and report the fact to the Tree Officer within 24 hours of such felling."

Another important point in the Bill was Section 10 that stated: "Every person, who is granted permission under this Act to fell on dispose of any tree, shall be bound to plant such number and kind of trees in the area from which the tree is felled or disposed of by him under such permission, as may be directed by the Tree Officer; provided that the Tree Officer may, for reasons to be recorded in writing, permit lesser number of trees to be planted or trees to be planted in any different area or exempt any person from the obligation to plant or tend any tree."

Similarly Section 12 (2) of the Bill stated, "All owners shall effectively protect all the trees growing in the lands or areas under their control and where the Tree Officer is of the opinion that adequate measures have not been taken to protect the trees from any damage, he may direct the owner to take such measures as are considered necessary to protect trees from damage. In case of default, the tree officer may himself arrange such measures and recover the expenditure thereon from the owner in the prescribed manner."

Did the Bill help, is a question that can perhaps be answered by even a cursory glance at data on forest cover in Goa. The fact that the total forest area of Goa today stands at 1424.46 sq km, of which approximately 200 sq km is privately owned, is evidence that the Bill did have a positive effect on the State. Today, we have 33.08 percent of the geographical area of Goa as government forest, and 5.40 percent as private forest. In effect, 61.52 percent of Goa's geographical area is non-forest land. Compare this to the fact that in 1982, the forest area was 28 percent of the geographical area. There has been an increase and the Tree Preservation Act is one of the reasons why the tree canopy has increased.

One other factor that has led to the increase of forest area, is the growth of mangroves along the riverine areas that are considered forests and included in these statistics. Although mangroves are often dismissed as not real forests and there is a debate on whether they are beneficial or not, the United Nation's Environment Programmer states that mangroves provide critical ecosystem goods and services, protection against storms, erosion and flooding, are sources of food and timber, improved water quality and carbon sequestration. Besides, the same programme states that mangrove forests are natural habitat for over 1,533 different species, including nursery habitats for many commercially important fish, and are beneficial to the health of adjacent ecosystems such as coral reefs and



seagrass meadows.

Similarly, on the webpage of "Grow A Million Trees," it is stated that 'Goa's mangroves are vital for their ecosystem services. They act as natural buffers, reducing the impact of tidal waves and storm surges. Mangroves also store up to four times more carbon than tropical forests, playing a crucial role in climate change mitigation.'

SACRED GROVES OF MEGHALAYA, THE NORTHEAST AND GOA

During the time that I spent in the North-East States as General Secretary, All India Congress Committee and in charge of North Eastern States, I had the opportunity of visiting all the States and understanding their culture and traditions. I also had the privilege of visiting sacred groves of Meghalaya and returned fascinated by them. While we too in Goa have sacred groves, in Meghalaya these have been bestowed a high level of protection and conservation. Essentially the Sacred groves are, as explained by the Meghalaya Biodiversity Board, tracts of virgin forests that have cultural or spiritual significance for the people who live around them. They have been protected by communities for a variety of reasons, including religious practices, burial grounds and water shed value. As a result of this the rich biodiversity of these forests are protected. I had the opportunity to visit these sacred groves, especially in the Khasi



Hills at Mawphlang and Cherapunji but I couldn't go there alone, I was accompanied by the village headman.

The sacred groves of Meghalaya enjoy legal support under the United Khasi-Jaintia Hills Autonomous District (Management and Control of Forests) Act, 1958 and the Garo Hills Autonomous District (Management and Control of Forests) Act, 1961. Both Acts were passed in pursuance of paragraph 11 of the VI Schedule of the Constitution of India. A chapter on 'Sacred Groves of Meghalaya', by B Tiwari, SK Barik and RS Tripathi states that as per the Act, the sacred groves are to be managed by the Lyngdoh (religious head) or the person to whom the religious ceremonies for the village are entrusted. As per section 7 of the Act(s) no tree can be felled in these

forests without the previous sanction of the Chief Forest Officer. Similarly section 9 prohibits the felling or removal a tree except for purposes connected with religious function or ceremonies recognised and sanctioned by the Lyngdoh.

Sacred groves in Meghalaya cover an estimated area of 10,251 ha, located in catchment areas of major rivers. Most are located at the origin of perennial streams, others on steep hill slopes, both critical sites which are most vulnerable to degradation. Hence sacred groves protect the land and soil from erosion and help maintain the quality of water in the streams downhill. As expected, the sacred groves are repositories of rich biodiversity and home to a number of rare and endangered flora and fauna. The vegetation of the

undisturbed sacred groves is generally very dense and well stratified. The presence of tall monoliths within these sacred groves are evidence that these have existed for long as these were erected in memory of departed elders of the local tribes.

In Meghalaya, sacred groves represent a long tradition of environmental conservation based on indigenous knowledge by the tribal communities. They are among the few least disturbed forest patches which are serving as the natural treasure house of biodiversity and a refuge for a large number of endemic, endangered and rare taxon. The general term for sacred groves in the Khasi Hills is 'Khlaw Kyntang' or 'Law Kyntang' or 'Law Lyngdoh,' while in the Jaintia Hills it is called 'Khloo Blai'. The sacred groves

in the Khasi Hills and Jaintia Hills District are fundamentally based on the traditional religious belief of the tribals i.e., Khasis and Pnars, which is called Seng Khasi and Niam Tre respectively. They believed that a forest deity called 'Ryngkew', 'Basa' or 'Labasa' in the local language, resides in these sacred groves which protects and provide for the well being of the village community. In these forests, cutting of trees, plucking of flowers, fruits, twigs are not allowed and it is believed that if done, the deity would get offended and would cause bad things to happen to people. Various rites and rituals are performed periodically in these forests. There are 79

