

Ayurveda at the Homeland of Kōnkani i.e., Goa. He wrote, 'Not only our GSB Ayurvedic Doctors in the past were experts in treatment, but they exported their know-how to western countries also. Incidentally let us go back to the Goan Ayurvedic scholars who settled at Kochi, even before the 17th century. This time tested truth was convinced to the western people without any shadow of doubt. Hence the western experts welcomed our doctors for their Ayurvedic applications.'

He also stated that 'the Testimony' given in the 'Hortus' may be the first evidence of Konkani script. It is written in Devanagari as like Sanskrit'. The brilliance of the three Konkani Brahmins shows they were well versed in Vedas, Vedanta and Sastrarthas.

Shenoy concludes that the *Hortus Indicus Malabaricus*, written in the 17th century, is the 'greatest achievements in the history of plant documentation. This shows that long ago Konkani Brahmins were aware of Ayurvedic concepts of medicinal plants and their uses. The morphology explained still serves as identification aid for many plants. The parts used and their method of usage explained in the book is very simple and can be used as home remedies'.

It is sad that we in Goa do not have a copy of the *Hortus Indicus Malabaricus* nor a memorial to these three knowledgeable Goans whose contribution to the Konkani language is unique and in academic and scientific circles, still discussed. I strongly believe that we should construct one such memorial as well as publish a copy of the work in Goa not only to honour the three Goans, but also that our current and future generations learn of the prowess of their forefathers. One way of doing so would be to include a chapter on these three Goans in the school text books and that Goa University take up the work of translating this to Konkani and English.

Our forefathers realised the value of the forests, but as the years went by and development entered, the forests came under threat, as we shall see further on, by analysing the most authoritative reports on the Western Ghats.

SWAMINATHAN REPORT OBSERVATIONS AND RECOMMENDATIONS

For an understanding of how the Western Ghats, at least in Goa, have been cut, one has to peruse the report of the Task Force on Eco-development Plan for Goa, compiled by a committee headed by M S Swaminathan in 1982, as it provides the best picture of what Goa was like in the 1960s and 1970s.

While we speak of forests in the

hinterland, these are not restricted to the eastern talukas nor are the consequences of clearing them restricted to merely these areas, but they have far-reaching consequences. The first meeting of the Task Force, held in the Planning Commission, New Delhi, in July 1981, emphasized that any forest plan should not be restricted to the three eastern talukas but, because of the interdependence of the lands in the valleys from the coast to the crest of Sahyadri in respect of ecological integrity, the Task Force should consider the problems of the entire district (Goa being a Union Territory was a single district) together and prepare a plan for Goa as a whole, primarily because these ranges occupy about one-third of the total territory of Goa. Right here, there is an important point to note, for according to the National Forest Policy, the forest area in a hilly region like Goa should be at least 60 percent of the total land area, thus, the forest area even in the Western Ghats region falls short of this limit.

The report states that provisional records of the Cadastral Survey (1977) of the Land Survey Department show an area of 83,903 ha. under forest, representing 24.3 per cent of the total reporting area of 3,655.6 sq.km. The report says, 'Obviously, the area under forests has conspicuously decreased due to wide-scale private encroachments and also due to allotment of forest lands to cultivators for agricultural purposes.' It added that the area under private forests were indiscriminately used, leading to soil erosion and flooding in low-lying areas, thereby posing a threat to ecological balance.

