CHAPTER V
Conclusion

The foregoing discussion clearly suggests that environmental crisis is probably the most important source of threat to the security of Bangladesh. The study shows that environmental crisis in the country has adversely affected agricultural, industrial, fishery, energy and inland transport sectors, human health and habitat which in turn have produced four main causally interrelated social effects: economic decline, decrease in the quality of day-to-day life of the population, population displacement and disruption of regular and legitimized social relations. The political consequences of these problems are manifested in internal political instability and various type of natural resource based conflicts (e.g., resource scarcity disputes, relative deprivation disputes and group identity disputes) both the intra-state and inter-state levels, each with potentially serious repercussions for the security of the country. A number of observations can be made from this study.

First, environmental crisis is one of the major reasons for the frustrating state of economic underdevelopment of the country. In the face of the country's incapacity to address the problems of massive unemployment, abject poverty and sharp social inequalities, there is pervasive social and economic frustration and alienation, which add to the weakening of an already underdeveloped political structure of the state.

Second, the study shows that the extreme form of environmental crisis has led to the erosion of legitimacy of representative governments and their simultaneous overthrow by the powerful challenger groups. This is corroborated by the fact that there is
a widespread perception within the political elite of the country that the occurrence of a famine so soon after the independence caused a massive crisis of legitimacy for the then Sheikh Majibur Rahman government whose violent overthrow a year later on 15 August, 1975 was seen as an expression of this loss of legitimacy.¹

Third, the cross-border disputes over environmental issues have been manipulated to strengthen the already existing authoritarian regime. For example, President Ershad effectively manipulated the Ganges water dispute against India in order to consolidate his dictatorial rule in the country.

Fourth, the cross-border disputes over environmental issues have been exploited by political parties of the country as an effective electoral strategy. The cross-border issues, particularly the Ganges water issue constitutes one of the recurrent themes in domestic politics of Bangladesh. Any political parties in opposition, besides condemning India, also criticise the government of Bangladesh for pursuing weak foreign policy and failing to force India to give Bangladesh it’s due share. The absence of consensus among political parties on crucial issues of national importance and its subsequent manipulation to gain narrow political advantage show the immature state of Bangladesh polity.

Fifth, Indo-Bangladesh disputes over environmental issues have been exploited by the fundamentalist forces of Bangladesh. It has contributed to the weakening of the salience of secular politics and thereby feeding the political dissension in the country. Bilateral disputes have also strengthened anti-India feelings in Bangladesh.

Sixth, the loss of environmental foundation of livelihood has led to shifts in sub-national allegiance that tend to undermine political order and some times even the sovereignty of the country, as is the case with the CHT. The CHT problem is a typical case of conflict generated by massive influx of outsiders (Bangalis) into the region, thereby undermining the economy, culture and the ecology of the region.

Seventh, there are widespread social conflicts over gaining access to scarce environmental resources in rural Bangladesh. Conflicts over char land and in FCDI project areas sufficiently prove the above statement.

Eight, it has been proven that the massive flow of environmental refugees from Bangladesh to India is a major source of irritant between the two countries. India’s decision to fence its border with Bangladesh to tame the tide of Bangladeshi refugees has already embittered their bilateral relations.

Finally, disputes between Bangladesh and India over the share of the common rivers and territories are the major threats to the security of Bangladesh. These disputes have not only led to verbal and political confrontations and tense disagreements between the two countries but also to violence, either among civilians or military forces.

Bangladesh is burdened with large population, dwindling natural resources and acute socio-economic problems: Furthermore, there are economic and political instabilities and high level of dependence on foreign aid in the country. In addition of this, domestic and transborder disputes over natural resources are likely to intensify in the future. All these factors make it imperative to integrate environmental issues as major security concerns of Bangladesh.
As our analysis suggests environmental crisis poses the gravest threat to the security of Bangladesh. Indeed, it poses insurmountable challenges to the very survival of the country. Measures are, therefore, urgently needed to overcome the environmental threats to its security. To this end, the following three level approaches may turn out to be effective.

1. Management of Environmental Crisis

The economy of Bangladesh and the livelihood systems of its people are overwhelmingly dependent on environmental resources. It is in this context that the management of environmental resources becomes very important. It involves many measures to arrest further deterioration of natural resources and enhances their quality.

In order to solve the problems of environmental crisis in Bangladesh, the most pressing task is to check the rapid growth of population. The present rate of population growth is not sustainable and it poses a threat to the environment of the country. Population control will definitely decrease the pressure on land, water, forest, fisheries and atmosphere for a sustainable level of development. The strategies to control population should reinforce emphasis on developing human capital through education, family planning and public health programmes.

