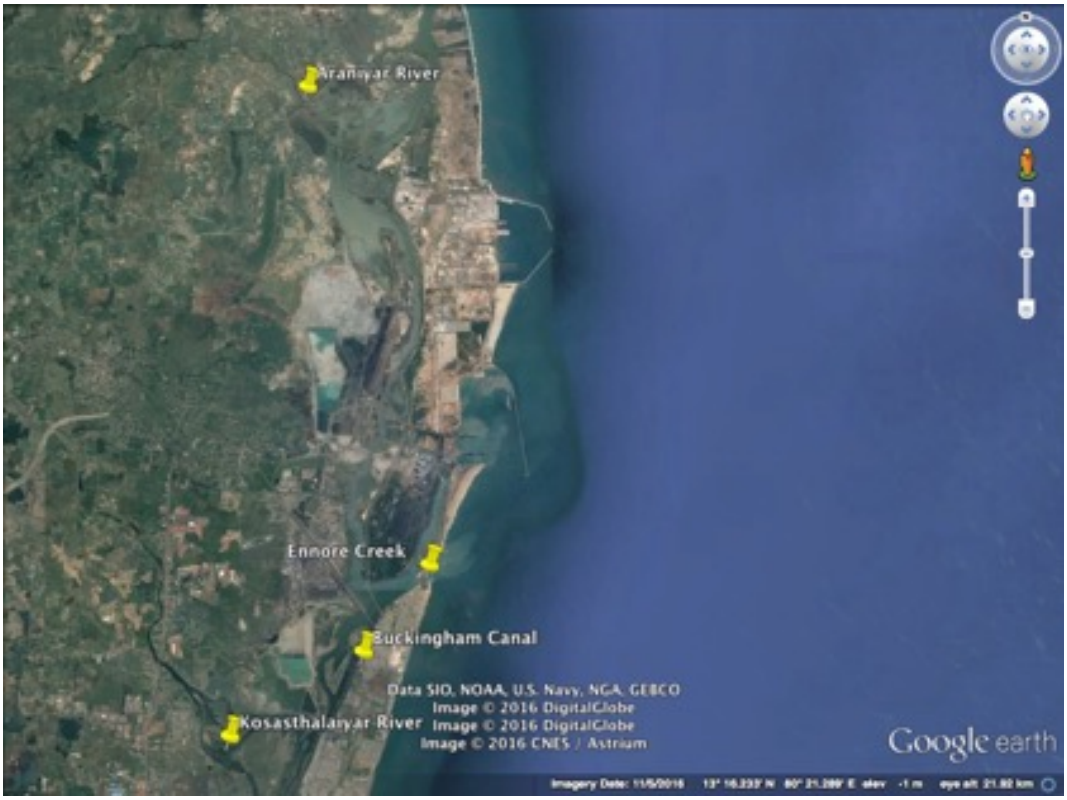
Ennore Creek - Ecology and Violations

The Ennore creek is located in the Thiruvallur District of Tamil Nadu, approximately 20 KM North of Chennai City. This creek is part of a lagoon ecosystem that plays a vital role in balancing the coastal ecosystem in the area. Ennore Creek drains two important rivers, Kosasthalaiyar in the South and Aranaiyar in the North into the Bay of Bengal through the Ennore Estuary. The creek forms an estuary that is about 400 m wide. Pulicat Lake, the second largest brackish water lake in the country and is a protected area also drains into the Ennore Creek. The Buckingham canal also runs alongside the creek, intersecting the creek at different points.



Dotted with salt pans, mangroves, fish farms and mud flats, Ennore Creek provides a variety of habitats that support a large number of animal and plant life. The Ennore Creek is the primary source of livelihood for six fishing villages. Mugathwara Kuppam, Kaatu Kuppam and Sivanpadaiveethi Kuppam rely wholly and perenially on the river and creek.

Once a biological hotspot, biodiversity in the Ennore Creek has been steadily declining. In the 1960s, the Manali Industrial Area and Ennore Thermal Power Station were set up encroaching on wetlands connected to the creek. The industrialisation and consequent degradation intensified starting in the 1980s with the setting up of NCTPS (1980s), KPL (2000) and the Vallur Thermal Power Plant about five years ago.

