is constructed and maintained by RHD. The length of this network is 21,571 km. The other roads – upazila roads, union roads and village roads – serve mainly rural areas, and are constructed and maintained by the Local Government Engineering Department (LGED).

The long-term goal of the perspective plan is to develop a safe, cost effective, efficient and sustainable system of land transport that facilitates economic development through the movement of people, goods and services throughout the country.

Strategies

- Roads have received overwhelming attention in the past four decades, both in terms of coverage and allocation. Attention will now be given to upgradation and maintenance of the existing roads relative to new road construction. The government will take steps to remove the maintenance backlog and strengthen capabilities in all the fields of road maintenance in engineering, contracting and cost control.
- Routine and periodic maintenance programmes will be drawn up by concerned authorities. The government will provide adequate fund for operating purpose. Possibility of realizing road maintenance costs from road users will also be explored.
- National Highways should receive priority attention to ensure a high level of service, safety and quality. The Dhaka-Chittagong Highway (NH1) is to become a six-lane road while the other highways should gradually become four-lane by 2021. These roads can form part of the regional road network, as well as the Trans-Asian Road network facilitating trade between Bangladesh and neighbouring countries.
- To ensure balanced development across the country, there should be an adequate number of east-west connections. The 6.15 km long and 22 m wide Padma Bridge will serve southwest part of Bangladesh and improve the connection between Mongla Port and Dhaka. Its completion is scheduled for 2013. Efforts will be made to construct the second Padma Bridge during the Perspective Plan Period.
- The Government will pursue the policy of road development with a view to accommodating regional as well as international traffic in Bangladesh. The Government will continue efforts to improve the road connectivity with neighboring countries through various regional cooperation forums

Railways

Long-term Vision and Objectives

Bangladesh Railway (BR) is the thrust sector of transport infrastructure in the Perspective Plan. The vision of the Perspective Plan is to expand and improve the railway system to provide safer, better, a more environmentally friendly and cost effective transport facility to national and international traffic. BR will also foster international rail links to serve regional/sub-regional connectivity and Trans Asian Railway (TAR). It will establish e-governance, introduce modern technology such as metro rail in Dhaka and undertake modernization of signaling system to ensure safety.

Strategies

- Rehabilitate, upgrade/improve and replace old-aged infrastructures and rolling stocks to reduce journey time, improve the service quality and to build the image of railway as a safe and reliable means of transport.
- Augmentation of line capacity along selected corridors, acquiring modern locomotives, coaches and wagons.
- Increasing market share in freight transport, in container transport between Dhaka-Chittagong Port and in passenger transport.
- Organizational reforms introducing a modern financial management system, improved maintenance and operational system and human resource development.
- Connect the Capital City with Cox's Bazar, Mongla Port, Tungipara, Barisal, Chittagong Hill Tracts and other areas where rail network does not exist.
- Improve Commuter Train Services to provide better urban transport facilities to the daily passengers around Dhaka, Chittagong, Rangpur, Dinajpur, Parbatipur, Nilphamari, Sylhet etc.
- Improve efficiency and cost recovery.

Inland Waterways

The country possesses a navigable waterways network, which varies from 3,865 km during the dry season to 5968 km during the monsoon season. Potential exists for a virtually stagnant Inland Water Transport to play a significant role in the movement of people and freight. About one-eighth of the rural population has access to the transport system only through IWT. That compares favorably with access to road transport, as only 37 per cent of the rural population lives within two kilometers of an all-weather road.

Objectives

During the perspective plan period activities relating to development of inland waterways would focus on dredging and resuscitation of dead and dying river routes, developments of inland river ports, providing navigable aids for smooth and safe movement of cargo and passenger vessels, improvement of waterways in and around Dhaka City for making surrounding rivers navigable and wider. All these activities will accelerate the infrastructure development and promote economic growth, which in turn will lead to poverty alleviation.

Strategies

- Expansion of the dredging program including procurement of dredgers to improve existing channel conditions of inland waterways and provision of navigational aids for smooth navigation of water crafts.
- Establishment of inland container river port on priority basis.
- Upgrading port facilities (both cargo and passenger) as well as storage facilities and introduce mechanical equipment to handle cargo in order to save waiting time for berthing of vessels.
- Enforcement of safety regulations to reduce the number of accidents.
- Implementation of the development projects of rural launch landing stations. by providing pontoon facilities for smooth embarkation/disembarkation of passengers and loading/unloading of cargo.
- Implementation of projects for improving the traditional country boat sector.

Air Transport

The geographical location of Bangladesh favors the country to communicate with Eastern and Western countries of the world. In this situation, there is potentiality for Bangladesh to make Hazrat Shahjalal International Airport as a hub for Air Transportation. By providing fuel to aircrafts and transit facilities to transit passengers at the International Airport Bangladesh can earn a lot of foreign exchange. It can also be an attractive vehicle for international and national tourism.

Strategies

- Second runway at Hazrat Shahjalal International Airport giving priority to cargo planes.
- Second international airport to serve Dhaka.
- Establishment of air-port for better access to Mongla Port
- Expanded runways at Chittagong and Sylhet.
- Greater accessibility for foreign carriers.
- Upgrading facilities and air security measures to an internationally acceptable level.
- Construction of a new international airport to cope with the increasing traffic and upcoming challenges.
- The private sector can be encouraged to lease unused airports, such as Shamsernagar and Thakurgaon, for operation and maintenance.
- Private sector involvement in air services has brought positive changes to the country's air transport and should be continued.

Ports and Shipping

The Maritime transport sector is critical to the economic development of Bangladesh. It contributes significantly to the country's foreign exchange earnings. Bangladesh needs to use its resources, both human and financial, in order to become a premier shipping center. The objective of the perspective plan is to promote efficient, effective and internationally competitive port and shipping facilities to enhance international trade and exports.

Strategies

- Maintain and improve the navigational channel through capital dredging and regular maintenance dredging.
- Develop efficient inland distribution of container traffic by road, rail, and inland water transport to relieve the congestion and long travelling time at Chittagong Port.
- Expansion of terminal/yard facilities and improvement of operations through the acquisition of modern container handling equipment and procurement of harbour crafts and vessels.
- Urgent establishment of ICDs/CFS at all potential cargo distribution centres across the country.
- PPP in port management and port development infrastructure through a BOO/BOT model using a clear, transparent policy guideline.
- Improve institutional capability for training, planning, safety, and environmental control.

Urban Transport

The pressure on urban transport systems in the country has been increasing as a consequence of rapid urban growth. Transport interventions in urban areas should aim at improving transport and traffic infrastructure so as to meet existing and potential demands, and developing an integrated and balanced system in which all modes (motorized and non-motorized) can perform efficiently and each mode can fulfill its appropriate role in the system. The main objective of urban transport policies should be to support sustainable urban development.

Reducing congestion in city roads, especially in Dhaka Metropolitan Area, would require considerable reduction of dependency on private automobiles, taxi cabs, baby taxies, and non-motorized transport modes such as rickshaws. Steps, therefore, should be taken to increase the number of large-size buses including double-decker buses on truck routes and buses of optimum sizes on other routes. Introduction of Rapid Bus Transit through the use of high capacity dedicated bus lanes should be given due consideration. Rail-based mass transit systems should also be considered as parts of a long-term integrated transport strategy for Dhaka Metropolitan Area. Other options may include Construction of an overhead monorail system, elevated expressway and Circular waterways around Dhaka city.

Rural Transport

It is important to give attention to ways that the rural transport infrastructure, particularly the physical infrastructure, can support rural economies. Roads, waterways, or both serve most of rural markets and growth centres. Upazila roads (formerly, Feeder Road Type B) connect growth centres to the RHD road network or to the upazila headquarters or connect one growth centre with another. Union roads connect union headquarters with the upazila headquarters, and local markets with each other, while village roads connect villages and farms to local markets and union headquarters. All these roads, along with waterways, are important for the efficient functioning of rural markets. Access to markets will encourage improvements in market facilities.

The long-term goals of the perspective plan with respect to rural roads are (i) to provide all-weather access to all growth centres, all union parishad complexes, most rural markets and other rural service delivery centres, and (ii) to improve rural accessibility to facilitate agricultural production and marketing. The strategies may be adoption of a Rural Road Master Plan and Maintenance Plan with priority accorded on maintenance over new construction, and more involvement of LGIs in ensuring utilization and maintenance of constructed facilities.

9.4 Multi-Modal Transport

Multi-modal transport has the potential to reduce transport expenditure and time. The modes should be integrated and the communication system should be improved to facilitate tracing the vehicles and sharing information among different stakeholders, such as importers/exporters, port authority and shippers. Computerised connectivity will improve communication, and adoption of the Digital Bangladesh policy will help further. Transport corridors, especially the Dhaka-Chittagong Highway, should be upgraded to facilitate the movement of container lorries. In the long term, another ICD should be constructed in the periphery of Dhaka, at major river and road

junctions. This ICD can assist in distributing freight to all parts of the country and be the focal point for multi-modal transport. Long distance, international transshipment of goods will take place automatically.

9.5 Communication

Telecommunication

The telecommunication sector has progressed significantly with the involvement of the private sector in the provision of mobile phones in the early 1990s. Yet, the teledensity remains lower than in neighbouring countries. The rural connectivity of some operators is still low. Teledensity in Bangladesh in 2007 was 1 per cent for fixed lines (compared to 4 per cent in India, 3 per cent in Pakistan, 14 per cent in Sri Lanka, 28 per cent in China, and 55 per cent in USA). Teledensity in respect to mobile subscribers in Bangladesh in 2007 was 22 per cent (compared to 21 per cent in India, 39 per cent in Pakistan, 40 per cent in Sri Lanka, 42 per cent in China and more than 100 per cent in Thailand, UK and Germany).

