

REVISITING THE LEGAL FRAMEWORK OF FOREST MANAGEMENT CHALLENGES IN BANGLADESH

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1. Introduction

Forests serve significant social functions, provide homes and economic base for forest dwelling people, supply fuel wood and other products to households in villages near the forest. It is also important to the household economy of the rural poor. Natural forests are critical to preserving biodiversity because they provide refuge to wild animals and plants, including rare species found only in the forest. Trees- whether natural or cropped- act as a sink for carbon and help to regulate climate at the regional and global levels.¹

According to an ESCAP (Economic and Social Commission for Asia and Pacific) survey, 5,00,000 to 6,00,000 people depend directly on the Sunderbans for their livelihood. This large population includes commercial and industrial enterprises dependent on the forest products.² Forest depletion not only contributes to extinction of wildlife and biodiversity but also weakens the economic condition of forest dependent people and ethnic communities and their indigenous lifestyle. It is worth mentioning that changing concept of ownership and possession of forest land, with the change of law also makes their life insecure and sometimes eviction or migration becomes inevitable. Highly efficient and people friendly forest legislation is a constant demand of forest dependant people. Therefore, the legal regime should be human and environment³

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¹ Mitchell, Robert, Property Rights and Environmentally Sound Management of Farmland and Forests, *Land Law Reform: Achieving Development Policy Objectives*, The World Bank, Washington, DC 20433, USA, 2006 at p. 207.

² Kafiluddin, Dr. A.K.M., *Population Research, Environmental Conservation and Economic Development*, First edition 2001, Dhaka, ISBN 984-32-0226-5, at p. 341.

³ "Environment means the inter-relationship existing between water, air, soil and physical property and their relationship with human beings, other animals, plants and micro-organisms"- Section 2(d), The Bangladesh Environment Conservation Act, 1995, Act No. 1 of 1995.

friendly. The forest legal framework consists of laws on environment, property and forest. Since, forest has nexus with population, geographic location, global and regional climate and political stability of the region, the management of the same is subject to multifarious challenges. There are many legislations and government policies that have relevance to the forest management and its challenges.

The objective of this article is to address the question- to what extent forest related legislations are effective to encounter challenges involved in the forest management of Bangladesh. This article has six sections. Section 1 is an introductory one. Section 2 gives picture of forest and vegetation in Bangladesh and also discuss about forest produce and related statistics. Section 3 is the heart of this article and it deals with the legal framework of forest management. It includes the faulty areas of forest and environment related legislations and makes an effort to improve the condition. The next section is about forest management challenges in Bangladesh which attempts to discuss the problematic management framework and critical issues related to the forest management in Bangladesh. Section 5 is about findings and positive recommendations for a better and wider forest cover in Bangladesh and finally, section 6 is the conclusion. It is needed to be mentioned that author's personal experience of traveling and residing in different forest areas has also been reflected in this writing. Different books, articles, websites, newspapers have been consulted for completing this article.

2. Forests in Bangladesh

Studies of the fossils and other geological characters reveal that in the ancient period extensive tropical to sub-tropical forests existed in Bangladesh. Evidence from paleobotany indicates that fossilized angiosperms were recorded in the Jurassic and Triassic periods. Muslim rulers maintained a status quo on the forest. On the other hand, East India Company considered the forest and agriculture as commercial entity because the forest and the crops provided the timbers, fuel and food to improve the living standard of the Britons.⁴ After the creation of Bangladesh the Forest Department was placed under the Ministry of Agriculture. A Forest College was established and placed under the Forest Department.⁵

⁴ Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, 2nd edition: December 2005, at p. 89.

⁵ *Ibid.* at p. 90.

In 1927, when the Forest Act of 1878 was reformed, there was about 20% forest in the territory of Bangladesh.⁶ According to the Forestry Master Plan (1993), which is said to be the first step to link Bangladesh with the Tropical Forestry Action Plan (TFAP), total forest lands managed by the Forest Department, Land Ministry and individuals are 24,60,000 hectares or 16.85% of the land surface of the country.⁷ The Compendium of Environment Statistics of Bangladesh 2004 shows that Bangladesh has 4477219.35 acres of reserve forest, 91381.89 acres of protected forest, 20859.66 acres of acquired forest, 9491.97 acres of vested forest, 1759456.83 acres of unclassed forest and 59510.84 acres of khas lands controlled by the Department of Forest. Therefore, the total forest land controlled by the Department of Forest is 6417920.54 acres⁸. The area under forest by the type of forest can be demonstrated in the following table:⁹

Year	WAPD & Khas land (square miles)	Garden area (square miles)	Reserve forest (square miles)	Acquired forest (square miles)	Vested forest (square miles)	Protected forest (square miles)	Unclassed state forest (square miles)	Total (square miles)	% of total area
1975-76	47.75	0.33	4430	365	41	222	3502	8608	15.48
1980-81	47.80	-	5422	399	41	222	3440	9572	17.22
1985-86	54.71	0.34	5718	262	35	207	2443	8720	15.68
1990-91	369.00	na	5028	157	87	202	1335	7178	12.81
1995-96	272.55	na	5643	372	33	149	1840	8461	13.60
2002-03	92.99	na	6996	33	15	143	2749	10028	17.50

2.1 Classes of forests

The forests in Bangladesh are found to be classified as reserve forests, protected forests, privately owned forests, unclassed state forests (USF) and public forests. Reserve forest is the largest category of forest in Bangladesh. The Sunderbans, Chitagong Hill Tracts (CHT) and

⁶ Gain, Philip, *Bangladesher Biponno Bon (The Endangered Forests of Bangladesh)*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2005 at p.V.

⁷ Gain, Philip, *Forest and Forest People of Bangladesh, Bangladesh Land Forest and Forest people*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 1995 at p. 30.

⁸ Compendium of Environment Statistics of Bangladesh 2004, Sustainable Environment Management Programme Component 1.3, Bangladesh Bureau of Statistics, Planning Division, Ministry of Planning, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh at p.155.

⁹ *Ibid.* at p. 156, Source: Department of Forest.

Modhupur tracts fall under this category. Where private forests comprise of forest type of lands owned by individuals and companies, village common forest of the indigenous groups in the CHT include land of unclassified state forests.

The three main types of public forests are:

- (i) Tropical evergreen or semi evergreen forests (640,000 ha) in the eastern districts of Chittagong, Cox's Bazar, Sylhet and the CHT region, (hill forest);¹⁰
- (ii) Moist or dry deciduous forests also known as *sal* (*Shorea robusta*) forest (122,000 ha) located mainly in the central plains and the freshwater areas in the northeast region;¹¹ and
- (iii) Tidal mangrove forests along the coast (520, 000 ha) – the Sunderbans in the Southwest of the Khulna and other mangrove patches in the Chittagong, Cox's Bazar and Noakhali coastal belt.¹²

However, Bangladesh has around 80 thousand villages and each of them is rich in trees, shrubs and herbs. Khan and Alam (1996)¹³ compiled a report on the "Homestead Flora of Bangladesh". They enlisted 217 floras found in the village homestead forest.¹⁴

2.1.1. Tropical evergreen or semi-evergreen forests

The forests of Chittagong Hill Tracts (CHT) fall under this category of forests and they have been classified as reserved forests (RF), protected forests (PF), unclassified state forests (USF). The reserved forests of CHT covers 796,160 acres or 1,244 square miles (about 24% of the CHT),¹⁵ the protected forests covers 34,688 acres or 54.20 square miles (about 1%

¹⁰ Gain, Philip, *Stolen Forests*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2006, at p. 26.

¹¹ *Ibid.*

¹² *Ibid.*

¹³ Khan, Salar M. & Alam, Khairul M., (1996), *Homestead Flora of Bangladesh*, International Development Research Centre (IDRC), Village-Farm Forestry Project, SDC, Dhaka, Bangladesh, Forestry Div. BARC.

¹⁴ See, Hasanuzzaman, S.M., *Plant Genetic Resources in S.AARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, Second edition: December 2005, at p. 97.

¹⁵ Gain, Philip, *Stolen Forests*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2006, at p.28.

of the CHT),¹⁶ and the unclassified state forests covers 2,463,000 acres or 3, 848 square miles (about 75% of the CHT).¹⁷ CHT is capable to produce variety of plants and timber. CHT also used to produce commercial plants like *Jarul, Gamar, Garjan, Koroi and Chapalish*. Bamboo grows in enormous number in the hills and valleys of CHT. Bamboo is also used as raw material in the paper mills.

The forests of CHT provided habitat for variety of wildlife which included abundant number of tigers, panthers and leopards. The population of tigers has drastically reduced and the tiger species is believed to be extinct in CHT's forest. The last species of Bengal tigers are surviving in the south-western part of the country, in the Sunderbans and they are also believed to be in bad physical condition. The forests of CHT were also home to wild elephant, bison, sambur, deer, imperial green pigeon, wood-duck, hill mynah and many other animals and birds. The rich volume of flora and fauna of CHT not only maintained the balance of ecosystem, it also had been a customary source of livelihood of indigenous communities. The enhanced communal tensions, ethnic conflicts, forest depletion, extinction of wildlife in the entire region are the indicators of improper management of land and forest of CHT over the years.