In the long run, solution to the population and environmental problems depends on the macro-economic policies, which will promote and ensure stable and broad based income growth for larger sections of population who have to depend on the extraction and use of the natural resources for their livelihood. This will in turn help to alleviate poverty. An equal access to resources, services and infrastructure
among the poor is also essential for the reduction of poverty, environment problems and population growth in the country.

Land is the most important resource of Bangladesh. Its availability is a major constraint for food production, forestry, fishing and infrastructural and urban development. The key environmental and socio-economic issues in this sector are the gradual loss of agricultural land, decline in soil fertility, land degradation, landlessness, distribution of khas land and cumbersome land registration system. The following measures with regard to land resources and land use planning can be proposed.

- Halt any further land degradation, preserve and increase soil fertility.
- Enforce zoning laws to limit loss of agricultural land for urban development.
- Encourage the adoption of land use practices that are compatible with various ecosystems of the country.
- Promote use of marginal and homestead land for intensive cultivation.
- Formulate comprehensive land use policy to address the issues of land fragmentation, land tenure, land ownership ceilings, landlessness, distribution of khas lands, etc.
- Conduct systematic and comprehensive land use survey to classify land on the basis of physical characteristics and legal status, and formulate recommendation for subsequent replication.
- Protect reclaimed land and newly accreted land.
- Create and maintain a permanent green belt along the coast and promote participatory forestry on barren lands and along roads and railways.
Water is critically important to the ecology and economy of Bangladesh. It is intricately linked with fisheries, forestry, wetland, biodiversity, irrigation, public health and sanitation, industry, recreation, power and navigation. Its value has increased with competing demands from various sectors. Therefore, water resources need to be managed both qualitatively and quantitatively. To address water pollution and water scarcity problems the following measures can be suggested.

- Ensure environmentally sound utilization of water resources.
- Ensure that all steps taken to develop water resources and irrigation networks do not create any adverse impacts on environment.
- Ensure that all steps taken for flood control, including construction of embankments, dredging of rivers, digging of canals etc., are environmentally sound at the local, regional and national levels.

Bangladesh is one of the richest countries in terms of inland fish resource. It plays a dominant role in nutrition, employment, foreign exchange earnings and other areas of Bangladesh’s economy. The key issues in the fishery sector are the loss of open water fishery habitats, adverse impacts of FCDI and FCD on fisheries, pollution and degradation of open water, loss of aquatic biodiversity, poor management of open water fisheries, overfishing of marine fish. The following measures are needed to solve the problems confronting the fishery sector.

- Conduct feasibility studies on FCD, FCDI and other water resources development projects in the light of their impact on fisheries.
- Prepare plans to examine possibilities for restoration of some of the lost fish (aquatic) habitats in different components of the open water systems.
Stop discharge of untreated solid, liquid and gaseous materials.

Natural forests throughout the country are being alarmingly depleted due to various types of human activity and natural factors. Protection of existing forest and mass scale afforestation programmes should be undertaken to increase forest areas in the country. Environmental education is necessary to create awareness among people to preserve the forest and halt deforestation. There is need to improve the management of state forests and homestead forest through people’s participation. There is also a need to formulate a new National Forest Policy suited to the present environmental need of the country together with adequate and appropriate legislations for implementing the same.

Biological resources and biological diversity form the basis of both the ecology and economy of Bangladesh. But biological diversity is being threatened by the loss of habitat, unwise utilization of biological resources, water pollution, land degradation, etc. There is need to give priority to the protection of threatened wildlife by imposing prohibition on their hunting, trapping and commercial uses. The government should take such initiative as improvement of habitats, studies on the breeding, feeding and migration ecology of water birds, and increasing education and awareness. There is also need to use different legal and administrative mechanisms to manage national parks and protected areas.

Although the overall air quality in the country is good, some pockets of the country like industrial and urban centres are heavily polluted. In view of the fact, the country needs a practical set of rules and regulations to control air pollution. Some important measures to control air pollution are suggested below.
• Control of brick burning.
• Regulation with respect to vehicles emitting smoke harmful for the environment.
• Environmental clearance.
• Regulations of the industries and other development activities.
• Provision of improved stores in rural areas.
• Coordination of different vehicular modes.
• Separate laws for different speed traffic.
• Introduction of traffic signals in urban areas.

Bangladesh is vulnerable to several kinds of natural disasters like floods, riverbank erosion, cyclone and storm surges, tornado, landslide, mass wasting and drought. These extreme natural events cause colossal damages to human lives, their livelihood system and national economy. Some of these disasters cannot be prevented. However, they can be managed with adequate planning and adaptation. There is a pressing need to frame a disaster management policy in the light of the modern concept of 'risk minimization activities'. The main elements of this concept are prevention or mitigation, preparedness, response, recovery, and development.