The cost of handsets, connection fees and airtime have reduced. The average mobile phone tariff fell from Taka 11.37 per minute in December 2001 to Taka 0.88 in June 2008. Costs and prices could be reduced much further, in line with rates in India and China. Private operators have started to get involved not only in mobile phones, but also in land phones thus improving their competitiveness in the sector.

The quality and coverage of the internet has also improved in recent years. Bangladesh is connected with the rest of the world through submarine cables owned by the Submarine Cable Co. and Very Small Aperture Terminals (VSAT). A second submarine line will be operational by 2015. Fibre-optic broadband connections have increased browsing speed. There are now more internet service providers, and their connection and monthly fees have fallen, but still remain beyond most people. The internet is not only a gateway to a huge amount of information from around the world; it offers rapid communication through email. Worldwide Interoperability for Microwave Access (WiMax) technology has been issued a license by BTRC.

The Print and Digital Media

Like the telecommunications sector, the digital and print media have also advanced since the days of Bangladesh Betar and Bangladesh Television, which had a monopoly from 1972. The introduction of private television channels in 1997 has opened competitions and the quality of programmes has generally improved.

Radio is still popular in rural areas. Radio again started to become popular among urban people, especially the young generation, with the introduction of FM channels since the middle of this decade. People do not need a separate radio, as they usually have FM radio as a standard feature of their mobile phone.

The print media has also come a long way. There are many Bengali and English dailies published today. Readers around the globe have access to newspapers' internet editions.

Bangladeshi nationals living abroad can update themselves on the news in Bangladesh. In addition to the dailies, there are many magazines specialising in specific areas, such as sports, show business, crime report, and education.

Strategies/policies proposed for the digital and print media

- Permission to a few of the present cable television channels for terrestrial broadcast rights, so that more people in rural areas can watch them.
- In the short term, the government may act conservatively in granting permission to new channels in order to check quality of programmes.
- For each channel, there should be some broadcast-time slots reserved for non-commercial educational programmes targeting rural people and students.
- Establishment of FM Radio news channels, in addition to entertainment channels.

Postal Service

Bangladesh Post Office offers a range of postal services, including Express Mail Service for speedy and reliable mail service and an electronic mail service, e-post for internet and e-mail services. The Post Office also offers limited tracking of mail through the internet. The recent introduction of Post Office vans has helped the Post Office to reach the people, instead the people having to reach them. EMS and e-post services will be expanded in rural areas.

Strategies and policies for the improvement of the postal service

- providing institutional autonomy and financial flexibility to operate a business;
- harmonizing the domestic and international postal networks;
- incorporating modern technologies to provide customer responsive products and services and improve and expand postal services to under-served areas and help alleviate poverty and rural isolation.
- the post offices throughout the country will be converted into development and outreach centers to serve the special needs of the poor for information technology and banking services

CHAPTER 10: ADDRESSING THE URBAN CHALLENGE

Introduction

Bangladesh has been experiencing rapid increase in its urban population ever since its independence in 1971. Urban population as a percentage of total population increased from around 8.8 % to nearly 23 % during 1974-2001 period. It is estimated that by the year 2021 nearly one-third or 33% of the population of Bangladesh will be living in urban areas. The urban population recorded during the 2001 Census was nearly 28.6 million and is currently (2010) estimated at 40 million. The tremendous challenge of absorbing such a massive number of people in urban areas and providing them with shelter, food, employment, healthcare, education, municipal services and recreation facilities is made more difficult given shortage of urban facilities and resources, skilled manpower and good governance. The urbanization challenge unless managed well could pose a serious problem to the future growth prospects for Bangladesh.

10.1 Trends and Patterns of Urbanization

The agrarian economy of Bangladesh having an area of only 147,750 km with acute problem of allocation of land to agriculture, industry, and human settlement is experiencing a very high rate of urbanization. In 1974 people living in urban areas accounted for only 8.8% of the population (Table 1), which rose to 23.1% by 2001.

Table 10.1: Growth of Urban Population in Bangladesh

	1974		1981		1991		2001	
	Number	%	Number	%	Number	%	Number	%
Urban	6273603	8.78	13535963	15.05	20872204	18.73	28605200	23.1
Rural	70124397	91.79	76376037	84.95	90582981	81.27	101424549	76.9
Total	76398000	100	89912000	100	111455185	100	130029749	100

Source: Bangladesh Bureau of Statistics

One of the significant features of urbanization in Bangladesh is the predominance of a few metropolitan centers resulting in an uneven distribution of urban population in the country. A large proportion of the urban population is concentrated in Dhaka, Chittagong and Khulna Metropolitan areas. According to population census report of 2001, Dhaka Metropolitan Area had a total population of 10.712 million comprising 37.45% of total urban population. Next in the hierarchy, Chittagong SMA had 3.386 million or 11.84% of the total, followed by Khulna SMA with a total population of 1.341 million or 4.69% of total urban population. These three metropolitan areas account for about 54% of the total urban population of the country.

A major cause of urbanization in Bangladesh is that the agriculture sector is no longer able to absorb the surplus labor force entering the economy every year. Inability of the agriculture sector

to provide sufficient employment or sufficiently high household incomes to cope with a growing number of dependents can encourage people to seek employment outside agriculture. In the case of Bangladesh the rural to urban migration has contributed to more than 40 percent of the change in urban population. The lure of employment opportunities existing in these cities is another reason for urban migration.

10.2 Urban Sector and the Emerging Challenges

Rapid urbanization has been posing serious challenges for sustainable urban development. Urban areas are now afflicted with innumerable problems ranging from lack of provision of services to deteriorating environmental conditions. Although majority of the urban centers face such challenges, severity of the problems vary depending on the size of the centers.

The environmental problems of urban areas have direct and immediate implications for human health and safety, especially for the poor, and for business productivity. Urban environmental problems are of central concern for policy makers since adverse environmental conditions resulting from inadequate waste management, poor drainage, air pollution, lack of access to safe water and sanitation, exposure to excessive noise level, traffic congestion as well as inadequate health services exact a heavy toll on the quality of life.

One of the major problems that the urban residents are facing is the lack of access to serviced land which is posing as an obstacle to their meaningful participation in the urban economy. The urban land market which directly affects the urban environment and quality of urban life suffers from many distortions due to lack of proper land development and management policies including lack of planning and slow provision of infrastructure and services, thus leading to unplanned or ribbon development of land in the urban periphery. Inadequate supply of serviced land in the market leads to land speculation which often prices the poor out of the formal land markets into the informal land markets which are characterized by slums and squatter settlements.

Ever increasing land price has also contributed to the deterioration of housing situation in urban areas. Very few households have access to land and credit facilities. The situation is particularly worse for the lower income group and the poor who live on marginal settlements built by small land developers or by the occupants themselves without any security of tenure.

With rapid urbanization during the last few decades, poverty has increasingly been urbanized by way of transfer of the rural poor to urban areas. But manifestation of urban poverty is often more appalling than that of rural poverty. Urban poverty is invariably associated with poor quality housing. Most of the urban poor live in slums and squatter settlements characterized by substandard living conditions. Slums and squatter settlements are found in all major cities in Bangladesh although their concentrations may vary depending on the size of cities. The largest concentrations are found in Dhaka followed by Chittagong, Khulna and Rajshahi. Secondary cities or district towns also have significant concentrations of slums and squatter settlements.

10.3 Policies and Strategies

Despite the challenges, urban areas demonstrate immense economic potential to generate growth in the country and can be instrumental in enhancing prosperity and increasing per capita income. As income grows and the economy relies more and more on manufacturing and organized services, urbanization will grow. The challenge for public policy is to manage this natural transition of Bangladesh from an agrarian economy to a modern economy well through appropriate institutions, programs and policies. The Government is cognizant of this challenge. It also understands that this is a long-term challenge. The back-log of unmet demand and new demand for basic urban services like housing, sanitation, water supply and urban transport requires huge resources, sound planning, and strong implementation capacity. These require strategic planning and implementation over a long period. Ambitious urban development programs during the perspective plan period will be adopted. These programs will be based on the policies and strategies as set out below:

Patterns and Process of Urbanization : The primary focus will be on the approach to be followed in the process and the patterns of urbanization in Bangladesh so as to achieve a more balanced distribution of urban centres in terms of population size, employment opportunities, housing and essential infrastructure and services.

Urban Governance: Policies and strategies in this area focus on institutional reforms and decentralization of responsibilities and resources to local governments; participation of civil society including women in the design, implementation and monitoring of local priorities; building capacity of all actors (institutions, groups and individuals) to contribute fully to decision-making and urban development processes; and facilitating networking at all levels.

Urban Economic Development: This involves initiative to combine available skills to be suitably upgraded, resources and ideas to stimulate the local economy towards the goals of job creation, economic growth, poverty alleviation, as well as proactive measures to deal effectively with changes in the national and global economies that are likely to affect the local economy.

Urban Environmental Management: Policies and strategies in this area seek to promote cleaner environment, control pollution and protect public health from environmental hazards. Special emphasis will be given on preventive actions, that is, to develop preventive measures that can forestall future environmental degradation without imposing excessive financial burden on government. Emphasis will also be given on holistic and inter-disciplinary approach.

Urban Housing: Access to affordable urban housing is an increasing problem in the country as population pressure increases and prices of land and construction costs rise. The policy in this respect is to bring about improvement in the housing situation in terms of quality and quantity of housing units, housing tenure and housing accessibility.

