

**“Algal Bloom turns Marsh in Pallikaranai A Pink Pool”**



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**CHENNAI:** Even as the State government is making efforts to get Ramsar site status for Pallikaranai marshland, the water quality of the ecologically-sensitive lake continues to deteriorate with its colour near Perungudi dumpyard turning freakishly pink on Thursday. Water spread across several acres of land near the dump resembled a pink cesspool with no sign of any birdlife, despite Pallikaranai being a known paradise for migratory and residential birds during this time of the year.

IIT-Madras professor Indumathi M Nambi, who studied harmful impacts of the dumpyard on Pallikaranai marshland, told TNIE that she has never seen anything like this. “It looks like a harmful algal bloom caused by cyanobacteria. The leachate from the dumpyard must have increased the nutrients (nitrogen and phosphorus) load, which assist the bacteria to multiply and bloom. Until we do a chemical analysis, we can’t pinpoint the exact reason.” Cyanobacterial blooms are usually blue-green in colour, but algal blooms can vary in colour, ranging from red to brown or pink. Deepak Srivastava, Additional Principal Chief Conservator of Forests and Member Secretary of Tamil Nadu State Wetland Authority, acknowledged that it was a matter of deep concern. “I will send a team to collect water samples and get it analysed. The dumpyard needs to be shifted. We are waiting for Pallikaranai to be declared as Ramsar site.” He said the authority has identified 25 wetlands in and around Pallikaranai marshland for conducting baseline studies, which includes fish gut analysis and sediment sampling. The leachate from the dumpyard is triggering eutrophication (enrichment of waterbodies with minerals and nutrients) of the lake, he said.

Top research institutions like National Centre for Sustainable Coastal Management (NCSCM), Anna University, IIT-Madras, and Care Earth are assisting the government in restoring the marshland. Recently, researchers from the Centre for Climate Change and Adaptation Research, Anna University, carried out a study which reveals that Pallikaranai wetland, which is supposed to act as a carbon sink, is emitting 18.4 gigatonnes of carbon dioxide and 8.4 gigatonnes of methane every year. Every molecule of methane that gets released into the atmosphere stays there for a minimum of 12 years. Methane is a potent greenhouse gas and is a cause for major concern globally. As per the Comprehensive Management Plan for Pallikaranai Marsh 2014-19 prepared by Care Earth, 90% of the marsh land that was spread across 6,000 hectares in 1906s has been lost. Today, the marsh covers just 690 hectares. The document blames the fragmentation of habitat on construction of institutes like National Institute of Ocean Technology (NIOT) and Centre for Wind Energy Technology, and Perungudi dumpyard and sewage treatment plant, and development of IT corridors and residential complexes.

### **What is algal bloom?**

Algal bloom on water surface depletes oxygen in the water and blocks sunlight from reaching fish and plants. With less light, plants can’t grow and fish starve to death. A cyanobacterial algal bloom can be harmful when the toxins (cyanotoxins) it produces in air and water reach concentration levels that are dangerous to people, marine life, and the environment.