The CHT constitutes ten per cent of the total land area of Bangladesh. The region comprises three hill districts: Rangamati, Khagrachari and Banderban. Geologically, it can be divided into two broad ecological zones: (a) hill valley, (b) agricultural plains.¹⁸ The hill people do not have a documented history of their own; for this they rely on their oral traditions.¹⁹ T.H. Lewin categorized the hill people as 'children of the river' and 'children of the hills'.²⁰ At the time of the incorporation of the Hills of Chittagong into the British Administration in 1860 the region was inhabited by thirteen ethnic groups.²¹

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ Mohsin, Amena, *The Politics of Nationalism: The Case of the Chittagong Hill Tracts, Bangladesh*, The University Press Limited, Dhaka, Bangladesh, Second edition, 2002, at p. 11.

¹⁹ *Ibid.*

²⁰ See, *Ibid* at p. 12.

²¹ *Ibid.*

2.1.2. Moist or dry deciduous forests (*sal* forest)

The *Sal* (deciduous) forest of Bangladesh has been found in the districts of Gazipur, Tangail, Sherpur, Netrokona, Rangpur and Dinajpur. The major quantity of *sal* plants are found in the districts of Tangail and Gazipur where the Modhupur tract is located. Areas like Arankhola, Shadhanapur, Bahera tail, Fatepur, Telihati and Singarsri of these two districts are main home to these plants.

A grown up *sal* tree produces thousands of seeds every rainy season. The mature seeds automatically drop on the ground from the top of the tree. If planted a seed becomes a sal tree in some years.²² The *sal* is a good quality timber and a good material for house construction and support for piling. The life cycle of sal shows some unique characters for which the forests should have survived and increased, which practically not happening though. The forest can be replenished from the seeds of the plant. The plant, after it is cut, generates some coppices. The forest can be regenerated from the selected coppices of the remained stump. More importantly, the decomposed or burnt dead leaves of these plants can be good nutrient for the soil. The decomposition of leaves is a natural process whereas burning requires some human efforts but not more than only setting fire. The ashes, then, mixed with rain water make fertile forest floor.

These forests are also home to other plant species and medicinal plants. With the increasing forest depletion, the rich wildlife is also extinct. The village people depend on these forests for many reasons, mainly for the forest produce like wood, fruits, herbs and medicinal plants. One particular type of grass grown in the forests is used for making roofs of the village houses. Sal forest with adequate vegetation provides food for domestic animals too.

2.1.3. The mangrove forests

The mangrove forests are located in the southern part of the country and once this was a large forest. Now this forest is extremely threatened and its animals are almost endangered. The map of Renell (1785) shows the entire coastal areas of Bangladesh covering Khulna, Bakerganj, Noakhali and Chittagong along with shore islands were covered by this mangrove

²² Gain, Philip, *Stolen Forests*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2006, at p. 63.

forests.²³ Satkhira, Khulna and Bagerhat are the three district where the major part of natural mangrove forest is surviving in Bangladesh. In some parts of Patuakhali, Borguna, Bhola and Chittagong there are planted mangrove forests. Sunderbans, the largest mangrove forest in the world is spread over two countries- India and Bangladesh. Two-thirds of the Sunderbans forest, that spreads from the southern end of the Ganges Brahmaputra delta and stretches to the Hoogly river are in Bangladesh. The name is so perhaps because the main species of forest is *Sundari* tree which provides a heavy but excellent timber.²⁴

Bangladesh has 6,017 sq. kilometers reserve forest in the Sunderbans of which the total land area is 4,143 sq. km. and the area covered by the forest is 4,069 sq. km (UNDP, FAO 1997:3).²⁵ Everyday the tidal water sweeps the whole forest twice, a unique characteristics of the mangrove.²⁶ This forest offers habitat to variety of flora and fauna. There are as many as 65 species of plant genetic resources in the mangrove forests.²⁷ The sunderbans is the last habitat of the man-eater species of tigers in the world. Tigers of other part of the world do not eat human as regularly as they do in the Sunderbans. It is believed that because of unfriendly environment and saline water, they become sick and hence they can manage to prey human more easily. The Sunderbans is home to crocodile, shark, water python, king cobra, monkey and thousands of deers and birds. It is an incredible resource, an amazing forest and it is dangerously threatened by global warming, state politics and policies, corruption in the forest department, in total, bad management. It is even home to pirates, as believed by many locals.

²³ See, Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, Second edition: December 2005, at p. 95.

²⁴ Kafiluddin, Dr. A.K.M., *Population Research, Environmental Conservation and Economic Development*, First edition 2001, Dhaka, ISBN 984-32-0226-5, at p. 341.

²⁵ See, Gain, Philip, *Stolen Forests*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2006, at p.82.

²⁶ *Ibid.*

²⁷ See, Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, Second edition: December 2005, Appendix-5.3, at p. 248.

2.1.3.1 Chakaria Sunderban

Chakaria Sunderban mangrove forest area lies on the south of Sanga river covering Fashiakhali range and a series of islands on the delta of Matamuhuri river under the Chakaria thana. From 1903 a part of Chakaria mangrove forest covering an area of 7,400 ha became a reserve forest and another 1000 ha were protected by law.²⁸ Since 1911 to 1925 the forests have got reduced by 43 sq. miles.²⁹ The vegetation of Chakaria Sunderban as compiled by Ministry of Environment and Forest (2001) shows 20 species of mangrove flora which included Sundari, Rain tree, Patpati, Gewa and Mangium.³⁰

3. The legal framework

The legal framework comprises of many Acts, Rules, Ordinance and Order. This chapter outlines the relevant provisions of concerned laws and aims to improve the condition by suggesting some of the changes that may take place in the near future.

3.1. The Forest Act, 1927

The Forest Act of 1927 is an Act to consolidate the laws relating to forest³¹ and it has differentiated forests for the purpose of management by the Government, in the hereinafter stated expressions- Reserve Forest, Village Forest, Social Forestry and Protected Forest. The Government exercises absolute power to reserve forests. The Government may constitute any forest land or waste land (or any land suitable for afforestation) which is the property of the Government, or over which the Government has proprietary rights, or to the whole or any part of the forest produce of which the Government is entitled, a reserve forest³²

²⁸ Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, Second edition: December 2005, at p. 96.

²⁹ *Ibid.*

³⁰ See, *Ibid* at p. 96.

³¹ "Forest includes any land recorded as forest in a record-of- rights prepared under Chapter IV of the State Acquisition Tenancy Act, 1950 (E.B. Act XXVIII of 1951) or such other land containing tree growth as may by notification be declared as forest by the Government"- Section 2(5) of the Private Forests Ordinance, 1959, Ordinance No. XXXIV of 1959.

³² See, Section 3, The Forest Act, 1927, Act No. XVI of 1927.

The Government may assign to any village community the rights of Government to or over any land which has been constituted a reserve forest, and may cancel such assignment. All forests so assigned shall be called village forests.³³

On any land which is the property of the Government or over which the Government has proprietary rights, and on any other land assigned to the Government by voluntary written agreement of the owner for the purpose of afforestation, conservation or management through social forestry, the Government may establish a social forestry programme under sub-section (2) of Section 28A.³⁴ A social forestry program is established when the Government by one or more written agreements assigns rights to forest produce or rights to use the land, for the purposes of social forestry, to person assisting the Government in management of the land.³⁵

The Government may, by notification in the official Gazette, declare the provisions of chapter IV of the Forest Act, 1927 applicable to any forest land or waste land which is not included in a reserve forest, but which is the property of Government, or over which the Government has proprietary rights, or to the whole or any part of the forest produce of which the Government is entitled.³⁶ The forest land and waste lands comprised in any such notification shall be called a “protected forest”.³⁷ However, it is pertinent to mention here that some of the specific areas of the existing Forest Act, 1927 require attention and they are discussed hereunder.

3.1.1. Practice of shifting cultivation

The Act provides that the practice of shifting cultivation shall in all cases be deemed a privilege subject to control, restriction and abolition by the Government.³⁸ It should be mentioned that shifting cultivation, traditionally known as *jum* in Bangladesh, is done in hill areas where no alternative method of cultivation has been so effective. The hill people are the pioneers of this cultivation process and their right on hill forest

³³ Section 28(1), *ibid.*

³⁴ Section 28A(1), *ibid.*

³⁵ Section 28A(2), *ibid.*

³⁶ See, section 29(1), The Forest Act 1927, Act No. XVI of 1927.

³⁷ Section 29(2), *ibid.*

³⁸ Section 10(5), *ibid.*

land is historically established. Power of exercising extreme restrictions vested in the government officials may not ensure ethnic-friendly living conditions in these areas. Therefore, practice of *jum* should be the right of the indigenous people and be recognized by this Act.