Urban Transportation: Policies and strategies in this area focus on developing an integrated and balanced transportation system taking into consideration the needs of the road system, non-motorized transport, public passenger transport and mass transit. Issues such as a city's balance

in the locations of employment and housing, demand management and the roles for the public and private sectors will also be given due emphasis.

Urban Land Management and Planning: The objectives of the policy in this area are to promote sustainable land-use planning and innovative land management practices, with the objective of providing for the land requirements for urban development through integrated and environmentally sound physical planning and land use.

Infrastructure and Services: Basic infrastructure and services at the community level include the delivery of safe water, sanitation, waste management, social welfare, transport and communications facilities, energy, health and emergency services, schools, public safety, and the management of open spaces. Steps will be taken to provide adequate and affordable basic infrastructure and services so as to help safeguard the health, safety, welfare and improved living environment of urban dwellers.

Urban Poverty; Policies to deal with urban poverty focus on promoting equal access to and fair and equitable provision of services in urban areas. Emphasis will be given to urban policies and programs that ensure equal access to and maintenance of basic services, including those related to education, employment and livelihood; basic healthcare services; safe drinking water and sanitation; adequate shelter; and needs and rights of women and children who often bear the greatest burden of poverty.

10.4 Long-term perspective

Implementation of policies and strategies as set out in the perspective plan will help the country manage its on-going urbanization process in a better way and to make full use of our cities and towns as engines of development. Food security should address both rural and urban areas. Bangladesh achieved remarkable progress in agriculture at a time when the rate of urbanization was also quite high. What is important to realize is that supporting sustainable urbanization will have positive impacts on rural areas. Rural areas can gain through remittances from urban areas and supplying agricultural products to larger markets in urban areas. Treating urban and rural development as two legs of sustainable development will enhance our chances of meeting the millennium development goals.

CHAPTER 11: PROMOTING HUMAN DEVELOPMENT

Over the next decade, Bangladesh's human resource development will encompass three broad processes:

- Ensuring education for all.
- Promoting and sustaining health and nutrition, and
- Planning population (both containment and management) and converting them into human resources.

In light of the government's vision 2021, the country aims at fulfilling the following targets:

- Deficiency in food will be removed and nutritional requirements of 85% of the population will be ensured.
- In addition, a minimum daily intake of 2,122 kilo calories of food will be ensured.
- Contagious diseases will be eliminated and primary health care and sanitation will be ensured for all.
- Average longevity will be increased to 70 years.
- Under 5 mortality per 1000 live births will be reduced to 45 and maternal mortality will drop to 100 in 100,000.
- Net enrolment at the primary level will be increased to 100% by 2013.
- Illiteracy will be removed by 2014.
- By 2021, there will be significant improvement in the quality of education with emphasis on science and technology.

11.1 Population Planning & Generating Human Capital

Population and development go hand in hand. Since people in a society are both producers and consumers, a development process should consider demographics, i.e. a population's structure, composition, distribution, behavior pattern, attitude, values, norms, beliefs, practices, and its whole lifestyle pattern.

The number of people, the rate of growth, the quality of life, the pressures people face are influenced by environmental, economic, political and social conditions. This is not a one way process. People influence these conditions by the decisions they take, and vice versa. Therefore, any development effort must take account of population parameters if economic growth and the welfare of society are to be sustained.

Demographic Challenges

Although Bangladesh is the eighth most populous country in the world, with the highest population density, the country's demographic indicators have recorded considerable improvements. The contraceptive prevalence rate has risen; fertility and mortality rates have declined; per capita income has increased; the overall level of poverty has declined; the rate of school enrolment has increased; the proportion of the population living in urban areas has increased; to name but some. In spite of such achievements, many challenges remain in this sector. The total population has increased from 71 million to 150 million since independence in 1971. The TFR remained stagnant for almost a decade and the recent decline is very slow.

Fertility is still playing major role in population growth. With the current rates of fertility and mortality, the population size is expected to be about 280 million before it stabilizes.

The population aged over 60 years will reach staggering proportions by 2051. By 2021, there are expected to be around 14 million people aged over 60 – and that figure will reach nearly 30 million by the end of 2051. This indicates that Bangladesh is entering a new phase of rapid growth of elderly population, with all its associated challenges. Projections show that even after reaching replacement level fertility, the population will continue to get older.

Population Policy Targets and Strategies

The Government's current policy targets in the context of population are to:

- Reduce TFR from 2.7 to 1.7.
- Increase CPR from 56% to 80%.
- Reduce unmet demand of eligible couples for FP supplies from 17.6% to 10%.
- Reduce discontinuation rate of contraceptive rate from 56.5% to 20%.

Attaining a TFR target of 1.7 by 2021 will ensure a rapid arrest of population growth. This could be achieved with a two-pronged attack on the issue: (a) supply of contraceptives and education, and (b) employment and health services targeting women. The strategies may include preferential treatment for one child for educational support, access to health and educational services, public sector employment, old age pension or social security benefit. Strategies may include, but are not limited, to:

- Government may give preference for providing educational expenses of families with one child. Encourage employment to the single child according to his/her qualifications in government/NGO/private organizations.
- Preference to be given for medical treatment in Government institutions to the single child until he/she reaches maturity.
- Introduction of social pension for the parents of a single child in case of need.
- Preference to parents with two children in terms of VGD/VGF or other safety net programs.

Incentives for voluntary permanent methods of birth control may be further strengthened. Population policy will include actions designed to promote the survival and healthy development of all children, improved health, education and socio-economic well being and empowerment of women, and for a better nutritional status for mothers and children, particularly the girl child. An increase in the contraceptive prevalence rate should be conducted through door-to-door service providers, which will be achieved by rejuvenating the Family Welfare Service, along with the strengthening of social development initiatives, such as female education, health services, later marriage, employment opportunities for girls, and social movement for the smaller family norm of one child per couple. Advocacy should be strengthened for male participation in permanent and other methods of contraception. A reduction in adolescent fertility has to be given top priority.

11.2 Promoting and Sustaining Health

Challenges to Public Health Services

Over recent decades, Bangladesh has made substantial advancements in the health status of the population. Life expectancy at birth has increased to 67.8 years in 2009, maternal, infant and

child mortality rates have declined, and immunization coverage has remained fairly high. However, much remains to be done to improve people's health condition. Serious health problems persist in Bangladesh. Poor nutrition represents a major health problem. Anaemia among women of childbearing age is extremely high. Diarrhoeal diseases are still a major killer, though treatment is known and accessible. Communicable and poverty-related diseases that are preventable continue to remain among the top ten causes of mortality. Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age. Skilled birth attendants attend only one-fifth of all births. This figure is even lower in slums and tribal areas. More than 80 per cent of deliveries take place at home. Only 18% of woman receive post-natal care. The situation is even worse in the lowest quintile of population.

In Bangladesh, HIV incidence is low, both among sex workers and in other populations. However, the incidence rises dramatically among intravenous drug users. TB and malaria, along with the threat of arsenic poisoning, continue to pose significant risks to public health.

Non-communicable diseases such as cardiovascular diseases, diabetes, cancer, and respiratory diseases are emerging as major public health concerns. While their treatment is taking place, the cost often is prohibitive. Road accidents constitute another public health hazard which is posing serious consequences to health status as well.

Some specific challenges in health services are as follows:

Lack of trained health care providers: Although there are about 30,000 registered doctors in Bangladesh, the doctor-population ratio is 1:4,000. It is certainly inadequate for the healthcare needs of the population. However, informed opinion suggests that there is over-supply of medical personnel in urban areas, particularly in Dhaka and in Chittagong, and an under-supply in rural areas.

Bangladesh has an extreme scarcity of trained nurses, who are another important part of the health sector workforce. The international standard for the nurse-patient ratio is 1:4 for general care, and 1:1 for intensive care. In Bangladesh, these ratios are 1:13 for general patients and physicians outnumber nurses with a ratio of 1.3: 1. Measures need to be taken to improve these ratios significantly by 2021.

Adequate providers and other inputs: The quality of medical education must be improved significantly. The motivation of the medical graduates must also increase towards pro-poor service delivery and effective management of life and death health issues among the population they serve. The capacity of existing training institutes might increase in terms of space and number of qualified trainers, and new training institutes, especially for nurses and medical technologists will be established. The number of facilities and skilled workers has to be increased considerably, and the quality of care and economic efficiency of resource use have to improve significantly. The private sub-sector and NGOs need to be regulated, and primary stakeholders may be increasingly involved in service delivery.

Public Health Facilities: In addition to medicare, public health services require considerable improvement. Access to clean water and sanitation could be envisioned for 2021 through, for example, access to piped water, well maintained sewerage systems, environmentally sound hospital and industrial waste disposal. Arsenic problem in groundwater has put a damper on clean rural water supply. Measures will be necessary for mitigation through provision of user-friendly affordable household water filter systems and for piped water supply through deep tube wells by communities and government. Research on arsenic mitigation should continue. Safe disposal of waste material, monitoring water quality, ongoing education on good hygiene practices and other measures to promote safe water will be strengthened.

Policies and Strategies

A healthy population is more productive and contributes more to accelerate economic growth. A range of policies may be adopted to improve public health over the long-term, such as:

- Coverage of all types of healthcares has to be increased steadily till 2015 when the MDGs are expected to be achieved.
- The number of service providers such as nurses, doctors and specialists should be increased and the doctor population ratio and nurse-doctor ratio has to be scaled up.
- The number and size of UHCs and FWCs should be streamlined with FWCs away from the UHCs, especially in large upazilas.
- The quality of medical education should be improved.
- Motivate medical graduates to pro-poor delivery of health services.
- Bio-technology, tele-medicine, training institutions especially for nurses and medical technologists can be expanded.
- Community clinics in all unions can be established.
- Efficiency in the use of health sector resources should be improved.
- Health and Family Planning co-ordination should be improved.
- Public health facilities such as pure drinking water and sanitation should be improved.
- Increase awareness of diabetes, hypertension, strokes and obesity, which could assume pandemic proportions in the next two decades.
- Coverage of most of the services should be maintained at the level achieved by 2015, coverage of some services such as births attended by skilled personnel, post-natal care will have to be increased more till 2021.

