

USE OF COASTAL SHELTERBELTS ALONG THE EAST COAST OF INDIA WITH SPECIAL REFERENCE TO TAMIL NADU AND ANDHRA PRADESH

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East coast of India was extensively affected by the tsunami two years ago. The need for shelterbelts along the coast has been realized after this incident. Plantation along the east coast has been an activity even during the pre-tsunami period especially by Forest Departments and by private land owners as part of income generation activity. However plantation activities in the name of shelterbelts, bioshields and biowalls gained much attention from all the stakeholders of coastal regions consequent to tsunami.

The coast line of Tamil Nadu and Andhra Pradesh extends a length of 2069 km. The key players in the post tsunami bio shield plantation activities include the State Forest Departments and several Non Governmental organizations. Some of the major NGO's that are involved in developing coastal shelterbelts in Tamil Nadu are: M.S. Swaminathan Research Foundation, Chennai, Anawim, Thiruchendur and Covenant Centre for Development (CCD), Madurai. Organizations such as M.S. Swaminathan Research Foundation, Coastal Community Development Programme (CCDP), Sravanthi and Sangamitra are the major players in Andhra Pradesh.

Tamil Nadu Forest Department has developed plantations covering 2000 hectares of coastal land in 2005. Anawim has in collaboration with Tamil Nadu Forest Department as part of agroforestry programme has raised plantations in about 71.5 hectares along the southern most part of east coast. M.S. Swaminathan Research Foundation, Chennai has raised 30 hectares of

mangrove shelterbelts and is in the process of developing non mangrove shelterbelts in six villages along the coast. Mangrove shelterbelt has been the major focus in Andhra Pradesh where about 100 hectares were planted jointly by the major NGO's in the state.

Tamil Nadu Forest Department has raised casuarina as a monocrop in ninety percent of the plantations. Some of the other species that are planted by the Department include *Anacardium occidentale*, *Acacia planifrons*, *Ficus benghalensis*, *Madhuca longifolia* and *Syzygium cumini*. Tamil Nadu agroforestry programme involved the communities in decision making process. NGO's are however planting diverse species including casuarinas after taking into consideration the views of the communities. Some of the species preferred by the communities include *Thespesia populnea*, coconut, and cashew. These species serve both as bioshield as well as improve the livelihood of the communities.

One of the major plantation activities along the coast is by private land owners who plant casuarinas and cashew as cash crops both in Tamil Nadu and Andhra Pradesh. Several places in Andhra Pradesh the plantations in private lands have helped greatly to contend the damage by tsunami. A collaborative model for planting private lands needs to be developed.

Though casuarina is an attractive option for planting in the coastal landscapes, the mixed species approach, especially using native species, should be encouraged taking community needs into account. The east coast is characterized by unique vegetation called Tropical Dry Evergreen Forest. Species of this forest such *Manilkara hexandra*, *Morinda pubescens*, *Pongamia pinnata*, *Gmelina asaitica* and *Streblus asper* can form important components for bio shield and can be linked to the livelihood of the neighborhood communities. Apart from the species the length and breadth of the shelterbelts also should be discussed with the community. Linking educational institutions in this process can help youth to get involved in this important endeavor by bringing together academic learning and social responsibility.