

village common forests, comes under the control of District Administration. The dominant forest types of the CHT are mixed evergreen and deciduous with relics of the following five major forest ecological sub-types;

- Tropical wet evergreen forests that cover the valleys,
- Tropical semi-evergreen forests covering the lower storey and deciduous forests covering the upper storey.
- Tropical moist deciduous forests occurring in valleys and channel banks,
- Tropical open deciduous species occurring on the exposed southern slopes.
- Bamboo forests either in pure patches or as undergrowth. Different bamboo species occupy the ecologically different land types extending from the channel banks to the hilltops. Much of the USF lands are now covered by various types of fallow vegetation including bamboo thickets, bushes and low forest of non-commercial shrubs and some are covered with monoculture forest plantations.

Outside the Reserve Forests, the following are the broad land use types in CHT:

- Rain fed shifting cultivation systems.
- Livestock-based farming systems/ Rain-fed or irrigation based lowland rice production/ Foothill terraced rice(*Ghona* cultivation) production systems.
- Commercial tree crop / horticultural crop production system.
- Homegardens/Homestead agroforestry production system.
- Miscellaneous annual cropping on miscellaneous lands e.g. *char* land, river terraces and fringe lands.

1. 3. CHT Soils

Hill soil is one of the vital components of CHT ecosystem that supplies major share of national needs of timber, horticultural crops, and spices, including the livelihood necessities for its population beyond its estimated carrying capacity. The increased national demand for timber, spices and fruits and the regional need for food and cash for the rapidly growing population of the region placed an increasing load on its land resources.

CHT soil belongs to the following three categories (Table- 9):

- *Surma-Tipam formation* (70% of CHT soil, effective soil depth is usually ± 50 cm) occur in the high and steep hills
- *Dupitila formation* (26%) in low hills of generally less than 100 m high occur between and outside the high hill ranges and are formed of unconsolidated sandstone, siltstone and shale.
- Alluvial soils (4%) formed from slope run-off and stream borne sediments occur in high river bank terraces, valley bottoms and flood plains with silt loam layered with sandy loam and silty clay loam layered with clay.

1.4. Land Degradation and Other Environmental Concerns

The CHT hill ecosystem is considered very degraded as compared to early 1960s and its degradation is inextricably linked to the impoverishment of the population. The main culprits are commercial extraction of timber and bamboo by clear felling system and inappropriate agricultural practices which are the result of policies that are insensitive to local circumstances and long-term political instability in the region. Therefore, the degradation of environmental and natural resources in the region is mostly imported by outside operators (ADB, 2001), rather than by the indigenous communities who have lived in this area for centuries.

The current environmental concerns now in the region are rapid depletion of natural forest resources, land and watershed degradation due to improper land use practices mainly by the migrants and the shortened rotational jhum cycles by some indigenous groups. These factors combined cause soil erosion, siltation of lakes and rivers and soil fertility decline thereby creating a food insecurity situation in the region. The migrants are Bangali people who practice the extensive tillage methods which they are used to in the deep soils of the plains. For example, whereas hill farmers use no more than a dibbling method, these farmers use deep digging/spading for cultivation of underground cash crops like aroids, turmeric, irrespective of the steepness and erodability of the soil. This causes severe erosion hazards, but, even some neighbouring indigenous communities have now taken up these practices, in search of immediate cash and considering their reduced availability of land. Land degradation in CHT by water erosion is adding to the costs of producing food and increased prices of harvested crops thereby adding to the cost