11.3 Promoting Improved Nutrition

From a nutritional standpoint, food security is ensured when all individuals in all households have the resources to obtain adequate, appropriate, and safe food for a balanced diet and good physical condition that enables the proper utilization of that food. Changes in nutrition status could take place mainly through decent employment and income generation, as well as improved decision-making by women when they spend the household income. Provision of safe drinking water, improved health care and education for all women should be considered essential and part of a comprehensive strategy to eliminate malnutrition and to achieve health for all by 2021 or beyond.

Challenges in Nutrition

Consecutive nutrition surveys conducted since 1962-64 have shown that Bangladesh has consistently experienced shortages in food and nutrition. It is evident that a substantial majority of the population suffer from varying degrees of malnutrition, including protein-energy malnutrition, micro-nutrient deficiencies (such as vitamin A deficiencies, calcium deficiency disorders), iodine deficiency disorder, Iron deficiency and iron deficiency anaemia, and vitamin deficiencies. The key issues in this regard are:

Physical retardation in population of Bangladesh: The consequences of malnutrition are indicated by anthropometric measures, including childhood morbidity and mortality, poor physical and mental development, poor school performance, and adult size and capacity to do physical work.

Micro Nutrient Deficiency/Hidden hunger in Bangladesh: Although most nutritionists believe that no more than 55-60 per cent of energy should be obtained from cereals, almost 70 per cent of energy has to be obtained from carbohydrates in the foreseeable future. Thus, the calorie share of protein would be 15 per cent and that of fat and oil intake would be no more than about 15 per cent. Bangladesh is experiencing a nutrition transition with high levels of malnutrition.

Stunting: Stunting is a better indicator of well-being for populations of children than weight, which also contains their growth and health. Underweight is affected by weight recovery for some children between 2-5 years of age, and by some children being overweight. They do not grow up as intelligent, as healthy and as tall as they should.

Imbalanced Diet: The problem is not only inadequacy of food intake by most people; it is also a lack of a properly balanced diet. Most people deal with hunger by eating rice and leafy vegetables. In other words, most of their calories and other nutrients are obtained from carbohydrates and very little from protein and fat.

Meeting the nutritional target of 2122 kcal per day for 87 per cent of the people is a major challenge. In order to attain that target, rice cultivation through increasing yields that enable greater diversification of farm products, including fish and poultry is important. For 2021, a cereal intake of 359 gm/person/day was proposed, which yields about 55 per cent of the total required calorie intake of 2122 kcal. The intake of animal food (such as meat, fish, egg, milk and milk products) has been scaled up to provide a better quality of protein and other nutrients and an increased percentage in the availability of minerals such as iron, zinc, selenium and vitamins. It also contributes some fat nutrient to the total calorie intake. The proposed intake of added oil is about 40 gm in 2021, which will yield about 15.86 per cent of the total calorie intake. This will partially address the requirement for 30 per cent of the total calorie intake, by contributing about 7 per cent of the total calories in 2021. Intake of potato and sugar will be increased gradually to reach the proposed target in 2021.

Strategies and policies for the long-term

The following strategies are being emphasized in improving nutritional status over the long-term:

- Improved education in health and hygiene.
- Reduction in the incidence of diarrhoea, dysentery, and stomach worms.
- Use of pure drinking water.
- Diversification of agriculture including production of more vegetables, fruits, pulses, fish, dairy products, poultry and other proteins.
- Improved knowledge of balanced diets and nutrition.

Table 11.1: Key HNP targets for SFYP and Perspective Plan

	Indicators	Value with Year	2015	2021
	Impact/Outcome			
1	Life Expectancy	66.6 (SVRS 2007)	68	70
2	Population Growth Rate	1.40 (SVRS 2007)	1.3	1.0
3	Maternal Mortality Ratio (MMR) (per 100,000 live births)	320 (BM MS 2001)	143	57
4	Infant Mortality Rate (per 1000 live births)	52 (BDHS 2007)	32	15
5	Underweight of Under 5 children (6-59 months)	41% (BDHS 2007)	33%	29%
6	Total Fertility Rate (TFR)	2.7 (BDHS 2007)	2.4%	2.1
7	Use of birth control Methods		74%	80%
8	Poverty rate (Head count ratio, %)	31.5(HIES 2010)	22.5	15.0%

Source: Perspective Plan projections

11.4 Education, Training, and Skills Development for Human Capital Formation

Education directly contributes to building a dynamic economy, an efficient system of governance, non-communal democracy and an enlightened progressive society. Illiteracy and democracy cannot run together. Recent experiences of developing countries suggest that successful implementation of population policies such as delayed marriage and late child birth aimed at a small family norm are directly related to education of girls. Education, health, nutrition, family size and employment are mutually reinforcing. Education is essential for developing the foundation required for a highly trained work force. It is accepted as the foundation of growth in productivity, income and employment opportunities, and for the development of science and technology.

Outcomes Visualized for 2021:

- An informed, knowledge-based, technologically-oriented, gender equitable learning system for all will be established. Every school age boy and girl has access to primary level institutions with the necessary facilities; they will also continue in school to receive quality education. All opportunities are provided to pre-primary children, young person; and adults to meet their learning needs in a competitive world, both in formal and non-formal sub-sectors of education, without any discrimination based on gender, income, ethnicity, livelihood, geographical location, disability, and autism.
- Gender equality at all levels of education will be ensured.
- All students enrolled in primary, secondary, and tertiary levels will have access to gender-responsive health, nutrition, water and sanitation, socio-cultural development, greater participation in sports and ensuring a fruitful learning and living environment.
- The government, civil society, the community, and other stakeholders equitably share responsibilities in ensuring quality education for all at different branches and stages of education and training.
- Universities and institutions of higher learning have been developed as centers of excellence for teaching so that they can be competitive globally.

- TVET and skills development programs are of a higher quality, deliver competencies required by industry and the qualifications received are recognized in Bangladesh and around the world.
- In primary, secondary, and tertiary level curricula, ICT education will be established as a compulsory subject.
- Teachers are recruited through a separate Teacher Recruitment and Development Commission and their salaries and benefits will be consistent with their qualifications.

Literacy

The literacy rate in Bangladesh has increased substantially in recent decades. In this respect, the country has done better than many other LDCs, and even compared to some middle income countries, but still has a long way to go. The present male literacy rate is 59 per cent and female literacy rate 48 per cent. Bangladesh has a net primary school enrolment of 91 per cent, compared to 90 per cent in LMI and 94 per cent in UMI countries. Considering this net primary enrolment rate, Vision 2021 has put a target of 100 per cent net enrolment and literacy rate after 2014.

Primary Education

As elaborated in Education Policy 2010 the duration of primary education will be from class I to VIII. Quality of education will be ensured in all schools irrespective of locations, rural or urban. A core curriculum will be followed by all types of schools irrespective of the medium of teaching to ensure that all children in the country have basic grounding in key national characteristics including language, culture, history, and geography as well as in science including mathematics and information technology. Girl students shall be protected against discrimination, harassment, or violence. A child friendly pedagogy will be followed in all classrooms in an inclusive manner.

Key Issues and Challenges of Primary Education in Bangladesh:

- Ensuring inclusiveness and access as the duration of primary education is extended from the present class V.
- Upgrading the curricula to the need of 21st century for quality education in a gender sensitive manner enabling all students to acquire human qualities on one hand and some basic skills on the other.
- Decentralizing administration and management system to develop a good mechanism for the supervision and monitoring through involvement of local citizens in addition to official processes.

Non-formal/ Mass Education

The target group for non-formal/mass education is out-of-school children, school drop-outs, adolescents and young adults, street children, and children of urban slum-dwellers' engaged in hazardous occupations. All illiterate, semi-literate and new-literate young persons and adults will have access to learning opportunities for basic education, adult literacy, and continuing education, including skills development for jobs or self employment. This learning will be linked to the new National Technical and Vocational Qualifications Framework (NTVQF), which will allow access to further learning. For skill development of the rural children and adults not in formal education for one reason or another, vocational schools with a wider choice of subjects will be important.

Secondary Education

By 2021, it should be possible to provide quality primary and secondary education to every child. No child should be left outside this education system on grounds of her/his lower family income level, gender, religion, ethnicity, or disabilities. Measures will be taken to improve the training and quality of school teachers. Management practices will be put in place to promote women's leadership in teaching as well as governance of secondary education.

Key Issues and Challenges of Secondary Education in Bangladesh

- Improving the relevance of secondary curriculum, especially for livelihood improvement and encouraging mathematics, science, information technology and humanitarian education.
- Encouraging students to seek quality education and accordingly, improving classroom teaching-learning activities and introducing mentoring activities to develop leadership quality among the students.
- Reducing gaps and differences between educational institutions of different types (standard, madrasa, English medium and other) and in different locations (village, urban) in the imparting of education by introducing certain common subjects (English, Bangla, mathematics, Science (ICT) and disparities in facilities and abilities through appropriate interventions .
- Sustaining gender equality for secondary education.
- Using PPP in expanding vocational education.
- Reforming the examination system in order to assess creativity, knowledge and problem solving skills of students rather than memorization.
- Improving the curricula, facilities, and methods of skill training for secondary school programs such as the SSC (vocational) and HSC (vocational).

