



INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

A photograph of a person sitting on a modern, minimalist concrete bench in a courtyard. The courtyard is paved with grey tiles and surrounded by lush green trees. In the background, there is a large, light-colored concrete wall. The scene is brightly lit, suggesting a sunny day.

**DR KIRAN C PATEL
CENTRE FOR
SUSTAINABLE
DEVELOPMENT**

DR KIRAN C PATEL CENTRE FOR SUSTAINABLE DEVELOPMENT

The Dr Kiran C Patel Centre for Sustainable Development at IIT Gandhinagar undertakes cutting-edge research on sustainability and related challenges of high societal importance and promotes cost-effective and sustainable solutions through its strong outreach and technology-transfer programmes.

Mission

- Identify and conduct interdisciplinary research on sustainability related problems of high societal importance.
- Develop practical solutions to sustainability challenges by integrating research, traditional knowledge and field understanding, and translate them into prototypes, patents, and publications.
- Establish an effective technology-transfer programme for sustainability solutions in the field.
- Implement sustainability solutions on campus and its neighbourhood.
- Develop a strong outreach programme of training, education, awareness and community engagement on sustainable livelihood and development.
- Promote networking and collaboration among scholars, policy makers, industry, non-profit organizations and other stakeholders on sustainability.
- Promote educational programmes on sustainability at IITGN.

Focus Areas

WATER

Desalination, Safe Drinking Water Production, Water Resource Research, River Flow.

POLLUTION & WASTE MANAGEMENT

Air, Water and Soil Pollution, Waste Segregation, Treatment and Recycling, Waste to Resource Techniques.

ENERGY

Renewable Energy, Efficiency and Energy Management.

CLIMATE CHANGE

Extreme Events, Prediction and Simulation.

NATURAL RESOURCES, WILDLIFE & ECOSYSTEMS

Biodiversity, Conservation, Ecotourism, Traditional Ecological Knowledge, Environmental Humanities.

Dr Kiran C Patel



The Kiran C Patel Centre for Sustainable Development at IIT Gandhinagar has been established with a generous endowment from Dr Kiran C Patel, a distinguished cardiologist, entrepreneur and philanthropist based in Tampa, Florida, USA.



DR KIRAN C PATEL CENTRE FOR SUSTAINABLE DEVELOPMENT PROGRAMMES

Research

The Centre conducts interdisciplinary research on sustainable solutions for water, pollution, waste management, energy, natural resources and climate change:

- Support research on sustainability at IITGN;
- Identify, prioritize and lead sustainability related thrust areas;
- Explore and promote collaboration opportunities;
- Catalyze research proposals on sustainability;
- Visiting faculty and student research internship programmes.

Education

The Centre undertakes curriculum development at IITGN and advance education on sustainability nationally and globally:

- Development of graduate and undergraduate courses and programmes on sustainability at IITGN;
- Implementation of modules on sustainability in existing courses as well as short courses and workshops;
- Promotion of student, academic and research exchanges on sustainability with institutions in India and abroad.

Outreach

The Centre organizes conferences, networking, training programs and workshops for scholars and professionals in the area of sustainability:

- Coordinate training programs and workshops on sustainable development;
- Promote sustainable solutions, disseminate conceptual and practical knowledge, training materials and create awareness on sustainability;
- Host interdisciplinary conferences for scientists, advocates, policy and industry professionals;
- Facilitate networking, advance sustainability solutions, and enhance the Centre's profile.

Practice

The Centre encourages lab to field technology transfers and implements sustainability solutions on campus and its neighbourhood.

IITGN faculty are involved in several central and state government projects, such as, the National Mission on Strategic Knowledge for Climate Change; Submarine Groundwater Discharge along the Gujarat Coast; ECO-WET: Efficient Coupling of Water and Energy Technologies for Smart Sustainable Cities; Data-Driven Intelligent Energy Management for Environmentally Sustainable Energy Access; Gujarat State Climate Change Center, GEER Foundation; Development and Application of Geomorphic Tool for Sustainable Management of a Himalayan River System, etc.

Collaborations

The Kiran C Patel Centre for Sustainable Development collaborates with global organizations and universities on its programs. It has a vibrant program of research exchanges, project partnerships and visiting faculty.

The Centre's faculty collaborate on research projects and consultancies with colleagues at institutions across the globe, such as Columbia University, USA; Duke University, USA; Kanazawa University, Japan; Newcastle University, UK; Royal Netherlands Meteorological Institute; Royal University of Bhutan; The University of Edinburgh, UK; United Nations Development Programme; United Nations Environment Programme and Yunnan Minzu University, China.



GREEN IITGN

The IIT Gandhinagar campus is the first in India to receive the 5 star GRIHA LD rating for its eco-friendly and sustainable design. The IITGN campus strives to be a “living laboratory” on sustainability.

SUSTAINABLE CAMPUS INITIATIVES

Passive Cooling Technologies

In student dining hall and classroom buildings based on evaporative downdraft cooling, night-purge based system, forced evaporative cooling.

Solar Photovoltaic Systems

The total installed capacity of 500 kWp: 190 kWp at academic building's roof, 120 kWp at student hostels roof and 190 kWp of solar carport.

Rooftop Rainwater Harvesting

Jal Mandaps, underground tanks, collect rainwater from rooftops for reuse for horticulture and toilets.

Sewage Treatment Plant and Water Recycling

A sewage treatment plant installed in 2015 allows IITGN to use recycled water to maintain green cover. The plant is a three-stage fully-natural (chemical-free) sewage treatment unit. Since 2015, IITGN has been saving nearly 3 lakh litre water daily.

Biogas Reactor

The 1-ton biogas generator (Nisargruna plant) in collaboration with BARC, generates manure and electricity from the food and organic waste. It is designed to save 1 ton of waste from going to the landfills daily.



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