The policy may take are of such aspects as accurate definition of disaster threats, organisational arrangements required to prepare responses to and recover from disaster events, assessment of resources available to deal with threats, and recognition of ways for the national disaster management policy to interlock with other national development policies.
The coastal areas of Bangladesh will be seriously affected by a possible sea-level rise in future. The country will be incapable in mitigating the problems of sea level rise without assistance from the rest of the world. The major options for the country will be to construct embankments along the coast, islands and riverbanks with financial help from the developed countries and multilateral agencies.

2. Mitigating Social Impacts of Environmental Crisis

It has been shown in Chapter III that environmental crisis has produced four main social impacts in Bangladesh: economic decline, decline in the quality of day to day life, population displacement and disruptions of regular and legitimized social institutions. Hence, understanding of a secure Bangladesh is:

- It must be able to attain a self-reliant economy.
- It must have a well-developed human resource base.
- It must have a strong livelihood system.
- It must build a stable and moving social order.

Stronger the economy, healthier the human resource, stronger the livelihood system and stable social order, the lesser is the vulnerability of the country to any security threat. Bangladesh is a poor economy. It is heavily dependent upon its natural resource base for economic development. Therefore, to attain economic prosperity, the country needs to adopt a sustainable development strategy, which recognises the importance of symbiotic relationship that exists between people and their environment. It also calls for intra- and inter-generational equity over access to environmental resources.
The most important step to arrest economic decline in the country should be to increase agricultural production on sustainable basis. Soil conservation, development of sustainable minor irrigation projects, adoption of cropping pattern on the basis of ecological settings, rotation and diversification of crops, selection of improved seeds and use of organic fertilizers are some of the necessary requirements to increase food production. To increase pace of industrial development emphasis should be given to labour intensive and locally available renewable resource based industries.

Inland water transport is a major contributor in Bangladesh’s economic development. Dredging of the rivers affected by emergence of *chars* and shoals is required for the smooth running of the vessels. Availability of biomass fuel for domestic use has reached a crisis proportion.

Solution to the energy problem requires involvement of people in mass tree plantation, forest conservation and regeneration, an increase in bovine population, motivation of people to use energy efficient stores and also an increased awareness about causes of fuel shortage.

Because of the low level of human development, the overwhelming majority of the huge potential mass power remains a burden rather than a contributing factor to the development process. Failure of the country to develop human resources is one of the major factors of unemployment and poverty and its continued underdevelopment. To tackle economic decline and to improve the living conditions of population, the country needs to reinforce the emphasis on developing human capital through education, family planning, public health programmes, supply of pure drinking water and development of weaker sections such as women and children.
The purpose of education should be to excel in quality and to improve the ability of the people to use natural resources efficiently and productively, and to diversify their sources of income, which will not be dependent on natural resources alone. There is a need to remove socio-economic and cultural hindrances that favour large family size. Education of women is critical for controlling population growth. Preventive measures capable of reducing environmental health risks from polluted water and air, lack of sanitation and drinking water should be incorporated in the public health programmes. The poor should have access to low cost treatment of diseases such as diarrhoea, respiratory problems, skin disease and cancer arising from environmental hazards. The vast majority of people in rural Bangladesh derive their livelihood from extraction and use of natural resources. Their livelihood system is extremely vulnerable to environmental crisis. Environmental degradation, unequal access to land, high population densities within the homeland compel these people to migrate to other areas. The frequently occurring natural hazards destroy their already fragile livelihood system and cause involuntary migration in large numbers. The problems of these people can be solved by preserving, protecting and strengthening their natural resource bases. These processes involve:

- Control of land degradation and water pollution
- Protect their natural resource base from environmental degradation and natural hazards.
- Ensure access of these people to *khas* lands and water bodies and government forests.
• Encourage sustainable and environmentally sound utilization of all natural resources.

To solve the problems of environmental refugees in the country the following measures should be taken to solve.

• There is a need to create a database on the nature (i.e., whether development induced, conflict induced or environmental degradation induced), extent and duration of population displacement.

• Adequate attention should be given to the creation of employment opportunities for the internally displaced persons.

• Local government institutions should be strengthened for rehabilitation of the internally displaced persons.

• A comprehensive economic, social and environmental impact assessment should be conducted before implementing any major development project.

• A systematic database on government khas land should be developed and be made available to the internally displaced persons.

• Experiences on displacement related issues should be shared with the neighbouring countries. This will help develop strategies for mitigating the plight of different categories of the displaced.

• Climate change or other environmental related displacement has regional and international dimensions. A regional approach is needed to address the problem of environment related displacement. Issues such as se-level rise should be brought on various international forums to make the international community accountable and take responsibility for impacts of climate change.
The environmental perspective of social issues in Bangladesh is of sharp social inequalities in distribution of and access to natural resources, political upheavals, ethnic and communal divides etc.