Integration and Unification of Education System at Primary and Secondary levels

With the unification of education at the primary and secondary levels, replacing the segmented education system (e.g. Bangla-medium, English-medium, Madrasa system) the exclusiveness, the socio-economic-intellectual discrepancies detrimental to social justice and solidarity will be eliminated. The curriculum needs to be revised for consistency amongst the major parts of the streams. Therefore, all streams will teach a number of core subjects (Bangla, English, Maths, Science, ICT, and Bangladesh Studies) along with stream-specific subjects. All students at secondary levels should be able to achieve a functional knowledge of English as a foreign language, which would enable them to connect with the outside world. All primary and secondary schools, public or private, rural or urban, will be improved to offer a high standard of education and will be equipped with comparable teaching staff, laboratory and computer facilities, libraries and so forth. Free education and textbooks up to secondary level are part of Vision 2021.

Tertiary/Higher Education

Enhanced opportunities for research will be created by establishing centers of excellence in some of the institutions of higher learning. The performance of private as well as public universities will be evaluated and monitored by establishing an Accreditation Council. Attempts will be made to improve the quality of teaching, library facilities, and research. The goals for all universities are to meet international standards. Current public expenditure on education is 2.24 per cent of GNP, which should be at least 6.0 per cent by 2021 to achieve the millennium development goals of universal primary education.

The government is supporting education of meritorious students' stipend schemes for schools and public colleges. Such students will be provided full funding of education, a goal to be reached by phases. For this purpose government will set up a Stipend Trust Fund with budgetary allocation and private contributions eligible for tax breaks. This Trust Fund will finance free education up to degree level for qualified students.

Key Issues and Challenges in Higher Education

- Upgrading the curricula and improving teaching -learning methods for quality outcomes to meet 21st century challenges;
- Integrating ICT in the curriculum irrespective of the stream and encourage computer aided learning at secondary level by establishing a coherent and comprehensive policy framework articulating national priorities in the education and reducing urban-rural gaps;
- Linking TVET curriculum to local industries and business needs and higher studies;
- Reducing session jam and elimination of politicization in higher educational institutions;
- Introducing a fair, non-political system of recruitment and promotion of teaching staff on the basis of performances;
- Introducing a special salary scale for teachers to ensure commitments and accountability;
- Increasing revenue of the public universities to cover 50% of their budget;
- Implementing Private University Act to enhance quality education and a standardized system; and
- Setting up an Accreditation Council for ranking the quality of higher education in all of the public and private universities.

Some Strategic Issues in Education Development

- **Quality Enhancement of Education System:** The goal is to transform educational environment in the country and to be internationally competitive by 2021. The engineering and scientific pursuits and methods will be of international standards. Students will be encouraged to work for leadership, co-operative zeal, and sense of positive competition and will be able to express their free opinion on national and international issues through dialogue. University administration and student discipline will be restored.
- **Decentralized Education System:** The administration, particularly for secondary and college education, will be decentralized in a manner that conflict does not arise among different persons and agencies; problems are more quickly solved and at the local levels; and school/college authorities do not need to come to Dhaka for even routine official matters like time scale, transfer.
- **Community Management of Local Educational Institutions:** A mechanism shall have to be devised, based on the Education Policy 2010, to ensure accountability of school teachers to the local community and to ensure school facilities (i.e. toilets, drinking water, and safety issues) that meet the needs of both girls and boys. Local community members and respected personalities, along with representatives of parents' should be an effective part of school management committees.
- **Increased investment and cost sharing in education:** While government budgetary share in education may have to be suitably raised – may be doubled in the foreseeable future, private sector participation in education, both investment and current expenditure, can

improve the situation. Training of teachers and expansion of peer approach/students mentoring activities in the secondary and higher secondary levels are areas where NGOs can supplement government efforts. In the interest of both equity and resource mobilization, higher education can be financed increasingly through greater cost sharing by beneficiaries, thereby making it less dependent on public resources. There are benefits to be derived through establishment of better linkages with job markets on the one hand and the world educational systems on the other.

- **Use of technology in education and computer literacy for all:** Integration of technology in teaching learning process, teacher development process, and skills development is a must to cope with the demand of 21st century. Computer aided learning would be given special emphasis so that students become able to handle technology smoothly. Full utility of modern technology including computers for quality improvement in primary and secondary education will be explored. An Educational TV channel could be established for this purpose.
- **Rejuvenation of sports and cultural activities:** The basic cultural characteristics of all culturally distinguishable groups including ethnic minorities will be facilitated to flourish, with unity in diversity established based on the common purpose of cohesive national progress that includes everybody. In order to facilitate, in this sprint, flourishing of cultural traits and their expression in performances and other activities, policy and budgetary support will be provided right from the early stages of schooling for cultivation of various cultural pursuits. Encouragement and budgetary support will be provided to educational intuitions at all levels aimed at promotion of exercises and sports. International participation in sports, games and cultural performance will continue to be encouraged.
- **Teacher development:** Appropriate policies will be adopted to attract talented and inspired young people to the teaching profession and retain them in the profession. It is essential to create a critical mass of talented teachers in the education system. Measures such as benefit packages may be introduced to attract qualified teachers to serve in rural areas. A Teacher Recruitment and Development Commission will be established to recruit teachers and support their professional development. Teachers' status, special incentives and training (home and abroad) will be ensured. They have to be encouraged and given opportunities to do research in their respective fields, in teaching methodology, in curriculum development, and in methods of assessment.

Promoting Science and Technology: Objectives in promoting science and technology are to (a) create a generation highly educated in science and technology; (b) encourage Research and Development in government and private sector and increase the share of GDP spent on R&D; (c) establish science and technology parks; and (d) spread awareness of vocational education for work at home and abroad.

Technical and Scientific Education for Development: Expenditure on Research and Development (R&D) is an index of a country's orientation to science and technology. Bangladesh's expenditure on R&D in 2005 compares favourably with some of the Lower Middle Income or even Upper Middle Income countries. India & China spend on R&D 0.85 per cent and 1.44 per cent of GDP respectively. Bangladesh currently spends 0.62 per cent of GDP on R&D, which is higher than some LMI countries. However, better performance in this regard must be attempted. Universities of science and technology, together with other general universities have to move forward with R&D, training men and women professionals in technology to meet the enormous demand for such expertise in the context of increasing investment and growth stipulated in the industries and services sector by 2021. Private sector initiative and investment

including from the corporations or foreign universities will be encouraged. In this respect, the example in the neighbouring country (e.g., India) may be useful to look at.

Technical and Vocational Education and Training (TVET): A strategy to achieve nearly full employment by 2021 must ensure that all new entrants to the work force are trained to enhance their knowledge, skill, and creativity.

Both the private and public sectors should expand the network of quality vocational training institutes. The private sector which came forward to train people in computer technology as well as in many of the trades and skills related to vocational training needs of different fields. These institutes can be developed in such a manner that promotes the role of women in nontraditional skills (i.e. scientific services, trades, technical areas, finance, nursing, ICT, management, etc.). In addition, strategy to promote and increase women in TVET is essential. The great surge in 15 - 35 age group requires creation of employment opportunities through provision of training for self-employment and/or employment in SMEs. However, strict monitoring and regulation of these training activities for purposefulness and quality will need to be put in place.

Different types of vocational training could be planned, including those in the emerging trades such as accounting and financial services, graphics and textile design, computer animation, etc. Management and engineering positions in commercial and services sectors will need newer type of skills. Industry can have a greater role in setting the standards for TVET and skills training and to assist government identify the skill needs of the economy in coming years. Income and remittances will increase substantially if we can send abroad workers with appropriate skills. New destinations for workers also will be explored such as Europe and East Asia. In addition to traditional job markets in the Middle East, future job openings are also widely expected in European and East Asian countries where unskilled hands will not be needed much.

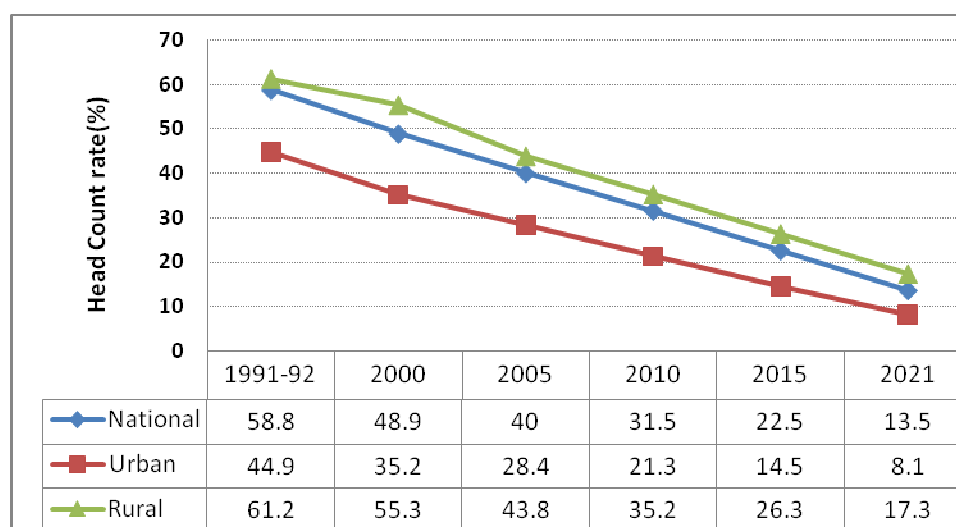
CHAPTER 12: ADDRESSING CHALLENGE OF POVERTY ERADICATION

While the Perspective Plan stipulates acceleration of economic growth, the underlying policies stress the inclusiveness and pro-poor approach to growth so that in the process of achieving the Vision 2021 goal of reaching middle income status, there is substantial eradication of poverty through a comprehensive scheme of social inclusion.