3.1.2. Right to pasture or forest produce

In the case of a claim to rights of a pasture or to forest produce, the forest settlement officer shall pass an order admitting or rejecting the same in whole or in part.³⁹ Who is the person entitled to this right is needed to be clarified. Personal integrity of the forest settlement officer exercising this power can make a significant difference.

3.1.3. *Char* land as protected forest

Waste land or *char* land can be declared as protected forest under section 29 of the Forest Act, 1927. The Act mentions that a survey would be conducted but does not specify many things related to the process of survey. This Act should have been linked with State Acquisition and Tenancy Act, 1950 in this respect. A land survey is conducted by the Settlement office following the provisions of the State Acquisition and Tenancy Act relating to the preparation of record of rights. The Revenue Officer exercises the first right of possession and control over a newly emerged *char* land or alluvial land in accordance with section 86 of the State Acquisition and Tenancy Act, 1950.

In Bangladesh, fluvial and tidal actions of the main rivers along with the sea coast cause significant accretion and diluvion. Firm land is regularly swept away by the great rivers during the floods and new *char* lands are constantly being formed. In all, the area liable to frequent alluvion and diluvion actions accounts for about 15% of the total area. This factor gives rise to complex implications for land ownership and land management.⁴⁰ Sections 86 and 87 of the State Acquisition and Tenancy Act, 1950 deal with legal implications of alluvion and diluvion, management of these lands, and their possession and ownership. The law in this respect has been changed several times and till date it is not in its perfect condition, given the newness of complications of land-related matters. Management and disposal of *Khas* land by the Government is inseparably connected with this issue. Therefore, the Forest Act, if it

³⁹ Section 12, *ibid.*

⁴⁰ See, Hussain, T., *Land Rights in Bangladesh: Problems of Management*, University Press Limited, Dhaka, Bangladesh, 1995, at p. 41.

intends to declare *char* land as protected forest, should establish coherence among the aforesaid laws and policies. Otherwise, section 29 of the Forest Act, 1927 can be contradictory to the land related laws.

3.1.4. Power to make rules for protected forests

The Government may make rules to regulate cutting and removal of trees and timber, granting of licences to take trees and timbers or other forest produce for their own use, granting of licences for the purposes of trade, clearing and breaking up of land for cultivation or other purposes in forests, cutting of grass and pasturing of cattle in forests and so on.⁴¹ They are very vital issues and should be dealt with due amount of seriousness while making rules to regulate these abovementioned matters. Most importantly, the monitoring framework should be established to check corruption in this respect.

3.1.5. Seizure of property liable to confiscation

When there is a reason to believe that a forest offence has been committed in respect of any forest produce, such produce, together with all tools, vessels, vehicles or cattle used in committing any such offence may be seized by any Forest Officer or Police Officer.⁴² All timber or forest produce which is not the property of Government and in respect of which a forest offence has been committed, and all tools, boats, vehicles used in committing any forest offence, shall be liable to confiscation.⁴³ While executing these aforesaid provisions the concerned officer should exercise highest caution, though there is provision for punishment for wrongful seizure. However, certain things should never be seized. In this respect, similar provision of Section 60⁴⁴ of the Code of Civil Procedure, 1908 should be included. Properties like tools of artisan, implements of husbandry of an agriculturist, his cattle which are necessary to earn his livelihood should not be seized or confiscated. They may directly affect the family members of the accused person.

⁴¹ Section 32, The Forest Act 1927, Act No. XVI of 1927

⁴² Section 52(1), The Forest Act 1927, Act No. XVI of 1927.

⁴³ Section 55(1), *Ibid.*

⁴⁴ Section 60 of the Code of Civil Procedure, 1908 prescribes which properties are liable to attachment and which are not.

3.1.6. Offence relating to counterfeiting or defacing marks on trees and timber

Penalty for counterfeiting or defacing marks on trees and timber and for altering boundary marks may extend to seven years and shall not be less than two years and shall also be liable to fine which may extend to fifty thousand taka and shall not be less than ten thousand taka⁴⁵. Despite significant punishment is provided for these types of offences, this provision could not fully restrain some of the corrupt forest officials and offenders to commit the offences. It is a common form of dishonest act that same number or marks is inscribed or written on two trees or timbers and one is sold by unfair means. The offender gets assistance from the corrupt forest officials in successful execution of the offence.

3.1.7. Power to prevent commission of offence

Every Forest Officer and Police Officer shall prevent and may interfere for the purpose of preventing, the commission of any forest offence.⁴⁶ To what extent use of force would be permitted or how would that power be exercised is not stated here. While interfering, what are the areas he can not enter and during which time, could also be specified.

3.1.8. Power to conduct survey

The Government may invest any forest officer with all or any of the powers mentioned in section 72 which includes power to enter upon any land and to survey, demarcate and make a map of the same. Survey is generally conducted by the settlement office and land demarcation is conducted by the *Amin*. Making a map of the land demarcated is a scientific process. The exact amount of land has to be there in the map and it is a more serious task than just showing how that land practically looks like. The same amount drawn in the map has to be available in the land that practically exists. It is a tremendous job and professionals should conduct this.

3.2. The Private Forests Ordinance, 1959

For the purposes of conservation of private forests and afforestation of waste lands the Government may require a working plan from the private forests owners under section 3(1) of the Private Forests Ordinance, 1959 which provides that the Government may, by notification, direct that

⁴⁵ See, Section 63, The Forest Act 1927, Act No. XVI of 1927.

⁴⁶ Section 66, *Ibid*.

every owner of a private forest⁴⁷ which is not a vested forest,⁴⁸ but which is situated within such area as may be specified in the notification, shall prepare in the prescribed manner and submit within the period mentioned in the notification to the Regional Forest Officer a working plan for the conservation of such private forest. The punishment for noncompliance with the aforesaid provision is pecuniary and may extend to Tk.500. Moreover, the Government exercises the power of approving the working plans for the private forest⁴⁹ and a copy of the approved working plan shall be sent to the owner of the private forest by the Regional Forest Officer and the owner shall manage such forest in accordance with such plan and shall carry out all the terms and conditions thereof.⁵⁰ The penalty for the violation or neglecting any terms and conditions of the approved working plan by the owner of the private forest, may amount to five hundred taka.⁵¹ However, the conservation of a private forest may be vested in the Regional Forest Officer, if the Government is satisfied that such private forest should not be left with its owner.⁵² The above stated provisions of the Ordinance would have to be interpreted giving a new meaning after the insertion of section 38A in the Forest Act 1927, by the Forest (Amendment) Act, 2000⁵³. Section 38A of the Forest Act, 1927⁵⁴ provides that after commencement of this section, the Government may no longer exercise authority under section 3 of the Private Forests Ordinance, 1959 to require private forests to have working plans. This section does not categorically prohibit the

⁴⁷ “Private forest means a forest which is not the property of the Government or over which the Government has no proprietary right”- Section 2(14), the Private Forests Ordinance, 1959.

⁴⁸ “Vested Forest means a forest of which the control has been vested in a Regional Forest Officer by a notification under sub-section 2 of section 6 or under section 7 or under section 11 and includes any forest deemed to be or managed as a vested forest under this ordinance”- Section 2(19), the Private Forests Ordinance, 1959.

⁴⁹ See, Section 4 of the Private Forests Ordinance, 1959, Ordinance No. XXXIV of 1959.

⁵⁰ See, Section 4(2) of the Private Forests Ordinance, 1959, Ordinance No. XXXIV of 1959.

⁵¹ See, Section 6 of the Private Forests Ordinance, 1959, Ordinance No. XXXIV of 1959.

⁵² See, Section 7, *Ibid.*

⁵³ Act No. X of 2000, section 10.

⁵⁴ Act No. XVI of 1927.

authority to require working plan. This provision can also be interpreted by saying that the working plan may be required, if the Government desires. The provision should have categorically mentioned its intention in respect of working plan.

It is pertinent to mention that the powers of Forest Settlement Officer need to be specific and rephrased under this legislation. For the purpose of inquiry, the Forest Settlement Officer may exercise the powers of a Civil Court in the trial of suits.⁵⁵ The powers of an authority like this, needs to be expressed in unambiguous terms.

Any Forest or Police Officer may arrest any person against whom a reasonable suspicion exists of his having been involved in any forest offence punishable with imprisonment for one month or upwards under this ordinance without orders from a Magistrate and without a warrant.⁵⁶ That arrested person shall be sent before the Magistrate having jurisdiction or to the officer in-charge of the nearest police station without unnecessary delay.⁵⁷ This same clause should have mentioned the time limit within which the arrested person would be presented before the Magistrate, instead of saying 'without unnecessary delay'. The last phrase of section 46(2) seems to be unnecessary, as an arrested person should be presented before the Magistrate, not an officer in charge of the police station.

