

Cape of environmental issues

Sasidharan Mangathil

Black sand mining has been taking place in Chavara and Anchumanakkal for over seven decades. The costal area from Neendakara to Kayamkulam Pozhi is now the hotspot for mining of black sand. Also the stretch between Kayamkulam Pozhi to Arattupuzha, Trikkunnappuzha, Thotappalli is also being considered for mining.

Geologists say that the black sand region from Neendakara to Thotappalli is a weak zone. This stretch of land is like a long island between the sea and the Kayamkulam backwaters and then along the TS canal beyond Kayamkulam backwaters. The width of Arattupuzha-Trikkunnappuzha is 200 m to 700 m. At the Kayamkulam-Neendakara region the width is even lesser. At some places in Alappat Panchayat it is as narrow as 50 m. There is one place where the backwaters and the sea had once merged with each other. This place, now known as Barrier Beach, had once been a part of the seashore.

Around 7000 hundred years back when the sea invaded the land and then withdrew this weak stretch of land was formed. The Kayamkulam backwaters and the TS canal, which are on the east of the island, are connected with many backwaters and swampy regions. In order to prevent construction activities from affecting the marine ecosystem and the seashore, the central government had introduced the Coastal Regulation Zone in 1991. The black sand region comes under the ambit of this protection. CRZ bans mining in such regions. Since there are mangroves (*rhizophora mucronata*) in this region, K V Thomas and K O Badaris of the Centre for Earth Sciences Studies, Thiruvananthapuram opine that Vellanathuruthu should be a protected region. Though conditional permission is given to mine rare minerals like monazite from the protected regions for defence purposes, mining of other minerals is not allowed.

Dr K P Trivikramji, former head of the geology department of Kerala University, says that during every monsoon, enough black sand is deposited on the Kerala coast and this is sufficient for the use of the two companies. But only as much sand should be mined that will not erode the beach, he says.

According to the T M Mahadevan committee, which had been constituted to study the problem, since the region is weak, black sand should not be mined using machinery. The report says that mining with machinery would destroy the coast, resulting in coastal erosion and increasing fury of the sea.

The black sand being deposited at the coast should be taken without affecting the coastal area. 'Mineral harvesting' should be done just like harvesting of agricultural products. Sand should not be taken from more than 50 cm depth. The report also insists that the dredge system should be implemented to take sand from the seashore.

In order to evaluate the coastal erosion in the stretch from Kollam to Alleppy, research and study with the help of modern equipment is essential, says the report. T M Mahadevan, who is the former director of Atomic Mineral Division, also suggests that a panel including environment experts should be appointed to analyse the state of black sand mining in the coastal region.

A geologist pointed out that though Neendakara-Kayamkulam Pozhi stretch has huge quantity of black sand deposits, that the companies mine without proper planning and that causes coastal erosion and other problems. People have now started purchasing land in the coastal areas to do mining. In block no 1, mining would start soon, says V Muralidharan Nair, Assistant General Manager of Kerala Mines and Minerals Limited (KMMML).

If only the sand deposited at the coast during monsoon was mined then that would not deplete the coastal areas said Dr N P Kurian, the head of the marine science department of Centre for Earth Science Studies. He also said that the High Court has, in 1997, stipulated the quantity of black sand that could be taken from the coast without causing environmental problem.

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