12.1 Notable record of poverty reduction

Bangladesh has been successful in achieving significant reduction in poverty since 1990. National poverty headcount declined from 58.8 percent in 1991-92 to 31.5 percent in 2010, while extreme poverty rate declined from 41 to 17.6 percent over the same period. Other measures of poverty, such as poverty gap and squared poverty gap show long-term trends similar to those for headcount rates. Assuming these trends to prevail with some improvement in the income inequality situation, headcount poverty rate is expected to decline to 22.5% by 2015 and to 13.5% by 2021 (Figure 12.1).

Figure 12.1 Long-term poverty trends



Source: Bangladesh Bureau of Statistics; various HIES

These notable achievements in poverty reduction in Bangladesh can be attributed to a combination of several factors as follows:

- The economic transformation is closely related to rapid GDP growth and the urbanization process in recent times – manifested in rising returns to human and physical assets, rising labor productivity and wages, the shift from low return agricultural labor to non-farm employment and growth in export industries.
- Increasing flow of remittances.
- The growth of micro-finance

- Forces that have emerged from social transformations occurring over time. For example, a fall in the number of dependents in a household, linked to past reductions in fertility, has been an important contributor in raising per capita incomes.
- Increases in labor force participation and educational attainment, particularly among women, have contributed as well.

For all its progress, however, Bangladesh remains a poor country – with an estimated 47 million people in poverty in 2010 and disparities in incomes and human capabilities across income and occupational groups, gender, and regions. To ensure that the benefits of economic progress envisaged during the Perspective Plan reach all strata of society, the challenge of social inclusion has to be faced squarely and policies framed to address and effectively resolve the national problem to make it a thing of the past.

12.2 Strategies for accelerated poverty reduction

The main elements of the poverty reduction strategy in Bangladesh will consist of policies and programs to:

- promote growth by sustaining increases in labor productivity and job creation in manufacturing and services;
- increase farm income through better productivity;
- enhance the access of the poor to production inputs (fertilizer, seed, irrigation water, power, rural roads) and to institutional finance
- expand employment opportunities in lagging regions by improving connectivity with growth poles through better infrastructure and by investing in human capital;
- facilitate migration from poor areas given the poverty-reducing impact of remittances;
- stimulate women's participation in the labor force;
- sustain Bangladesh's past successes in reducing fertility;
- improve poor households access to and quality of education, health and nutrition services;
- strengthen the coordination, targeting and coverage of social protection programs;
- enhance the access to micro finance;
- ensure stable food prices; and
- to mitigate the adverse consequences of climate change

Based on the projected acceleration of real economic activity, the shift in employment to more productive sectors of the economy, and implementation of related measures to enhance the human and physical capital of the poor a significant reduction in poverty is expected. The head count poverty rate is projected to be reduced to 13.5 percent by 2021.

High economic growth with sustainable productive employment and incomes for large number of people of Bangladesh is the major policy focus for rapid reduction in poverty in Bangladesh. There is a need for faster growth and job creation in manufacturing at all levels: large, medium and small. Many of the small enterprises are located in the rural areas. So a part of the growth strategy is to support productivity and employment opportunities in these small rural enterprises. Thus, a rapid expansion of productive non-farm activities, particularly in the rural areas, will

accelerate the pace of labor absorption in relatively larger and wage-labor based enterprises. In view of the important contributions of the demand-driven non-tradable sectors, the future growth policies would simultaneously focus on accelerating the growth of both tradable and non-tradable sectors of the economy. This will require, along with exploring new sources of growth especially with linkages with the external markets and sustaining the growth of the present export-linked activities like readymade garments and remittances, prudent macroeconomic policies and adequate policies for sustained growth of agriculture to provide the required demand stimuli from both internal and external sources. The contribution of productivity growth to the overall growth of the economy is low. For higher growth, productivity improvements will be achieved through efforts to promote technological progress and enhance efficiency in resource use across all sectors of the economy.

To tackle the spatial dimension of poverty, emphasis will be put on eliminating the growth bottlenecks in the concerned regions in terms of targeted infrastructure programs (power, transport and irrigation). Furthermore, in view of the existing inequity in the distribution of physical, human and other assets, policy efforts will focus on pursuing spatially targeted “asset building” programs to create wider access for the poor to growth opportunities in the lagging regions. In particular, emphasis will be placed on developing human capital including health, education, nutrition and social, political and other non-economic assets that will enhance the capabilities of the poor in the lagging regions.

12.3 Challenge of addressing income inequality

Yet another aspect of the problem to be addressed is the prevalence of income inequality in society which appears to be growing, though moderately in the recent past. Results show that the distribution of income is much more unequal than the distribution of consumption. Income inequality as measured by the gini coefficient for the distribution of income has risen substantially during the 1980s and the 1990s. More recent data show a further increase in the income gini coefficient during 2005 but slightly improved in 2010 arresting the upward trend from 0.46 to 0.45 (HIES – 2010). Income inequality between the urban and the rural areas is still a matter of serious concern. There is a need to address the income inequality problem through a range of measures including creating better access to high productivity, high income employment; improving farm productivity and incomes; sharpening the focus on equity aspects of public spending on education, health, family planning; nutrition and water supply; reducing the regional disparity of growth; and improving the access of the poor to means of production (fertilizer, seeds, water, electricity and rural roads); and by improving the access of the poor to institutional finance.

12.4 Human development

The need for human resource development is a key element of the overall poverty reduction strategy. Basic education is critical to ensure that everyone can participate in and benefit from growth. As described in the preceding chapter, Government policies and budgetary allocations will focus on human development, and spending on primary education, child care, and pre-natal care.

The Government's policies and goals are to increase substantially the proportion of post-primary students enrolling in VTE. Under the new education policy formulated in 2010 one technical school will be established at every Upazilla.

Health care facilities will be taken at the door step of the people. The Government will revitalize and made operational 10,723 existing Community Clinics and construct 2777 new clinics at the grass root level to provide primary health services to the rural community. Reproductive health care system will be further strengthened. Population programme will be revamped and coordination among the health and population directorates will be ensured.

The availability of safe water and good sanitation is also essential for improving living standards of the poor. Increasing investment in water and sanitation is therefore planned during the Sixth Plan period and beyond.

12.5 Sustainable Environments

Climate change poses a significant threat to the goals of the fight against poverty in Bangladesh. Adaptation to climate change is therefore a national priority for the long-term. Government's policy for proper handling of disasters would be coordinated with the efforts taken at different stages in the disaster management cycle, like disaster management practice, disaster mitigation, emergency preparedness, emergency response, disaster management mechanism, early recovery and immediate rehabilitation, space technology and disaster management, space technology in disaster prediction, warning, flood monitoring, mapping and use of internet facilities for disaster monitoring, prediction and information dissemination.

12.6 Addressing poverty through social protection

The diverse underlying causes of poverty in Bangladesh include vulnerability, social exclusion, and lack of assets and productive employment; although the main symptom is often hunger. The extreme vulnerable poor can potentially lift themselves out of poverty with appropriate short to medium-term support. The extreme dependent poor, who are old, disabled or chronically sick, will depend on long-term social protection to survive. The children of the extreme poor, who are stunted or malnourished, are vulnerable to harassment, and have limited, or no access to education. A sharp rise in inequality would not only undermine the impact of growth, but may also threaten social cohesion and breed instability and discontent. Both poor and non-poor families are vulnerable to shocks (e.g. natural disasters, health problems) that can return them quickly into extreme poverty.

There are four major concerns that the current rate of progress in reducing extreme poverty may not be maintained: (1) slowdown in the global economy together with domestic factors; (2) growing population density is likely to force more of the poorest people to live in the most vulnerable areas; (3) climate change will exacerbate the vulnerability of poor people to environmental shocks, with the predicted increase in extreme climate events; and (4) demographic and social changes may further increase vulnerability and social exclusion.

Risks and vulnerability are mainstream problems in the lives of the average Bangladeshi and are recognized as such by governments, individuals and communities. Safety Net Programs to

address risk and vulnerability have been an integral part of the anti-poverty strategy of the governments and will remain so for the next decade. However, with informal safety nets eroding, newer risks emerging from rapid processes of urbanization and global economic integration, and, stronger assertion of mitigation demands from a democratizing polity, a holistic re-thinking on the direction, scope and design of safety net policies in particular and social protection policy in general has become necessary. Social protection includes safety nets, various forms of social insurance, labor market policies as well as processes of self-help existing or emerging within society. Risk reduction and social protection are important not only in themselves but also because an unaddressed risk atmosphere carry negative psychological consequences for the livelihood initiatives of the poor and for community efforts at social cohesion.

Effective policy initiative based on a holistic approach to social protection will require a sharper profiling of risks, old and new. These include disasters, anticipated risks such as monsoon and seasonal poverty, public health risks associated with the urbanization process, social ills such as dowry, erosion of family-based safety nets and emergence of new vulnerable groups such as the elderly and the disabled, and, the uneven globalization process which may give rise to new categories of poor whether in terms of worker displacement, livelihood losses or victims of environmental disasters. An important corollary of moving towards a comprehensive approach to social protection programs is the need to streamline the institutional strategy for implementation. The potential of local government bodies, particularly the Union Parishad, to coordinate a streamlined institutional strategy needs to be actively explored.

The main challenges of implementing social protection programs are coverage issues, targeting beneficiaries, leakages, and disparity in regional distribution. There is a need to address these problems with the aim of using resources effectively for poverty eradication. Given the large demand for social protection support and the present low coverage, public expenditures on social protection programs will be increased during the period of the Perspective Plan. At the same time, efforts will be made to make the existing and new programs much better focused on reaching the intended beneficiaries and serving the needs of long term poverty reduction strategy.

