Check Erosion

Or

Lose Ground

Synopsis: Conservation of the land is essential for survival and continued availability of food-grains. Soil-erosion is a worldwide phenomenon but it is worst in the developing countries. Water and wind are the major sources of soil-erosion which wash or blow away the top soil, the valuable substance which helps plants and vegetation to grow. In India about 175 Mha land is already degrades because of erosion. Conservation of land and other natural resources need to be addressed immediately. Several steps have been taken to stop soil erosion and conserve natural resources but they are not adequate. More efforts on various levels need to be taken to conserve land, increase agricultural productivity and develop new technologies in water and soil management etc.

Conservation of soil and water is essential for human survival. Without the conservation of these two natural resources food production cannot be increased nor disasters checked. Already all the available land for agriculture is being exploited and there is not much scope of further expansion. Nearly one third of the total land area of the world in arid, about 11 per cent is under ice-cover and another 10 per cent is tundra. Conservation is the need of the hour to ensure continued availability of food-grains, fruits, vegetables, and such other supplies. Water is life. It is an essential natural resource needed in homes for drinking, bathing, wising, cooking and in fields and farms for raising crops and keeping animals.

When the land is stripped of its green cover, soil is lot and damaged by erosion. Nearly 26 billion metric tonnes of topsoil is being eroded every year. It takes from 200 to 1000 years to from 2.5cm of topsoil under normal agricultural conditions. It is estimated that from 20-300 tonnes per hectare soil is lost annually. Topsoil is lost many times faster than it can be replaced. The erosion is called the silent theft. A single rain or storm can erode century's old accumulated soil from a field stripped of plant-cover. Soil is that valuable substance which causes plants and vegetation grow. Soil is the life-giving substance. Ultimately men and animals, all depend on plants, grass, grains etc. It this vegetation and plant supporting soil is blown or washed away, the land becomes useless form the agricultural point of view because the sub-soil,

underneath it is not potent enough to support plant life. Without this vital cover of topsoil, the land becomes arid, barren and useless.

Water and wind are the two major agents of soil-erosion which wash or blow away the top-soil. Poor agricultural practices which strip the land of its vegetative cover are the cause of soil-erosion. As a result of erosion about 4330 million hectares of arable land had to be abandoned during the last 4-5 decades. This degradation of land caused by erosion is a very serious problem. In the developing nations of Asia, Africa and South America, the problem is the worst. Soil erosion is affecting 15 per cent of the earth's cropland area. The shrinking forest covers result in flash floods and erosion of the land. There are storms as well across the denuded area of land and the soil is blown away constantly. Soil erosion is likely to continue in coming years. At the present rate of erosion there would be about 30 per cent loss of the global soil inventory by the year 2050.

Erosion by sea water and desertification has made the situation worse. Desertification is there on a vast scale. Nearly 21 Mha of present rate of desertification about 1.2 billion people would be affected by the turn of the century. The global warming, because of greenhouse effect, will make the sea-level rise above present level by 20 cm by 2030 and 30 cm by 2050 leading to inundation of large areas of land. Glaciers and icecaps have started melting and causing thermal expansion of the oceans. India has a vast coastline and erosion by sea has caused losses on a vast scale. About 175 Mha land in the country is already degraded. The land under agriculture is 143 Mha, 56 percent of it's suffers from varying degrees of degradation. Of the total of 75 Mha forest land, 40 Mha suffers from degradation. It emphasizes the abuses of our natural resources in the past and even in the present. Conservation is one of the major human problems and must be addressed immediately and effectively. Earth is the 4ojly known living planet because of its varied natural resources which support and sustain life. Without these natural resources like water and soil, the earth would have been another dead, desolate and deserted planet like Mars or Jupiter. Water, soil, forests and wildlife are our valuable natural resources and must be preserved at any cost.

Soil conversation is one of the most important inputs of increasing agricultural output. IN India many efforts are being made to check soil erosion and the emphasis has been on development of technology for problem identification, formulation and implementation of problem-oriented schemes, enactment of appropriate legislation and constitution of policy coordination bodies. The main objectives of soil and water conservation schemes in the country are : to minimize process of erosion and land degradation to restore degraded lands; to ensure availability of water and soil moisture; to create micro

level irrigation potential through water harvesting; to ensure rebuilding of internal fertility of soil through organic recycle etc. The various programmes aim at conservation of soil and water mainly on agricultural lands. These programmes provide an overall perspective of problems like water and wind erosion, degradation through water logging, salinity, ravines, torrents, shifting cultivation, coastal sands in addition to declining man-land ration. Major Central schemes aim at checking premature siltation of multi-purpose reservoirs, mitigating flood hazards in productive plains, resetting of shifting cultivation and restoring degraded lands.

A Centrally-sponsored scheme of soil conservation in catchment of river valley project was launched during Third Plan. Another scheme of integrated watershed management in catchments of flood-prone rivers was launched during the Sixth Plan in eight flood-prone rivers. By the end of the Seventh Plan an area of 2.40 Mha out of the total treatable area of 17.99 Mha in the catchments of River Valley Projects was treated, which comes to 13.11 per cent of treatable area. Similarly, in the case of Flood-prone River Scheme till the end of the Seventh Plan an area of 0.36 Mha, out of the treatable are of 4.37 Mha was treated. A scheme for reclamation and development of ravine areas had been launched in 1987-88 in Madhya Pradesh and Rajasthan. A scheme for reclamation of alkali (user) soils was also launched during the Seventh Plan which is continuing in Haryana, Punjab and Uttar Pradesh. It was introduced to improve physical condition and productivity status of alkali sols for restoring crop production. Gujarat was added to the scheme in 1989-90. For controlling sheeting cultivation a pilot scheme in 1989-90. For controlling shifting cultivation a pilot scheme was implemented in Arunanchal Pradesh and Mizoram in 1986-87. This scheme was then extended to many States including Orissa and Andhra Pradesh and all the north-eastern States.