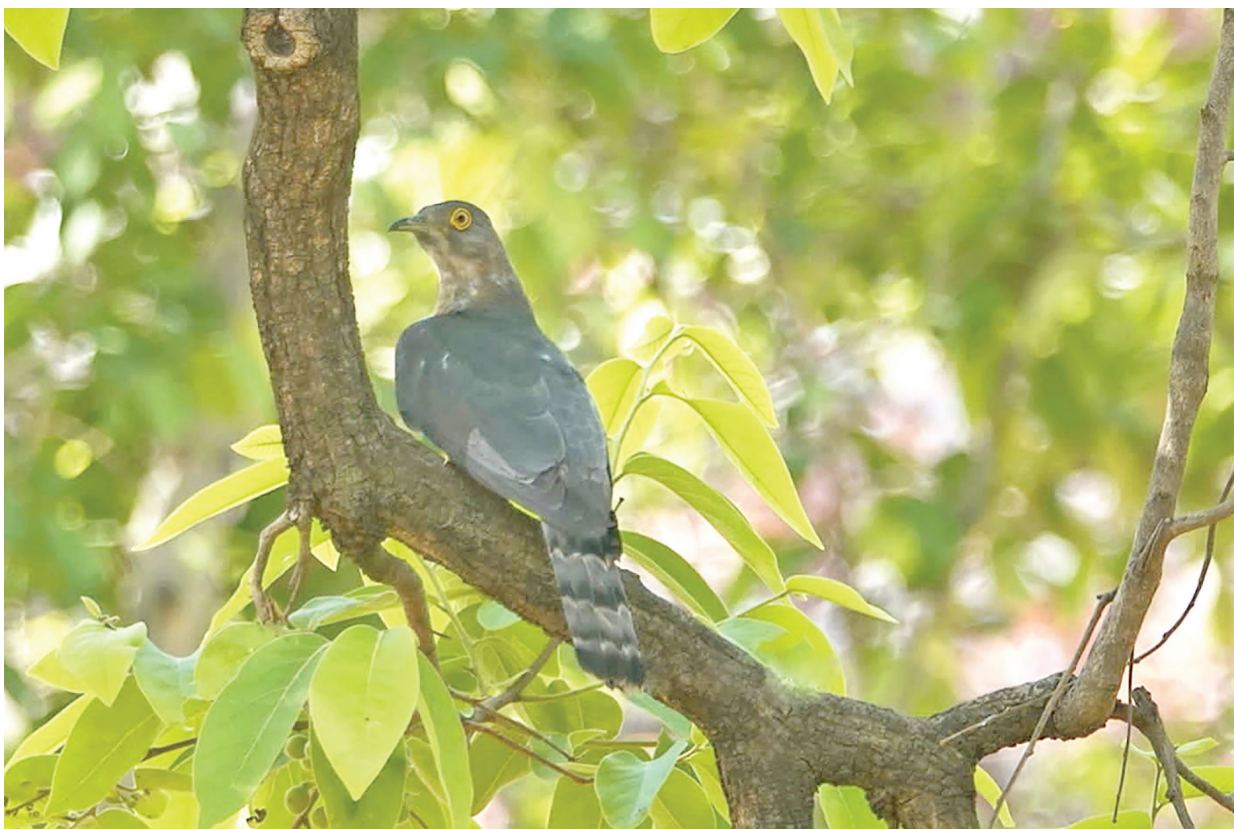
Dedicating an entire chapter on forests, the Kasturirangan Plan informed that according to old records, the total forest area in Goa was about 1,309 sq.km. of which government forests were estimated to extend over an area of about 1053 sq.km., the remaining being under the control of Comunidades and private parties.

It further stated that until 1977, forests were managed under the clear felling system followed by artificial regeneration of species like teak, eucalyptus and cashew. After 1977, the clear felling system was discontinued in areas along the Western Ghats and in rest of the areas where it was continued, the upper one-third portion of the hill slopes is being worked under the selection system, which the report said was an improvement in the management technique from the ecological point of view.

One activity that has wrecked the forest areas of Goa is mining. In 1982, the Kasturirangan task force had said that about 70 percent of the area covered by mining fell within the forests which destroyed the forests, but arguing that mining was



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an important activity for the Goan economy and a significant foreign exchange earner for the country and hence necessitated to be carried out, it sought long-term plans of afforestation for the rehabilitation of lands after mining operations were abandoned. It even suggested that in areas where mining operations had been abandoned, afforestation work could begin.

Damage to forest land caused by the opening of pits and to some extent by dumping of waste is inevitable, particularly in Bicholim-Sirigao area, Pissurlem Sonshi area, Surla Pale area and Odaial-Tathodi area. The forest growth in these areas is generally shrubby with little commercial timber, the plan said.

It is interesting to read the recommendations and whether they have been followed. Regarding forests and mining it recommended that lessees should be bound to plant suitable forest vegetation on abandoned mining areas, that the width of roads in sanctuaries be kept to the minimum so as to avoid adverse effect on ecology and for forest protection and that no black topping should be done and no heavy traffic

should be allowed over these roads. Among other recommendations was that eucalyptus trees be planted on sites suitable for their growth and as a mixed crop with other species. On mining, it recommended that all active mines review their mining plans with reference to protection of the environment, making a pointed reference to the disposal of rejects that should be avoided to the extent possible in forest and agricultural land, while planting suitable species of grass, legumes or trees in the dumps. It also suggested that it be mandatory for the mine owner to plant elsewhere within the lease area at least as many trees as were removed and sought reforestation on abandoned mines that have been reverted to the government.

All these were made in the early 1980s, had these been followed, we perhaps would not have been facing the deforestation that we now see. I spent a month in Geneva, Switzerland, representing India at the International Labour Organisation. During that time I was able to observe the city and the surroundings and learn a few lessons. One aspect that

has remained in my memory, and recalled as I read the Swaminathan report, is that they have developed the cities, but they haven't brutalized the countryside by having very broad roads. They still have narrow roads, just what has been recommended by the Swaminathan report. Leisure and access to nature is freely available in Switzerland. They have what is called the Black Forest and people visit it, but compared to the forests and trees that we have here in Goa that is negligible.

I reiterate that the biggest destruction of Goa's forests has been due to mining and upset by this I had moved a resolution in the Legislative Assembly that the forests within the wildlife sanctuaries should not be touched. On the other hand they should be preserved and allowed to rejuvenate. But beyond that, in recent years we have seen how mining has damaged the forests in Goa and the illegal mining that caused losses to the exchequer. We therefore look at another report of 2010, almost 30 years after the Kasturirangan plan.

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