However, no suit shall lie against any public servant for anything done by him in good faith under this Ordinance.⁵⁸ This indemnity for acts done in good faith would not be a problem, if the public servant exercises powers prudently and judiciously.

3.3. The Forest Industries Development Corporation Ordinance, 1959

The Government of the East Pakistan by its Ordinance No. 67 of 1959 established a Forest Industries Development Corporation, an autonomous body under the name 'East Pakistan Forest Industries Development Corporation'. The name of the corporation was changed to

⁵⁵ See, Section 24 of the Private Forests Ordinance, 1959, Ordinance No. XXXIV of 1959.

⁵⁶ See, Section 46, *Ibid.*

⁵⁷ See, Section 46(2), *Ibid.*

⁵⁸ Section 56, the Private Forests Ordinance, 1959, Ordinance No. XXXIV of 1959.

Bangladesh Forest Industries Development Corporation (BFIDC), under Presidential Order No. 48 of 1972 with its headquarters in Dhaka.⁵⁹ The major aims and objectives of Bangladesh Forest Industries Development Corporation are to extract timber from inaccessible and thinly populated natural forests of the Chittagong Hill Tracts and thus to make vacant land available to the Forest Department for raising dense and intensive forests with specified species of trees of both commercial and environmental value.⁶⁰

Since its creation, the Corporation has so far received 70,729 acres of coupe (forest area) from the reserve forests of Kassalong, Ringkheng and Sangu Matamuhuri of Chittagong Hill Tracts and extracted timber from these areas and handed over the vacant land to the Forest Department for raising dense forests. From these coupes 28 million cft of timber was extracted till now.⁶¹ In addition, the Corporation raised rubber plantation in 13,000 acres of land from 1962 to 1979 out of its own fund in the periphery of reserve forests of Chittagong and Sylhet region. In addition the corporation raised rubber plantation in 7 estates in greater Chittagong district, 4 estates in greater Sylhet district, 4 estates in greater Mymensingh district and 2 experimental estates in Rangpur and Chittagong with the financial assistance of Government of Bangladesh and Asian Development Bank.⁶² The present rubber plantation of the Corporation is 32,665 acres in the fallow, hilly and semi-hilly areas of greater Chittagong, Sylhet and Mymensingh districts. In these estates there exist about 41,00,000 rubber trees.⁶³ Despite the growing number of rubber trees, it does not provide a healthy picture of forest. Rubber plantation never substitutes a natural forest and not at all capable to provide the natural habitat of wildlife.

The Ordinance provides that the general direction and administration of the Corporation and its affairs shall vest in a Board and the Board in discharging its functions shall act on commercial considerations and shall be guided on questions of policy involving the national interest (including

⁵⁹ See, http://banglapedia.search.com.bd/HT/B_0177.htm. Visited on 04.11.2008.

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² *Ibid.*

⁶³ See, http://banglapedia.search.com.bd/HT/B_0177.htm, visited on 04.11.2008.

commercial and industrial interest) by such directions as the Government, which shall be the sole judge whether the national interest is involved, may give it from time to time.⁶⁴ This is perhaps, an improper direction and inadequate picture of a legal provision. This provision should have categorically mentioned the need of environmental conservation, which has been totally ignored by giving more importance to commercial and industrial interest. A forest can not serve commercial interest solely, ignoring environmental issues. However, the changing democratic Governments in Bangladesh, under these legal provisions, as a sole judge of 'national interest', are never beyond mistake and suspicion.

3.4. The State Acquisition and Tenancy Act, 1950

A *Malik* or an owner can not retain any land consisting of forest under section 20 sub-section 2a(iii) of the State Acquisition and Tenancy Act, 1950. The Act enumerates which land can be owned and possessed by an individual and which can not be kept under private ownership or possession. During the acquisition of the interests of rent-receivers in any area under this legislation, a rent-receiver, cultivating *raiyyat*, cultivating under-*raiyyat* or a non-agricultural tenant could not retain a forest land. This provision gives a clear indication that the State does not intend to allow a *Malik* or a private individual to own as owner, a land that consists of forest. Since right to property is subject to any restriction imposed by law, as mentioned in article 42 of the Constitution of the People's Republic of Bangladesh, any limitation imposed by the State Acquisition and Tenancy Act, 1950 regarding the right to own and use a land, is legitimate. Therefore, the State retains every right to control and manage forest lands by enacting laws and making policies.

3.5. The Environment Conservation Act, 1995

The Bangladesh Environment Conservation Act, 1995⁶⁵ provides for the conservation of environment, improvement of environmental standards and control and mitigation of environmental pollution.⁶⁶ The Act has a close relation with forest issues, as forest consists of different

⁶⁴ Section 5, The Forest Industries Development Corporation Ordinance, 1959, Ordinance No. LXVII of 1959.

⁶⁵ Act No. 1 of 1995.

⁶⁶ See, Preamble, The Bangladesh Environment Conservation Act, 1995, Act No. 1 of 1995.

components which are related to environment in many ways.⁶⁷ Legislations concerning forests and the environment should have coherence and therefore, environmental conservation⁶⁸ shall be the prime concern in guiding the behavior of the forest dependant people. It is needless to mention that the health of a forest largely depends on the behavior of the dependent people and the condition of environment.

This Act makes an attempt to identify and declare environmentally important sites as ecologically critical area and also attempts to restrict the activities in these areas. Section 5(1) of the Bangladesh Environment Conservation Act, 1995 provides that if the Government is satisfied that an area is in an environmentally critical situation or is threatened to be in such situation, the Government may, by notification in the official Gazette, declare such area as an ecologically critical area. Sub-section 2 of section 5 provides that the Government shall, in the notification published under sub-section 1 or in a separate notification, specify the activities or processes that can not be initiated or continued in an ecologically critical area. The Government can specify the activities or processes which can not be continued or initiated in an ecologically critical area.

Rule 3 of the Environment Conservation Rules, 1997⁶⁹ mentions the factors that have to be considered by the Government while declaring an area as Ecologically Critical Area. Under sub-section 1 of section 5 these factors are: (a) human habitat, (b) ancient monument, (c) archeological site, (d) forest sanctuary, (e) national park, (f) game reserve, (g) wild animals habitat, (h) wetland, (i) mangrove, (j) forest area, (k) bio-diversity of the relevant area, and (l) other relevant factors. It is evident that these areas are mostly forest areas, as most of the factors relate to forest and bio-diversity. Therefore, ensuring an effective environmental legal

⁶⁷ "Environment means the inter- relationship existing between water, air, soil and physical property and their relationship with human beings, other animals, plants and micro-organisms"- Section 2(d), The Bangladesh Environment Conservation Act, 1995, Act No. 1 of 1995.

⁶⁸ "Environmental conservation means improvement of the qualitative and quantitative characteristics of different components of environment as well as prevention of degradation of those components."- Section 2(f), The Bangladesh Environment Conservation Act, 1995, Act No. 1 of 1995.

⁶⁹ Rules made in exercise of the powers conferred by section 20 of the Bangladesh Environment Conservation Act, 1995 (Act I of 1995).

framework should be a vital concern in ensuring a satisfactory forest legal regime.

However, environmental litigations are contested in the Environment Court. The Environment Court Act, 2000 says that a case shall in accordance with the provisions of this Act, be directly instituted in an Environment Court for trial of an offence or for compensation under an environmental law⁷⁰, and only that Court can take cognizance and hold proceedings for trial and disposal of those cases⁷¹. And the paradox situation is created by allowing a major role of Director General of the Department of Environment in justice system. It is a matter of great concern that the Environmental Courts do not function independently and even they do not entertain litigations directly from the aggrieved person. The formality relating to the written report of an inspector or any other person authorized by the Director General squeezes the power of the Court. Section 5(3) of the Environment Court Act, 2000⁷² says that no Environment Court shall take cognizance of an offence or receive any suit for compensation except on the written report of an Inspector or any other person authorized by the Director General. However, there is a mandate given to the Court under the proviso to section 5(3) to entertain a case as an exception to the aforesaid provision and that option is also not a direct right to approach to a Court by an aggrieved person.

It is evident from the proviso to section 5(3) that even after a complaint is ignored by the inspector or no action is taken by him, the Court has to hear him before taking any action. The whole process could have been made better by giving aggrieved person right to file a suit or case directly to the Environment Court. This Court should have been made like a normal civil or criminal Court. This legislation has made the Environment Court different from the civil and criminal Courts in respect of exercising powers. Because of the hassles an aggrieved person has to face, he would not voluntarily come to the Court to address an issue of environmental degradation, where greater interest of large

⁷⁰ "Environmental law means this Act, the Bangladesh Environment Conservation Act, 1995 (Act No. 1 of 1995), any other law specified by the Government in the official Gazette for the purposes of this Act, and the rules made under these laws"- Section 2(bb), The Environment Court Act, 2000, Act No. 11 of 2000.