The existing social inequalities can be removed by land reforms, progressive taxing on wealth and protective discrimination in favour of the weaker and marginalised sections of the society. The problem of ethnic and communal divide can be solved by economic, political and cultural integration, of ethnic and communal minorities into the national mainstream.

The problem of political instability can be solved through structural and institutional arrangements in favour democratic polity. The democratic system and culture can be strengthened through decentralisation and empowerment of people and by facilitating participation in the democratic, administrative and developmental processes.

3. Resolution of Environmentally Induced Conflicts

As analysis shows, the environmental conflicts—both at domestic and external fronts are threatening the security of Bangladesh. The peaceful resolution of these conflicts is vitally important to ensure security of the country. The following five important issues have been described below.

(i) Resolving Endemic Conflict over Char Lands

Disputes over control, use and exploitation of char land have been the source of violent social conflicts in rural Bangladesh. However, these conflicts are not law and order problems and these cannot be resolved by policing the char areas. The
problem is far deeper rooted in the social, political and economic structure of Bangladesh.

Therefore, the solution of this problem requires to take necessary measures in the light of the following crucial issues (i) ownership and tenural status; (ii) reorganization of the presently centralized settlement operations for immediate “on-the-spot” survey of charland; (iii) maintenance of up-to-date records of rights, and where necessary, new survey of accretion land; and (iv) better coordination between different agencies related to Char land administration. Finally, local peasant organizations should be involved and be allowed to play an important role in any implementation of char land reform and settlement policies at the village level.

(ii) Resolving South Talpatty/New Moore Island and other Territorial Disputes

As analysed in the previous chapter, the conflict between Bangladesh and India over South Talpatty/New Moore Island became militarised at one point of time. The dispute is a part of the larger conflict of interests between the two countries over delimitation of maritime boundaries. Actually, the problem of conflicting claims is not due to lack of understanding of international law, but politics surrounding the claims. Claims and counter claims are based purely on narrow national interests. Machinery for settlement of maritime disputes is well established in the 1982 conventions of the law of the sea. Since both the countries are signatories of the treaty, a legal framework for dispute settlement is already agreed upon. What is needed is to transform the legal consent into a strong political will to resolve this issue by peaceful means. In this direction, both the governments have agreed to exchange data through hydraulic
survey for a peaceful settlement of the sovereignty claim of South Talpatty/New Moore Island.²

Regarding territorial disputes along the border, the demarcation of 6.5 km stretch of the boundary should be completed on priority basis. All areas in adverse possession of each country should be measured and demarcated at the earliest and subsequently be exchanged.

(iii) Resolving the Chittagong Hill Tracts Conflict

As noted in the previous chapter, the settlement of the people displaced from the floodplain and coastland to the CHT and the subsequent economic, ecological and cultural marginalisation of the indigenous people led to this problem. The issue took an international dimension with the migration of Chakma refugees into India.

However, the problem was resolved following signing of the Chittagong Hill Tracts Peace Accord in 1997. But the problem still persists due to the non-fulfillment of some provisions of the peace agreement including proper rehabilitation of the returned refugees, settlement of land confiscated from the tribal people, and withdrawal of non-permanent military camps from the hill area. To make the accord durable, the earliest solution of these problems is required. At the same time, the government should give emphasis on the ecological and economic concerns of the area, including deforestation, extinction of wildlife, hill cutting, soil erosion,

unplanned *Jhum* cultivation, scarcity of safe water, agricultural and employment problems.

**(iv) Resolution of Conflicts over River Waters**

Bangladesh and India share 54 common rivers. Disputes over these rivers centre on sharing of water and the management of water quality. Of these 54 rivers, water sharing of the Ganges has been the most serious and disputed issue between the two countries. However, signing of the Treaty on sharing of the Ganges in 1996 resolved the most vexing issue between them. The Treaty does, indeed, mark a watershed in bilateral relations. It has paved the way for discussions on sharing of other important common rivers. There is a need of political commitment and goodwill on the part of two countries to resolve disputes over the remaining common rivers. Both the countries should positively move forward to conclude water sharing agreements treaties on the basis of equity, fairness and no harm to either party.

**(v) Resolving the Conflicts Over Illegal Migration Of Bangladeshis Into India**

The problem of continuous influx of illegal Bangladeshis refugees into India is another major thorn in the bilateral relations. The military-type measures like fencing, intense patrolling adopted by the Indian government will not solve the problem completely. The main driving force behind illegal migration is the economic misery of these people being caused by environmental crisis is Bangladesh. In view of this, solutions of these problems require a major policy shift for coordinated development of ecology and economy of borderland areas through trans boundary cooperation.
There are various opportunities and compulsions for such cooperation between them: management of common rivers, development of trans-border transport systems, removal of existing barriers in cross-border trade, trans-boundary energy cooperation, joint ventures for industrial development in the borderlands, restoration of natural environment and coordination in disaster management.