



SDG 14: Life below water

CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

The institute has been undertaking research, practices and community outreach programmes related to the Sustainable Development Goal 14: Life below water. The campus has two natural water bodies, which is home to a diversity of flora and fauna.

Research

Nearly 10 researchers at the institute work on areas related to rivers, seas and oceans; such as the role of submarine groundwater discharge zones, phytoplanktons, marine spatial planning, etc. Research projects are also undergoing at the institute in this sphere, examples of which include:

- A genetic morphological classification of the Peninsular rivers through clustering of river long profiles: a tool for sustainable river management; Council of Scientific and Industrial Research
- An experimental operational hydrologic modelling and forecasting system for river basin hydrology and extremes for India; Indian Institute of Tropical Meteorology
- Flood risk assessment in tropical rivers in the anthropocene under climate change scenario using hydro geomorphic modelling; Ministry of Education
- Fluvial Geomorphology study in stretches of Kosi, Nihal, Suheli and Geruwa rivers and impact of changing river-dynamics induced by mining activities onto wildlife; World Wide Fund for Nature - India
- Impacts of climate variability and climate change on water resources in the Sabarmati river basin; Ministry of Jal Shakti
- Impact of sea level fluctuations, climate change or tectonic activity on the decline of the Harappan settlement of Dholavira, Kutch, India; Department of Science and Technology (DST)
- Mobility and multilingualism in the Indian Ocean: Impacts of global ecological change on local society; Social Science Research Council
- Tectonic and climatic control on variability of sediment routing in the NW Himalaya since late quaternary; DST

Education

Courses offered by the institute include:

CE 201 Earth Materials and Processes

CE 624: River Engineering
EH 301: Field Practices in Earth System Sciences
EH 602: River Morphology and Ecology
EH 604: Quantitative Geomorphology

Field courses of a few disciplines such as Humanities and Social Sciences, Earth Sciences, Civil Engineering are also oriented to life below water.

Community Outreach

KPCSD Sustainability Seminar Series

The Dr Kiran C Patel Centre for Sustainable Development conducts a monthly seminar series on a wide range of topics related to sustainable development including water, pollution, ecosystems, climate change, energy, etc., that are targeted for a general audience. The events are announced through emails, social media channels, etc. to ensure participation from all interested.

Operations

The institute takes several initiatives which help in preventing and reducing marine pollution, in particular from land-based activities. Some of the measures are included below:

- Constant reminders of the need to reduce and segregate waste are made on all possible occasions, such as initiatives to promote reusable materials and discourage single-use materials (especially plastic). For instance, only reusable bottles, glasses, cutlery and plates are used in the tea stalls and at meetings and conferences, etc.; the use of disposable packaging items is not allowed/discouraged.
- A green bottle initiative has been in place for several years throughout campus, where campus staff, students, faculty and visitors are all encouraged to use reusable glass water bottles rather than single-use plastic water bottles.
- The basic water quality parameters, including pH, turbidity, TDS and chlorine are monitored and documented regularly by the Institute Works Department. Samples of water are collected and sent to laboratories for analysis to ensure compliance with the state and national level pollution control regulatory framework. This exercise helps in assessing and preventing any polluted water from entering the water distribution system and to uphold water quality in order to protect ecosystems, wildlife, and human health and welfare.
- Waste disposal of hazardous materials is carefully handled, including the collection of the chemical waste of the labs by a designated agency.
- Dedicated areas are provided to store construction materials on site. Construction waste is segregated and also stored at different locations.
- Separate storage facilities for inert and hazardous construction wastes are allocated and measures are employed for its safe disposal/recycling. Scrap materials are sent to a waste recycling facility.