⁷¹ Section 5(1)

⁷² Act No. 11 of 2000.

number of people is concerned. Because of the procedural complications, people from the community feel less interested in environmental litigation. Victims of environmental degradation, forest depletion or actions threatening bio-diversity and eco-system could have been given right to file a complaint or suit for compensation directly without requesting the Inspector⁷³ or the Director General for investigation and that can ensure individuals' participation and justice. Unfortunately this Act gives certain amount of discretionary power to the Department of Environment and restricts the power of the Court which is clearly against the spirit of separation of judiciary. The role played by the Department of Environment, after a case is filed, certainly makes the law less effective, judicial process weak, enhances the hassles of the aggrieved person and the consequence is very poor number of environmental litigations in comparison with the number of civil suits and criminal cases.

3.6. Brick Burning (Control) Act, 1989

Eit Porano (Niontron) Ain is an Act to restrict burning of bricks and it has banned use of wood for burning bricks. Section 5 of this Act categorically said that nobody would use fuel wood for burning bricks. This restriction would lessen the pressure on wood, and in consequence, on forest. At least supply of wood for use in brickfields would be under constraint. More importantly, no license would be given allowing establishing a brickfield within 3km. of certain areas. Forests are the one kind of areas amongst others, within 3km. of which no brickfield would be allowed.⁷⁴ This provision would help forests survive and grow in pollution free environment, if other circumstances favour them. Moreover, the license given under this Act for burning brick shall be valid for a period of three years, and if anybody violates any provision of this Act or rules made hereunder or violates any condition mentioned in the license, his license can be cancelled by the Deputy Commissioner.⁷⁵ It is pertinent to mention that rule 2 of the Brick Burning (Control)

⁷³ "Inspector means an Inspector of the Department of Environment or any other person authorized by the Director General by a general or special order or a person authorized under any other environmental law to inspect or investigate"- Section 2(b), The Environment Court Act, 2000, Act No. 11 of 2000.

⁷⁴ See, Section 4(5) of the Brick Burning (Control) Act, 1989, Act No. 8 of 1989.

⁷⁵ See, Section 4(4) of the Brick Burning (Control) Act, 1989, Act No. 8 of 1989.

Rules, 1989⁷⁶ prescribes the form in which an application would be made for brick burning license. The prescribed form⁷⁷ of application contains the information regarding source of energy / fuel and its type, and thereafter, on the basis of investigation, license is supposed to be issued, and finally a restriction banning the use of fuel wood for the purpose of brick burning is inserted in the license itself. Therefore, existence of these provisions show significant legal achievement, but the enforcement and strict observation of the same is even more important.

3.7. The Building Construction Act, 1952

The Building Construction Act, 1952⁷⁸ was enacted for the prevention of haphazard construction of buildings and excavation of tanks and cutting of hills which are likely to interfere with the planning of certain areas in Bangladesh.⁷⁹ Section 3C of this Act restricts cutting of hills but this restriction is not absolute. After obtaining previous sanction of an Authorised Officer and approval of the Government, one can cut or raze hills⁸⁰. Before granting a sanction, the Authorised Officer and the Government has to be satisfied about following things -

- (a) the cutting or razing of the hill shall not cause any serious damage to any hill, building, structure or land adjacent to or in the vicinity of the hill; or
- (b) the cutting or razing of the hill shall not cause any silting of or obstruction to any drain, stream or river; or
- (c) the cutting or razing of the hill is necessary in order to prevent the loss of life or property; or
- (d) the cutting of the hill is such as is normally necessary for construction of dwelling house without causing any major damage to the hill; or
- (e) the cutting or razing of the hill is necessary in the public interest.⁸¹

⁷⁶ Made under section 9 of the Brick Burning (Control) Act, 1989, Act No. 8 of 1989.

⁷⁷ Form *Ka*, See, Rule 2(1) of the Brick Burning (Control) Rules, 1989.

⁷⁸ Act No. E.B. II of 1953.

⁷⁹ See, Preamble to the Building Construction Act, 1952, Act No. E.B. II of 1953.

⁸⁰ See, Section 3C (1), The Building Construction Act, 1952, Act No. E.B. II of 1953.

⁸¹ Section 3C (1), the Building Construction Act, 1952, Act No. E.B. II of 1953.

The aforesaid provision relaxes the restriction and makes room for application of discretion of the concerned authority, which can often be dishonestly used. It is worth mentioning that hills in this country are mostly located in the forest areas and the hills are mostly dense forest in some parts of the country. Cutting or razing hills not only threatens the environment in different forms, but also shrinks the forest. Therefore, this Act needs to be revised and amended.

3.8. The Bangladesh Wildlife (Preservation) Order, 1973

Wild animal,⁸² national park and wildlife sanctuary has been defined by the Bangladesh Wildlife (Preservation) Order, 1973.⁸³ Article 2(p) provides that wildlife sanctuary means an area closed to hunting, shooting or trapping of wild animals and declared as such under Article 23 by the Government as undisturbed breeding ground primarily for the protection of wildlife inclusive of all natural resources such as vegetation, soil and water. The Government may by notification in the official Gazette, declare any area to be wildlife sanctuary⁸⁴ and restrict activities in those areas. This Order also restricts actions in areas declared as national park.⁸⁵ No person shall-

- a) enter or reside in any wildlife sanctuary,
- b) cultivate any land in any wildlife sanctuary,
- c) damage or destroy any vegetation in any wildlife sanctuary;
- d) hunt, kill or capture any wild animal in any wildlife sanctuary or within one mile from the boundaries of a wildlife sanctuary;
- e) cause any fire in a wildlife sanctuary;

⁸² “Wild animal means any vertebrate creature other than human beings and animals of usually domesticated species or fish, and includes the eggs of birds and reptiles”-Article 2(o), Bangladesh Wildlife (Preservation) Order, 1973, P.O. No. 23 of 1973.

⁸³ P.O. No. 23 of 1973.

⁸⁴ Article 23(1), Bangladesh Wildlife (Preservation) Order, 1973, P.O. No. 23 of 1973.

⁸⁵ “National park means comparatively large areas of outstanding scenic and natural beauty with the primary object of protection and preservation of scenery, flora and fauna in the natural state to which access for public recreation and education and research may be allowed”- Article 2(h), Bangladesh Wildlife (Preservation) Order, 1973, P.O. No. 23 of 1973.

- f) pollute water flowing in or through a wildlife sanctuary.⁸⁶

The proviso to Article 23(2) provides that the Government may for scientific purposes or for aesthetic enjoyment or betterment of scenery, relax all or any of the prohibitions specified above. This proviso is very vague and what really would amount to aesthetic enjoyment for which the abovementioned provisions would be relaxed is not identified, and hence, makes scope of exercising discretionary power of the authority. The practical conditions of these areas clearly show the loopholes of these words. The enormous corruption in wildlife sanctuaries is just an effect of weak legislations and poor condition of implementation of those legislations.

National park comprises of vast areas of scenic and natural beauty with the main objective of protection and preservation of flora and fauna in the natural state where public recreation and education and research would be allowed. Like forest it also plays a notable role in environmental conservation. The Government may declare any area to be a national park where the following acts shall not be allowed:

- a) hunting, killing or capturing any wild animal in a national park and within the radius of one mile outside its boundary;
- b) firing any gun or doing any other act which may disturb any wild animal or doing any act which may interfere with the breeding places of any wild animal;
- c) feeling, tapping, burning or in any way damaging or destroying, taking, collecting or removing any plant or tree therefrom;
- d) clearing or breaking up any land for cultivation, mining or for any other purpose;
- e) polluting water flowing in and through the national park.⁸⁷

The proviso to Article 23(3) mentions that the Government may for scientific purposes or for betterment of the national park or for aesthetic enjoyment of scenery or for any other exceptional reasons relax all or any of the prohibition specified above. This clause is very similar to the earlier one relating to the wildlife sanctuary. These relaxations of

⁸⁶ See, Article 23(2), Bangladesh Wildlife (Preservation) Order, 1973, P.O. No. 23 of 1973.

⁸⁷ Article 23(3), Bangladesh Wildlife (Preservation) Order, 1973, P.O. No. 23 of 1973.

restrictions in national parks will not ensure its best condition and the relaxation of prohibitions in wildlife sanctuaries shall always carry the risk of maximum environmental and economic losses.

4. Forest management challenges

Bangladesh is one of the most densely populated countries in the world having a population of about 130 million at present within a total surface area of 1,47, 570 sq.km.⁸⁸ This population is increasing at an alarming rate. Any increase of population increases demands for consumption of material goods and services that enhance over exploitation of natural resources including land, water, fisheries, forest etc. leading to degradation of resource base and depleting both ecosystems and environment of the country. On the other hand, a degraded environment might have many negative impacts on population in different forms and degrees.⁸⁹ Forest management, for being closely connected with issues of environment and human life has multi-dimensional challenges, of which a significant part is wildlife conservation.

