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High nitrate content in Nilgiris streams

18-Month Study In The Region Reveals Massive Pollution In The Hill Streams

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Udhagamandalam: Streams that flow down the Nilgiris and eventually merge with the Bhavani in Mettupalayam now contains nitrate above desirable limits, according to a study.

The study, conducted by Keystone Foundation, an NGO working on eco-development initiatives in the Nilgiris, revealed that the Kettery river in Coonoor contains nitrate to the extent of around 150ppm. Though the situation is not alarming yet, the situation is a cause of concern. The study was conducted in Coonoor and surrounding areas in the Nilgiris over a period of 18 months by the organization.

Members of the Keystone Foundation study team had a presentation before a select audience including the Nilgiris district collector Archana Patnaik, officials from various government departments' officials and stakeholders in the district, including NGOs in the Nilgiris, to highlight the issue and work out solutions on Tuesday. Dr Sundarrajan Krishnan, a Gujarat-based hydrologist, collaborated with Keystone in carrying out the study. The study revealed the importance of upstream shola grasslands and wetlands for downstream continuity of water resources for people and wildlife and nature, according to Pratim Roy, director, Keystone Foundation.

The project included quantification and valuation of hydrological



TIME TO ACT: The study was conducted in Coonoor and surrounding areas in the Nilgiris by Keystone Foundation, an NGO.

benefits provided by upstream shola grasslands to downstream communities as well as landscape. The assessment also gauged the impact of land use patterns. "The project is also at bringing about a radical approach towards water issues and thereby starting the process of influencing policy change," said T Balachander, one of the team members.

Various hydel projects in the Nilgiris were tapped in addition to water resources, forest and electricity departments for data. "Quantity as well as quality of water was looked into so that the output of the model would inform policymakers as well as the general

public and other stakeholders such as industry, of the trends and order of impact on the water resources and the need for appropriate policy and action," said Balachander.

According to him, the study team discovered that enormous amount of waste was dumped anywhere and everywhere in the areas. "It was observed during the study that people generally used streams to dump garbage. Water from streams was not used for drinking. Only spring water is used for drinking by the village people," he said.

Eventually all the streams, say six to seven main streams in the Coonoor region, join the Coonoor

Health effect of nitrate

High nitrate levels in water can cause methemoglobinemia or blue baby syndrome, a condition found especially in infants under six months. Even animals are affected by nitrate the same way as human babies. Older animals may tolerate higher levels.

river which in turn merges with the Bhavani. "The water test revealed that the content of nitrate is around 150 ppm which is not advisable," said Balachander.

According to the study, the nitrate in water is mainly due to human wastage, besides from fertilizers used in farms. Trees also discharge some amount of nitrate but the amount is very meagre.

Many of the hotels and cottages in the study areas have soak pits and not septic tanks, the study revealed. "Hence, the accumulated polluted water is certainly affecting the quality of the river water," said Balachander.

A micro level study in the same part of Coonoor will be conducted again in detail to draw suitable solutions regarding waste management and to figure out remedies to reduce the scale of pollution.

Representatives of Soil and Water Conservation Board, United Planters' Association of South India, Rural Development Organisation, Coonoor municipality were also present during the presentation.