Over the years, social protection programs in Bangladesh have been substantially expanded. While the Government will continue to give priority to core social protection programs, in the long-term efforts will also be made to find ways to move to contributory social protection programs as in advanced countries. This is important to ensure the sustainability of an expanding social protection program. Also, the possibility of introducing a National Pension Plan will be explored. These schemes and possible options will draw on good international practices.

A coherent and integrated national social protection strategy based on a comprehensive mapping of existing and emerging vulnerabilities will be developed. This strategy will also draw on good international practices. The strategy will be to formulate a variety of social assistance and social insurance programs to be undertaken during the Perspective Plan period. The coverage of existing programs which have proven track records will be expanded. The labor laws of the country that already have provisions for several types of social insurance related to employment

will be reviewed, further strengthened as needed, and implemented. A rigorous evaluation of current programs will be done to identify weaknesses and improve their effectiveness. Programs which address emerging vulnerabilities such as urban poverty, livelihood loss due to economic integration and policy reforms, and disadvantaged groups not covered by existing programs will be developed. At the same time, holistic strategy will be developed to provide long-term solutions to entrenched problems such as seasonal poverty in northern districts and other affected areas. Targeted programs in health and nutrition aimed at reducing maternal mortality and improving child nutrition will be given priority. The strategy will also facilitate the growth of insurance programs targeted to the poor and vulnerable groups as viable alternatives for their social protection needs. In addressing all of the above, gender concerns will be accommodated as a matter of priority.

Finally, during the Perspective Plan period, there will be strong emphasis on monitoring and coordination of social protection programs. As such consideration would be given to (i) establishing a clearing and designing house for keeping track and coordinating optimal utilization of scarce resources by avoiding duplication and dovetailing programs so that the needs of the special groups may be catered to; (ii) minimizing the number and improving the accountability of intermediaries who are involved in administering social protection programs; (iii) establishing a standing arrangement for monitoring and overseeing the development and implementation of policies and programs; (iv) coordinating the views and activities of the government and non-government organizations involved in this area; (v) assigning greater responsibility for implementing programs to the local government level; (vi) introducing periodic evaluation of programs to throw light on what is working and what is not; and (vii) allowing for reform and consolidation of programs where needed.

CHAPTER 13: ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

Introduction

The process of economic growth must be equitable as well as environmentally sustainable. The environmental efficacy deteriorates when the environment is degraded and the environmental balance disturbed through overuse, pollution, deforestation, and the consequences of greenhouse gas emissions. Environmentally sound development calls for actions to restore and maintain environmental health while pursuing socio-economic development. Internationally, there is broad consensus that the environment and production systems should be tailored to minimize damage to the environment to ensure the sustainability of development, and the environmental services should be directed towards poverty reduction.

Sound environment is a multisectoral concern and it contributes towards capacity building of other sectors and helps to facilitate effective coordination among sectors. Such an integrated pathway is crucial from the perspective of longer term development sustainability and for leaving the environment, as inter-generational equity considerations demand, in such a state that the future generations can meet their needs. *Nothing should be done today which will compromise the well-being of future generations.*

The vision of the perspective plan is to take effective measures to protect Bangladesh from the adverse effects of climate change and global warming. The plan targets to take all possible steps to protect the vulnerable people from natural calamities, to take actions for the prevention of industry and transport related air pollution and to ensure disposal of waste in scientific manner. Steps will also be taken to make Bangladesh an ecologically attractive place and to promote tourism in this regard.

13.1 The State of Bangladesh's Environment

Bangladesh's environment is under threat from natural causes compounded by man-made excesses owing to the pressure of population. Man-made threats to the environment include deforestation; pollution of air, water, and land; over-fishing; encroachment of rivers; conversion of wetlands into lands for agriculture and construction of buildings; over-utilization of groundwater; obstruction of drainage channels in urban areas; land degradation due to unbalanced use of chemical fertilizers, and also as a consequence of monoculture; and population pressure on land and other natural resources. The natural phenomena include arsenic contamination of groundwater, floods, river erosion, cyclones and storm surges, and salinity ingress in coastal areas.

13.2 Global Climate Change and Bangladesh

The greatest environmental risks now arise from the intensifying global climate change which is adversely impacting both human and natural systems. Human systems include river and other water bodies, agriculture and forestry, coastal zones and marine systems including fisheries, human settlements, energy, and industry, insurance and other financial services, and human health. Natural systems include rainfall, glaciers, coral reefs and atolls, mangroves, boreal and

tropical forests, polar and alpine ecosystems, prairie wetlands, and remnant native grasslands. The degradation of the environment in Bangladesh from human encroachment makes the impacts of climate change even more severe. Natural disasters such as floods, cyclones, and drought are becoming more frequent and devastating in terms of economic and infrastructural losses and damages and health hazards (outbreak vector- and water-borne diseases). As a result of rising sea levels, a significant part of the coastal areas may be permanently inundated, displacing large numbers of people; and salinity will spread deeper and wider. Low rainfall will continue to cause drought, desertification in Barindra areas and inadequate groundwater replenishment in drier parts of the country. Large parts of the rural economy, including the coastal areas, are threatened by natural disasters which destroy crops, infrastructure, livestock, and economic activities. As a result, poverty may widen and deepen. There is a direct linkage between poverty and intensifying climate change.

It is now recognized internationally that Bangladesh is at the forefront of adverse climate change impacts. One key reason is the disadvantaged geographical location of Bangladesh at the bottom of the three mighty river systems—the Ganges, the Brahmaputra, and the Meghna, with a long coastal belt with much of the country low-lying and flat. The country has no control over its water resources as over 92 per cent of the annual run-off that flows through Bangladesh on to the Bay of Bengal enters the country from the upper riparian country. Another key reason is the extremely high population density. Thus, as a result of climate change, Bangladeshis are likely to face increasing risks to their security in terms of food, energy, water, livelihood, health, and habitat.

13.3 Responses to Environmental Challenges, Climate Change Impacts and Disaster Risks

The government has developed Bangladesh Climate Change Strategy and Action Plan (BCCSAP) and National Adaptation Programme of Action (NAPA) in 2009 to respond to climate change induced development risks and National Plan for Disaster Management (NPDM) in 2010 to respond to disaster risks. GoB has also developed National Environment Policy (NEP) in 1992, National Forest Policy (NFP) 1995, National Sustainable Development Strategy (NSDS) and other relevant policies for environmental conservations. The basic approaches in BCCSAP, NAPA, NPDM, NEP, NFP and NSDS are to wise use of natural resources, disaster and climate resilient development initiative, pro-poor adaptation and mitigation strategies, green growth, eco-system based disaster risk reduction, all risk resilient urban development and pollution management. Although not required to reduce greenhouse gas emissions given its status as a least developed country, Bangladesh is committed to following a low carbon path, success of which would depend on provision of resources by the international community. But Bangladesh will not compromise on the need for accelerated economic growth and poverty reduction. Planning Commission has taken an initiative to mainstream poverty-environment-climate change and disaster issues into development planning and budgetary process.

13.4 Environmental, Climate Change and Disaster Management Strategies

The major environmental, climate change and disaster risk reduction strategies include:

- Develop effective operational procedures in different ministries and agencies to implement environment, climate change and disaster agenda of the country and in possible cases, bring synergies amongst these agendas to ensure poor people are ultimately benefitted.

- Steps to ensure that human activities that degrade environment are contained through awareness-raising and, if necessary, recourse to legal means.
- Government's population policy will reinforce and incorporate climate change strategy.
- Best utilization of the available land, arresting and reversing the land degradation process, is a major policy thrust. In this context, an integrated plan of action may be prepared. Also, especially for urban areas, further unplanned growth needs to be stopped and an urban renewal strategy will be formulated and implemented.
- Bangladesh is committed to conservation and enhancement of the country's biodiversity, which has been severely affected in terms of species losses and threatened species. The Biodiversity National Assessment and Programme of Action 2020 continue collection of information and analyses on the current state of biodiversity in the country and outline an action plan. Efforts to protect and enhance biodiversity will be strengthened.
- With growing population, a major focus will be given to managing and improving sanitation in both rural areas and towns and cities. Both awareness-building and increasing the availability of required supplies (such as sanitary toilets) is part of the strategy to improving sanitation.
- In rural areas, the arsenic contamination of groundwater will continue to be addressed with determination. Mitigation options include treatment of arsenic contaminated water.
- Increase the use of surface water sources. Deep aquifers appear to offer a long-term source of arsenic-free and safe drinking water.
- To improve navigability and water discharge, and to reduce flood risks, a strategy of dredging and training of rivers in a planned and phased manner will be pursued.
- Aforestation, particularly in coastal areas, is already a major thrust and will be strengthened in terms of strategic location and overall area covered.
- The policy of crop diversification will be strengthened and properly implemented, as it is economically sound and should help reverse the land degradation process.
- Integrated coastal zone management will continue to be a policy thrust. The Coastal Zone Policy and the Coastal Zone Strategy will be put to use, and may be revised and modified if necessary as the implementation process progresses. A major emphasis will be placed on desalinization of water and land.
- In adaptation activities both structural and non-structural measures, as appropriate, will be undertaken to protect the people and equip them at the same time to respond better. The option of O&M and rehabilitation activities for embankments and polders to prevent flood waters and salinity intrusion will be examined and the best approaches identified for implementation.
- Communities, particularly those to be affected most by extreme climatic events, will be the focus for capacity-building and mobilization. Their economic uplift will be promoted as an integral part of the process.