4.1. Forest depletion in Bangladesh

It is not the inherent nature of people to destroy forests for pleasure. Forest degradation and deforestation are usually the result of overexploitation in search of income.⁹⁰ Without alternative income generating options, people have little choice but to resort to whatever livelihood opportunities that forests offer, often with severe negative repercussions on the forests.⁹¹ Some simplistic reasons for depletion and degradation of forest resources are growing population, wide spread poverty, migration of landless people in the forest areas, shifting cultivation, inappropriate exploitation of forest resources, grazing, illegal felling, fuel wood collection, uncontrolled and wasteful commercial

⁸⁸ Kafiluddin, Dr. A.K.M., *Population Research, Environmental Conservation and Economic Development*, 1st edition 2001, Dhaka, ISBN 984-32-0226-5, at p. 364.

⁸⁹ See, *Ibid.*

⁹⁰ Chris Brown, Patrick B. Durst and Thomas Enters, "Perceptions of Excellence: Ingredients of good Forest Management", *In Search of Excellence: Exemplary forest management in Asia and the Pacific*, Asia-Pacific Forestry Commission, Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, Bangkok, 2005, ISBN 974-7946-68-8 at p. 18.

⁹¹ *Ibid.*

exploitation etc.⁹² In the mangrove forests, the surveyors during the early part of 1900 AD recorded 334 spp. Spermatophytes and Pteridophytes⁹³. At present, due to increase in human habitation and encroachment of forest area there are only 66 spp. of climbers, herbs, shrubs and trees.⁹⁴ This extinction of species not only reveals the picture of forest depletion, but also portrays irrecoverable gene loss. Loss of forests can contribute to local flooding, regional and global climate change and loss of animal and plant species dependent on natural forests.⁹⁵ Animal and plant species may also be threatened by replacement of natural forest with monoculture tree crops.⁹⁶

Bangladesh, over a period of less than 200 years, has lost most of its historical forests and their associated biodiversity assets. One of the world's greatest swamp-reed forests that covered much of the Sylhet Basin and the areas north of Dhaka is gone, with only a few trees remaining.⁹⁷ Apart from the protected Sunderbans forest, the Tropical Mangrove Forests that covered the entire coastal belt no longer exist.⁹⁸ In Chokoria Sunderban, shrimp cultivation funded by donor agencies has extinct the forest which was once full of fish, naturally grown shrimp and aquatic reptiles. The Chokoria Sunderban, which once had a unique and balanced ecosystem⁹⁹, now has turned into a forest without tree and a land with completely ruined soil.

⁹² See, Kafiluddin, Dr. A.K.M., *Population Research, Environmental Conservation and Economic Development*, 1st edition 2001, Dhaka, ISBN 984-32-0226-5, at p. 341.

⁹³ One of the plant groups of the forest.

⁹⁴ See, Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, 2nd edition: December 2005 at p. 95.

⁹⁵ Mitchell, Robert, Property Rights and Environmentally Sound Management of Farmland and Forests, *Land Law Reform: Achieving Development Policy Objectives*, The World Bank, Washington, DC 20433, USA, 2006 at p. 179.

⁹⁶ *Ibid.* at p. 180.

⁹⁷ See, Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, Second edition: December 2005, at p. 157.

⁹⁸ Bangladesh, Environment and Natural Resource Assessment 1990

⁹⁹ "Ecosystem means the inter-dependent and balanced complex association of all components of the environment which can support and influence the conservation and growth of all living organisms"- Section 2(g), The Bangladesh Environment Conservation Act, 1995, Act No. 1 of 1995

For combating deforestation, the Bangladesh Government policies in the forestry sector as embodied in the Environment Policy, 1992 are to:

- (i) conserve, develop and augment forests with a view to sustain the ecological balance;
- (ii) include tree plantation programs in all relevant development schemes;
- (iii) stop shrinkage and depletion of forest-land and forest resources; and
- (iv) develop and encourage use of substitutes of forest products.¹⁰⁰

4.2 *Jum* cultivation (swidden cultivation)

Jum is a form of ecological agriculture traditionally practiced by the ethnic communities living in the Chittagong Hill Tracts. The term *Jum* refers to both the agricultural land on hill slopes, and the rotation of mixed crop and vegetation cultivation which is done on this land.¹⁰¹ After the crops are harvested the *Jum* is left fallow for a certain period to regain its soil fertility before the next cultivation. The practice of this shifting cultivation was found to be ecologically stable and sustainable when the fallow period was about 10 to 15 years. But in recent years, the erosion and soil fertility problems have become severe with decreased fallow period due to increased population – thus not allowing enough time for replenishment of soil fertility through natural process.¹⁰² The reduction of fallow period is responsible for decreasing soil fertility, landslide, siltation in the lakes and reduction of forest covers; though *Jum* is not the major responsible factor behind reduction of forest cover. *Jum* is definitely a very suitable and appropriate method of cultivation in the hills but the method must allow adequate fallow period. Moreover, the indigenous communities have no better alternative to *Jum* and they believe it is good for them and is an ecologically sound agricultural system. Therefore,

¹⁰⁰ See, Kafiluddin, Dr. A.K.M., *Population Research, Environmental Conservation and Economic Development*, First edition 2001, Dhaka, ISBN 984-32-0226-5, at p. 342.

¹⁰¹ Chakma, Kabita and Hill, Glen, *Thwarting the Indigenous Custodians of Biodiversity, Bangladesh: Land, Forest and Forest People*, Society for Environment and Human Development (SEHD), Dhaka, 1995, at p. 149.

¹⁰² Rahman, Anisur, CHT heads toward ecological disaster, *Chittagong Hill Tracts: State of Environment*, Forum of Environmental Journalists of Bangladesh (FEJB), Dhaka, 2001, at p. 96.

alternative recourses have to be evolved to reduce pressure on the *Jum* land instead of banning overnight. Moreover, the increasing population other than the indigenous people has caused grievance amongst the native indigenous communities over the years, and this enhanced population has caused enormous pressure on *Jum* land.

4.3. Watershed management

Watershed¹⁰³ management implies rational utilization of land and water resources. The watershed areas of Bangladesh are about 12 per cent of the total land area. Forest is an integral component of watershed management which is beset with large and increasing population.¹⁰⁴ Watershed management is more important in hilly areas where rate of depletion of soil and forests are frightening. Therefore, scientific watershed management is considered as a holistic approach for the environmental conservation and ecological balance. Forest management policies should not overlook this challenging and integral part of it.

4.4. Development projects and the influx of settlers in the Chittagong Hill Tracts

In the land system of the CHT, hill people could only subsist from their fields as a part of a community, bound in ties of mutual reciprocity. For the shifting cultivators of the Hill Tracts, land is common property, belonging to the community, kinship groups and even members of the spirit world, with individual families exercising the right to use the land—in western terms, a usufruct.¹⁰⁵

¹⁰³ Watershed is a natural contiguous geographical area enclosed by ridge or boundary line from where all the runoff drains into a common channel or outlet. See, *Participatory Approaches to Integrated Watershed Management in Bangladesh*, Proceedings of the National Workshop held at Bangladesh Forest Academy, Chittagong from 01 July to 05 July, 1997, Organized by Bangladesh Forest Department, Dhaka, p. iv.

¹⁰⁴ See, *Participatory Approaches to Integrated Watershed Management in Bangladesh*, Proceedings of the National Workshop held at Bangladesh Forest Academy, Chittagong from 01 July to 05 July, 1997, Organized by Bangladesh Forest Department, Dhaka, p. vii.

¹⁰⁵ 'LIFE IS NOT OURS', *Land and Human Rights in the Chittagong Hill Tracts, Bangladesh*, The Report of the Chittagong Hill Tracts Commission, May 1991, Distributed by IWGIA, Copenhagen K, Denmark and Organising Committee, Chittagong Hill Tracts Campaign, Amsterdam, The

Between 1957 and 1963 a dam and hydro-electric plant was built at Kaptai. The artificial lake flooded just under half of all the available cultivable land in the Hill Tracts. 100,000 hill people were displaced by the dam. Compensation for lost land was negligible and over 40,000 Chakma crossed the border into India. Many still live stateless in Arunachal Pradesh.¹⁰⁶ At the same time as the dam was built, the then Pakistan Government began to encourage poor Bengali families to enter the Hill Tracts. Throughout the 1970s the numbers of Bengali settlers increased gradually, particularly after the liberation war when 50,000 Bengalis entered the Ramgarh area.¹⁰⁷ Bengali settlers were transmigrated primarily from the plains regions in three waves, 1979-1980, 1981 and 1982-1983. This massive increase of Bengali settlers had a devastating effect on the hill people, who in a few years became almost a minority in their own districts. The shortage of land became more acute as the Bengalis from the plains sought land on which to settle. The only available lands were the forest lands held by the State and the land which hill people held.¹⁰⁸ Therefore, the inevitable consequence was land grabbing, land dispute, ethnic conflicts, human rights violation and enormous pressure on forest and *Jum* lands. Gautam Dewan¹⁰⁹ said, "We have a land crisis because of the dam and the settlers".