Nature of Violations and its Impact on Ennore Creek

S. No	Nature of Violation	Responsible Party	Description	Nature of Impact
1	Illegal Dumping of Dredged Material	Kamaraj Port Limited	• Dumping carried out on Ennore Creek and Buckingham Canal • Dumping carries out on Salt Pans, marked as CRZ I (Ecologically Sensitive) • Illegal Under CRZ Notification 2001 and Water Act, 1974	Hydrological Impact
2	Leakage of Ash Slurry into the Ennore Creek	NCTPS	• Leaking pipelines deposit large quantities of Ash Slurry on the water body • Hardens and destroys natural flow of the waterbody • Releases a range of harmful toxins into the aquatic ecosystem • Can affect fish resources and in turn, livelihood of fishermen • Coal ash contains heavy metals such as arsenic, boron, cadmium, chromium, mercury and selenium. Heavy metals such as selenium bioaccumulate in fish and harm their ability to reproduce	Hydrological Impact, Ecological Impact, Livelihood Impact
3	Ash Pond as a physical barrier	NTECL	• Part of the creek opposite Sivanpadaiveedhi Kuppam and Kaatu Kuppam have been encroached upon for the ash pond of NTECL's TPP • Presence of the Ash Pond hinders the flow of east flowing canals and tributaries of the Kosasthalaiyar River • Contributes significantly to the siltation in the river	Hydrological Impact, Ecological Impact
4	Encroachment on Fish Farms	Kamaraj Port Limited / CICTL	• Fish Farms have been encroached upon for construction of coal yards • Apart from affecting the water flow, it also discharges toxic coal leachate into the creek • Affects aquatic life and livelihoods	Hydrological Impact, Ecological Impact, Livelihood Impact
5	Increased Siltation and alteration of river flow due to bridges	Kamaraj Port Limited, NCTPS,NTECL, HPCL, GoTN	• 10 bridges, including coal conveyer belts, coolant water intake and outlet pipes, ash pipelines, LNG pipelines, roads and railway lines cut across the Ennore Creek • Lesser space to navigate. • Bridges are built on pilings, after construction these pilings are not removed and depth is not restored. • Leads to changed water flow, higher turbulence and currents • This leads to increased boat accidents, higher risk for life and damage to fishing gear. • Reduces water caring capacity of the river	Hydrological Impact, Livelihood Impact

S. No	Nature of Violation	Responsible Party	Description	Nature of Impact
6	Leakage of Ash Pond Filtrate Water	NCTPS, NTECL	• NCTPS and NTECL Illegally discharge filtrate water into the Ennore Creek • Consent to Operate given to both TPP's by TNPCB specifically orders that no water from the ash pond can be discharged into the river • Entire stretch of the creek has been silted up with ash sediments. • These sediments are above the level of water during low tide	Hydrological Impact, Ecological Impact, Livelihood Impact
7	Discharge of Coolant Water into the Ennore Creek	NCTPS, NTECL	• NCTPS and NTECL use coolant water systems that discharge the water used as coolant back into the water body after use • Causes large scale thermal pollution, as the water discharged back is always above the ambient temperature of the water body • Reduces the dissolved oxygen, intern affecting fish life. • Chemicals like Zinc, Chromium and Cadmium are added to the water during the cooing process, that contribute to pollution of the receiving body.	Ecological Impact. Livelihood Impact.
8	Discharge of Petrochemical Effluents into the Ennore Creek	CPCL & Manali Industrial Estate	• Industrial area of Manali is located close to the Ennore Creek • They discharge trade effluents into the Ennore Creek. Oil tanker washing and other oil based effluents are common. • Quality of seafood caught has deteriorated drastically • Reduces commercial viability of fish caught from the Creek • Can exhibit itself in a variety of health implications	Ecological Impact, Livelihood Impact, Health Impact on Residents
9	Discharge of Domestic Sewage into the Ennore Creek	Village Municipality	• Domestic sewage and garbage is regularly discharged into the creek • This comes from several village municipalities including Kathivakkam and Thiruvotriyur	Ecological Impact, Health impact on Residents