- For 2009-10 budget year, the government allocated 700 crore Taka (US\$100 million) for climate change activities, which is being utilized. The allocation will be increased in the coming years, as appropriate.
- Efforts will be made to mobilize *net additional* resources from bilateral & multilateral sources, including UNFCCC, for climate change interventions. Since it is the developed countries that are responsible for climate change, and Bangladesh suffers from no fault of its own, climate justice requires that the developed countries provide necessary funds and technologies to Bangladesh, as also to other similarly placed countries, to enable them to mount appropriate responses to the intensifying risks from climate change.
- All necessary steps will be taken to utilize nationally and internationally mobilized funds properly and effectively.
- Efforts will be made to mobilize domestic and foreign fund for 'green growth' in all sectors and provide strategic environmental services for adaptation, mitigation and disaster risk reduction.
- Regional cooperation will be pursued for more effective flood and drought management as well as for basinwide trans-boundary river management. This will be mutually beneficial for all co-riparians including Bangladesh. Climate change management through regional cooperation has good potential for mutual benefit. The regional countries can learn from one another's experiences and pool resources and expertise to develop appropriate adaptive capacities. Regional countries may also work together to protect and enhance their collective common interests in international climate change negotiations.
- Adaptation must be the main focus for a country like Bangladesh; but unless mitigation starts immediately with drastic reduction of greenhouse gases, particularly by developed countries, climate change will continue to intensify with ever more adverse impacts, which will make adaptation increasingly difficult. If overall greenhouse gas emissions continue to increase, climate change may become unmanageable in 50 years' time.
- All development initiative needs to be pro-poor, environmental sustainable, climate change and disaster resilient. Therefore, Planning Commission and relevant agencies will develop proper capacity building mechanism to ensure that development projects are designed in a sensible way to increase country's resilience.

Bangladesh urges, in association with the international community, that global warming be kept at 1.5°C - and in any case not to exceed 2°C to be incorporated in a binding agreement.

CHAPTER 14 : CONCLUDING REMARKS

Perspective Plan of Bangladesh 2010-2021

The **Perspective Plan of Bangladesh 2010-2021** has provided the road map for materialization of the national goals enshrined in *The Vision 2021*. That *Vision* embodies a dream that Bangladesh, on the eve of its 50th anniversary of independence, will cross into the middle-income country threshold, its citizens will enjoy a higher standard of living, will have better access to education, will benefit from improved social justice, and will live in a more equitable socio-economic environment. These milestones will be achieved in a political climate that is in line with core democratic principles of human rights, freedom of expression, the rule of law, equality of citizens irrespective of race, religion and creed, and equality in opportunities.

To start with, the Perspective Plan acknowledges that in order to meet the desired outcomes by 2021, the country needs a better governance scenario that provides improved incentive mechanisms for the public sector to deliver results. This improvement requires enhanced public administration capacity, lower levels of corruption from increased transparency and stronger prevalence of the rule of law. On overall macroeconomic management, and for Bangladesh to qualify as middle income country, the government must adopt a prudent macroeconomic framework that ensures macroeconomic stability for the long term. This necessitates that macroeconomic policy ensures external and internal stability through an effective exchange rate policy, low inflation, and adequate resource mobilization to generate optimal level of public and private investment. The goal is to accelerate real GDP growth to 10% by 2021, and reduce head count poverty rate to about 14% of 2021 population.

A number of key sectors will play a pivotal role in materializing the Vision 2021. It begins with a focus on explicit goals, challenges, and strategies for the agricultural and rural sectors which account for a significant proportion of the country's GDP and employment. The primary goal is to eliminate food deficiency by improving production that will enable citizens to meet their nutritional requirement. More specifically, for ensuring food security by 2021, strategic goals need to be addressed in the crop sector, fisheries, livestock and poultry, and forestry. In order to enhance employment generation and rural development, adequate policy attention must be given to rural-non-farm activities. The government must also help farmers in marketing agricultural products and accessing rural credit by pursuing policies that establish powerful autonomous local government bodies for coordinating public and private development initiatives.

Next, industrialization process must play a central role in accelerating growth and achieving real GDP growth of 10% by 2021. This means that in an era of increasing globalization, the only *mantra* for survival and progress is to facilitate the competitive strength of our industrial sector. In terms of broader goal, the industrial sector will continue to account for a much larger share of GDP – reaching 37% in 2021. This dominant performance of the industrial sector is necessary for it to address the increasingly diminishing capacity of agriculture to absorb the incremental labour force. However, industrial expansion must simultaneously be matched with a highly productive farm and non-farm agricultural sector. Within industry, the manufacturing sector is to display superior double digit performance for the period 2011-21. This can be realized by

increasing the competitiveness of Bangladesh's export, and ensuring a larger share for the country in global trade. With this objective, policy makers can target product and market diversification with an effective trade policy regime that is geared to ensure productivity and export competitiveness while aiding the emergence and expansion of new product markets.

The current wave of globalization holds both opportunities and challenges for Bangladesh. The Bangladesh economy today is more integrated with the global market – largely due to the rapid growth in trade, substantial out-migration of labour and remittance inflows, financial sector reform, and creation of favorable FDI regimes. The Perspective Plan emphasizes that it is very important for Bangladesh to make-use of the complementary resources, which it shares with countries like India, Nepal, Bhutan and Myanmar. This makes a case for greater regional cooperation on trade and trade facilitation, regional transport, energy trade and water management, FDI and joint ventures, cooperation on rail and road projects.

The Vision 2021 also constitutes a goal that is eloquently described by the Prime Minister as 'Digital Bangladesh' to rapidly address the lack of capacity to generate productivity improvements from technological progress, which has long been undermining Bangladesh's growth potential. To minimize such constraints, the government has implemented the national ICT Policy 2009 in order to enhance the usage of information communication technologies in both private and public sector. On the whole, the 'Digital Bangladesh' agenda is likely to aid the creation of a knowledge-based society, which is necessary for Bangladesh to move up in the development ladder.

The Perspective Plan underscores that at present Bangladesh is coping with a grave energy crisis which is a product of growing deficit in the supply of energy against current and potential demand. The circumstances call for a prompt but well crafted sustainable long-term strategy for a balanced growth in resource exploration, energy generation, transmission and distribution. The goal for the power sector is to have electricity for all by 2021. The goal necessitates that policymakers complement energy options from domestic sources with possible options for energy trade. Emphasis has been placed on the need to identify and reach the optimal fuel mix for energy generation. While the present scenario exemplify our over-dependence on gas for performing generation activities, the sector must gradually accelerate the usage of other fuels – especially coal- to maintain the desired growth in energy generation. This also demands that the government speed up exploration of domestically available resources, such as coal, oil and gas from offshore sources. Lastly, the supply side options need to be balanced with policies for demand management that conserve energy and discourage inefficient use of electricity.

For Bangladesh to emerge as a 'middle income country', we need a vibrant and effective transport and communication network. The strategy is to develop an efficient, sustainable, safe, and regionally balanced transportation system in which various modes – roads, railways, inland waterways, air transport, ports and shipping, urban and rural transport – complement each other, interface appropriately, and (when possible) provide effective competition to each other. The progress in the telecommunication network and digital media are also noted to be fundamental in advancing economic growth. This is because these sectors play a fundamental role in facilitating the diffusion of information, which in turn reduces associated transaction costs in the economy.

The development targets by the end of this decade also bring to attention the changing nature of urbanization. It is estimated that by 2021, more than 33% of the population of Bangladesh will be living in urban areas. This prospective urbanization challenge unless well managed can choke off future growth acceleration targeted in the Perspective Plan. To minimize such risk, the government plan to undertake an ambitious urban development program based on policies and strategies that will cover spatial, economic, social, cultural, aesthetic, and environmental aspect of urban life. Effective implementation of these programs will be pivotal in determining if the urban areas can provide access to health, education, security, shelter, and basic services – which are essential ingredients in ensuring a ‘quality life’ for its habitants.

Economic development to be meaningful must be associated with human development. The idea here is to expand the ‘choice-set’ available to every citizen in the country to pursue their basic needs and entitlements. Plan targets in this regard include: (i) removing deficiency of food and ensuring nutritional requirements of 85% of the population, (ii) ensuring minimum daily intake of 2122 kilo calories of food, (iii) eliminating contagious diseases and ensuring primary health care and sanitation, (iv) increasing life expectancy to 70 years, (v) reducing under five mortality to 45 per 1000 lives births and maternal mortality into 100 in 100000, (vi) increasing net enrollment at primary level to 100% by year 2010 , (vii) removing illiteracy by year 2014, and (viii) improving the quality of education with an emphasis on science and technology. These targets are to be attained with the help of strategic actions that aim to improve access and affordability of public service with a special focus on quality.

Lastly, the Perspective Plan reiterates that accelerating economic growth without paying attention to the concepts of ‘inclusiveness’ and ‘sustainability’ holds no meaning for a country. As a result, the Plan intends to achieve pro-poor growth with adequate attention to social protection that promotes participation of the excluded groups –such as poor women, people from ethnic groups, and socially excluded groups – in the process of development. The growth experience, so far, has also brought chronic environmental degradation. Consequently, the plan document accepts that the present decade holds a ‘window of opportunity’ for halting the process of environmental degradation through pursuing strategic actions that generate green growth, and also minimize the adverse effects of climate change.

In sum, the **Perspective Plan of Bangladesh 2010-2021**, articulates the ‘means’ and ‘ends’ that Bangladesh wants to adopt and reach on the eve of its 50th anniversary of independence. It highlights a pragmatic multidimensional approach in producing an economy that is innovative and competitive, and the opportunities it creates allows us to achieve a socially just society.