The Chittagong Hill Tracts Commission, an independent body, was formed to investigate allegations of human rights violations in the hill region of southeast Bangladesh.¹¹⁰ The Commission received detailed

Netherlands, Printed by Calvert's Press (TU) Workers' Co-operative, at p. 60.

¹⁰⁶ *Ibid.* at p. 62.

¹⁰⁷ *Ibid.* at p. 63.

¹⁰⁸ See, *Ibid* at pp. 63-64.

¹⁰⁹ Rangamati District Council Chairman; See, '*LIFE IS NOT OURS*', *Land and Human Rights in the Chittagong Hill Tracts, Bangladesh*, The Report of the Chittagong Hill Tracts Commission, May 1991, Distributed by IWGIA, Copenhagen K, Denmark and Organising Committee, Chittagong Hill Tracts Campaign, Amsterdam, The Netherlands, Printed by Calvert's Press (TU) Workers' Co-operative, at p. 62.

¹¹⁰ The International Commission on the Chittagong Hill Tracts was established at the end of 1989. Joint Chairs of the Commission are Douglas Sanders (Professor of Law) from Canada and Wilfried Telkaemper (Vice President of the European Parliament) from Germany. The other Commissioners are Rose Murray (Aboriginal Community Worker) from

information about the implementation and effect of the various development programmes from hill people and from Government and military sources. The Commission's assessment of the findings was:

Time and again two underlying motives for the development programmes were emphasized: to stop *jum* cultivation in order to restore the ecological balance, and the aim to bring the 'backward' tribal population into the mainstream. From its observations the Commission learnt that the socio-economic changes that are taking place in the Hill Tracts, rather than restoring the ecological balance and benefiting the hill people, have the opposite effect.¹¹¹

Over the last three decades the ecology of the CHT has been severely degraded. The worsening ecological imbalance in the environment of CHT in last three decades is deeply rooted in so-called 'development' programs such as those for 'jungle clearing' and 'logging'. The development projects are generally legitimized in the name of 'poverty and development' which effectively devalue the subsistence practices of the indigenous groups. The authority implementing the development process then introduces own agenda into the structure of the legitimized project.¹¹² This includes dislocation and intimidation of the ethnic communities in most cases.

4.5. Plantation practices

Plantation of exotics- rubber, acacia and eucalyptus, in particular, is major factor that has changed the Modhupur *Sal* forest for ever, with severe consequences for the ethnic communities- Garos and Koch, who have

Western Australia, Leif Dunfjeld from Norway and Hans Pavia Rosing (Representative in the Danish Parliament) from Greenland.

¹¹¹ 'LIFE IS NOT OURS', *Land and Human Rights in the Chittagong Hill Tracts, Bangladesh*, The Report of the Chittagong Hill Tracts Commission, May 1991, Distributed by IWGIA, Copenhagen K, Denmark and Organising Committee, Chittagong Hill Tracts Campaign, Amsterdam, The Netherlands, Printed by Calvert's Press (TU) Workers' Co-operative, at p. 81.

¹¹² See, Chakma, Kabita and Hill, Glen, Thwarting the Indigenous Custodians of Biodiversity, *Bangladesh: Land, Forest and Forest People*, Society for Environment and Human Development (SEHD), Dhaka, 1995, at pp. 150-152.

lived in the forest for centuries.¹¹³ With loan money from the Asian Development Bank and the World Bank in particular, the Government has actually established plantations of alien species all over the public forest land.¹¹⁴ Native species and complex plantation practices could have been beneficial in every way, in particular, for conservation purposes, instead of simple plantation forestry practices. However, tobacco cultivation is an emerging threat to forests of Chittagong, Cox's Bazar and CHT.

4.6. Climate change and salinity

The adverse impact of global warming and sea level rise would affect coastal forest areas of Bangladesh. The increasing salinity is believed to be responsible for top-dying disease of trees and decreasing plant genetic resources in the Sunderbans. After the construction of the Farakka Barrage the fresh water flow through the Sunderbans has further decreased causing the salinity increase in the forest.¹¹⁵ It is needless to mention that if sea level rises this mangrove forest can go under water permanently. Rising sea levels have submerged two islands in the Sunderbans, where tigers roam through mangrove forests in the Ganges river delta, and a dozen more islands are under threat, scientists say.¹¹⁶

4.7. Oil and gas exploration

Bangladesh seems to be a prospective land for gas and oil, and hence exploration, examination and excavation in search of wealth have left some of its forests burnt and disturbed. Accidents caused by the negligence of the giant companies that operate in the forests have never been appropriately compensated. The forest fire at Magurchara in 1997 is an unforgettable and horrific experience of the forest and inhabitants of the adjacent area and also of the wildlife. They had to pay a heavy price for the mistakes and misdeeds of somebody else.

¹¹³ Gain, Philip, Policies and Practices Concerning Forests and Ethnic Communities of Bangladesh, *Critiques of Policies and Practices: The Case of Forests, Ethnic Communities and Tea Workers of Bangladesh*, Society for Environment and Human Development (SEHD), Dhaka, 2005, at p. 18.

¹¹⁴ *Ibid.*

¹¹⁵ See, Gain, Philip, *Stolen Forests*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2006, at p.87

¹¹⁶ The Daily Star, Vol. XVI, No. 334, December 22, 2006, at p. 1.

Lawachhara National Park (1250 ha) is one of the protected areas has witnessed installation of gas pipeline which has crossed through the heart of the park. Fire accidents can burn the entire forest within short time and the pipeline for the transport of gas is a live threat to the forest. The gas pipeline was set up in violation of the Bangladesh Wildlife (Preservation) Order of 1973. This Order prohibits any type of hunting, killing or capturing of wild animal or making disturbances within the park. Environmentalists believe that according to the Environment Conservation Act, 1995 and the Environment Conservation Rules, 1997, no commercial activity such as setting up a gas pipeline can be carried out through the Lawachhara National Park.¹¹⁷

4.8. Corruption in the Department of Forest

Corruptions in Forest Department need to be addressed. For making money, forest officials get involved in stealing timber and forest produce, tourism business during working hours. It is believed by the locals nearby sunderbans that forest officials have friendly connections with pirates living inside the deep forest. Pirates make money by demanding ransom to the fishermen and tourists. However, forest guards and officials sometimes put same marks or number on two trees and sell one on suitable time. The various forms of corruption by the forest officials are just ever innovative. They sometimes take money from the tourists as fees and never pay the same to the Government. Therefore, the Anti-Corruption Commission should also pay special attention to this sector. However, bringing one or two top corrupt forest officials to justice is not enough to change the tradition and legacy of corruption.

5. Findings and recommendations

The statistics mentioned in section two of the article shows that from the year 1975 to 1980 the percentage of forest increased from 15 to 17 and then reduced to 15 in 1985. From 1985 to 1995, it was erratic but decreasing and finally in 2002 it rose to 17%. The forest areas were between 12 to 17 percent from the year 1975 to 2003 and this is not a satisfactory figure to show that the country has enough greenery.

Forests in Bangladesh have been classified in different categories. They are different from many aspects and there are differences in legal

¹¹⁷ See, Gain, Philip, *Stolen Forests*, Society for Environment and Human Development (SEHD), Dhaka, Bangladesh, 2006, at p.122.

frameworks too. The Chittagong Hill Tracts (CHT) has unique pluralistic form of legal and administrative framework where most of the laws of the country have no substantial means of application. There are some laws that are applicable to CHT only, and at the same time CHT is supposed to abide by the law of the country too. The CHT and Sunderbans are the major forest patch of Bangladesh. The largest mangrove forest named after a tree spreads over the southern districts providing a wide range of wildlife. The *Sal* forest is situated in the middle of the country. All of these forests have their distinct features.

The forest legal framework is a combination of laws relating to environment, property, wildlife, forest and forest produce. The Forest Act, 1927 alone provides maximum instructions for forest related activities. Nevertheless, the Environment Conservation Act, 1995, the Environment Conservation Rules, 1997, the Environment Court Act, 2000 have some mentionable role to play where environment in general is a serious concern. The country has a good number of legislations which have direct or indirect connection with the forest management. The State Acquisition and Tenancy Act, 1950 provides the provision on title of land consisting of forest. However, Forest Industries Development Corporation Ordinance, 1959 deals with management and utilization of forest produce and the Private Forests Ordinance, 1959 serves the purpose of conservation of private forests. These legislations need to be made timely and proposed changes keeping the contemporary circumstances in mind has been addressed in this article.

Forest management challenges of the country vary due to the context of particular forest. There are many complicated and unresolved issues like migrated *Bangali* and ethnic tension, military camps in the forest, land crises and land disputes, *Jum* cultivation and so on. in the Chittagong Hill Tracts. The Chittagong Hill Tracts Peace Accord 1997 was supposed to solve many problems in the region but it is believed by many indigenous people that the true spirit of the peace accord has not been materialized. Therefore, many rebel groups are emerging even after the peace accord, which are acting and demanding beyond that treaty. Development plans undertaken by the series of Governments in the forest areas, oil and gas exploration, commercial plantation, impacts of global warming, complicated property laws, deprivation of fundamental rights of ethnic minority, corruption and many other problematic areas have been the critical challenges for the forest management of the rest of the country.

This article offers hereinafter stated recommendations:

Creating new means or alternative ways of livelihood for forest dependent people would prevent forest depletion. Forming and establishing ecotourism related enterprises and forest protection business can be alternative to extracting forest directly. For an example, wildlife spotting excursions for tourists, selling souvenirs, providing accommodation and food, transport services for tourists can be alternative profession for the people exclusively dependent on mangrove forests now. Concerted effort is required to create new livelihood opportunities for the local people and training is also needed in respective fields. Therefore, a holistic approach to forest management should comprise of dedication, property rights, ecosystem management, focus on the livelihood of the local people, sound legal and institutional framework and most importantly, sensible management plans and philosophies. Cultural integrity, indigenous knowledge, ancient ways of life and system, traditional property rights should never be ignored in forest management. Survival of the dependant people and the forest both are important. Sometimes, in some cases, local inhabitants can be granted the right to manage the forest land. Without their participation, management plans may not be possible to be executed perfectly. Social forestry program existing under the Forest Act can be strengthened by ensuring participation of communities living nearby forests.

Razing or cutting of hills should be totally banned and afforestation programme will help maintain environmental balance creating positive microclimatic environment for better rainfall. It should also be mentioned that farmers in hill areas need to be taught how to cultivate and what to cultivate and which would be friendly to water conservation, soil fertility and would reduce erosion. Farmers should also organize themselves and share information and knowledge on how to cultivate and market forest based produce.

The growth of large scale commercial timber plantations in the CHT, to some extent, undermines the social equity and sustainability of the CHT's environment. Therefore, large scale private and corporate forestry should not be allowed in the CHT region. The grant of leases for private rubber plantations should be stopped in the forest areas of CHT. Logging and clearing of the remaining natural forest should be stopped.

Commercial shrimp cultivation within mangrove areas should be banned. Mangrove rehabilitation in Chakaria Sunderbans should be in the

reforestation agenda. The State can undertake plantation of mangroves program in the original sites, before it is too late. The Sunderbans should no longer be safe home to pirates. The State has to keep control of forests for all practical purposes and all forests should be utilized for the purpose of poverty alleviation, environmental conservation and sustainable development, though these terms have been widely and indiscriminately used without understanding them properly. It is pertinent to mention here that corruption in the department of forest should be taken very seriously, because implementation of policies will depend on their meaningful participation.

Department of Environment should be separated from the judicial process. Their job should be identified with clarity and precision. The Environment Court should be allowed to proceed independently without imposed assistance from executive body of the Government. Some of the Government and non-government actors, institutions and organizations can work together to build a healthy forest cover in Bangladesh. Ministry of Environment and Forest, Department of Forest, The Bangladesh Forest Industries Development Corporation, NGOs like Bangladesh Poribesh Andolon (BAPA), Bangladesh Environmental Lawyers Association (BELA) can be rightly mentioned in this respect.

The Forest Act is needed to be amended in an indigenous friendly fashion. The ethnic communities believe that this is a problematic and anti-people legislation. In fact, improper implementation of any legislation and abuse of power automatically leaves negative marks in people's mind. Hence, actions justified under this Act are needed to be monitored for the sake of justice and accountability should truly be established. Moreover, Department of Forest should act wisely in acquiring new lands for reserve forest which are currently owned by the indigenous people.

Development has posed highest amount of threat to forest, forest dependant people and indigenous life in this country. Despite thousands of instances of failure to do sustainable development, series of Governments have promised better life to people and sold fairy-tale stories of development and till date it is the sweetest term to politicians and donor agencies. The consequence of development in this country, believed by many, in respect of forest and land management, is forest depletion, commercial plantation, landlessness, endangered ethnicity and threatened wildlife with significantly reduced vegetation. Now it is time

to do some real work because 'awareness' is the term which is no longer saleable. People are already aware of the past. However, thorough environmental impact assessment should be a mandatory precondition of conducting experimental development works in the forest zones and compensation for the adverse impacts of experiments should also be mandatory.

Population is the vital problem in this country. Bangladesh is yet not capable to undertake responsibility to fulfill the basic needs of its citizens. It is just not simple and wise to make more children without plans for their future. The more population we make, the less land we get. It is just needless to say that forest, wildlife and environment face the enormous pressure of the increasing number of population. Ecological balance can not be maintained by making innovative policies only, where the population is out of proportion. Declining agricultural productivity and increasing food shortage in the face of rising population is a critical issue in forestry of hilly areas.

Political stability and will is needed like any other sectors. CHT offers a variety of dimension of ethnic conflicts. The existing land dispute in the region is crux of variety of critical problems. However, participatory integrated approaches involving land, water, forest, agriculture, livestock, wildlife, human resources and their activities can be promoted and utilized for sustainable and futuristic watershed management.

The draft Bangladesh Water Act, 2008 contains various provisions relating to the protection of the environment. The draft Act contains provisions for the bio-environment of the Sunderbans, its resources-forest and fisheries. However, it is too early to discuss about a draft Act, but it is under active consideration of the Government and hence, it is expected that it would address the conservation of forest, watersheds and rights of the dependent population.

6. Conclusion

It is distressingly clear that Bangladesh is in imminent danger of losing its remaining forest based biodiversity assets.¹¹⁸ Tropical forests directly provide food, medicines, industrial raw materials and energy. In addition they provide essential environmental services in recharging ground water,

¹¹⁸ See, Hasanuzzaman, S.M., *Plant Genetic Resources in SAARC Countries: Their Conservation and Management*, SAARC Agricultural Information Centre (SAIC), Dhaka, Bangladesh, Second edition: December 2005, at p. 157.

preventing erosion through watershed protection, reducing flooding, helping to prevent drought and reducing atmospheric CO₂.¹¹⁹

Bangladesh is a forest-poor country despite it looks to have lush green vegetation all over its body. The country is densely populated and poverty affected. It is needless to mention that there is a close nexus between poverty and environmental stresses. The poor are the most vulnerable to environmental challenges like depletion of forests, global warming and climate change and hence, least able to adapt and cope with any catastrophic situation. Mischievous acts contributing to forest depletion is an indicator that present situation calls for a concerted effort to help forest survive the present and future challenges.

In considering options for managing forests to protect them, it is important to keep in mind how management regimes affect the poorest of the poor.¹²⁰ One method of preserving forest resources is to establish protected forests in which officials restrict and closely monitor human access and harvest of forest products.¹²¹ Where forests are located in areas with established communities, forestry officials often find it difficult to protect the forest from harvesting by local communities that are aware of the State's claims and prohibitions but nevertheless feel justified in gathering food, fodder and fuel from the forest to meet their subsistence needs, as they have for generations, especially where the risk of detection is low.¹²² Gururani recounts practices in a village of the Kumaon Himalaya of India:

To avoid the guard, women time their trips to the reserved forest carefully and go to the forest only after they have made sure that the forest guard has gone past their patch of the forest. The activities of the forest guard are persistently monitored and even men and women who do not go to the forest keep track of the forest guard. Discussions about the forest guard constitute a significant part of the conversation among Bankhali men and women.¹²³

¹¹⁹ *Ibid.*

¹²⁰ Mitchell, Robert, Property Rights and Environmentally Sound Management of Farmland and Forests, *Land Law Reform: Achieving Development Policy Objectives*, The World Bank, Washington, DC 20433, USA, 2006 at p. 208.

¹²¹ See, *Ibid.*

¹²² J.I.O. Abbot & R. Mace, *Managing Protected Woodlands: Fuelwood Collection and Law Enforcement in Lake Malawi National Park*, 13(2) *Cons. Biol.* 418 (1999).

¹²³ S. Gururani, *Regimes of Control, Strategies of Access: Politics of Forest Use in the Uttarakhand Himalaya, India in Agrarian Environments: Resources, Representations*

Where the Bankhali villagers regarded the forest guard for the state reserve as a government employee who had no real stake in or understanding of the forest and its products, similar views are prevalent in Bangladesh too. The indigenous people who are dependant on forest believe that their voices have never been exactly heard and therefore, the forest legislations are faulty and atrocious. They blame the Forest Act, 1927 most. In the first Conference on Indigenous People and Bangladesh Environment held from December 17 to December 18, 2007, organized by Bangladesh Poribesh Andolon (BAPA) and Bangladesh Environment Network (BEN), representatives of the indigenous communities expressed their anguish and resentment caused by the forest related legislations and reiterated their ancestral right to possess and take care of the forests. This reminds that the practical condition of the forest dependant communities needs to be addressed too.