SUSTAINABLE DEVELOPMENT GOALS

KIIT Sustainable Development Report 2024

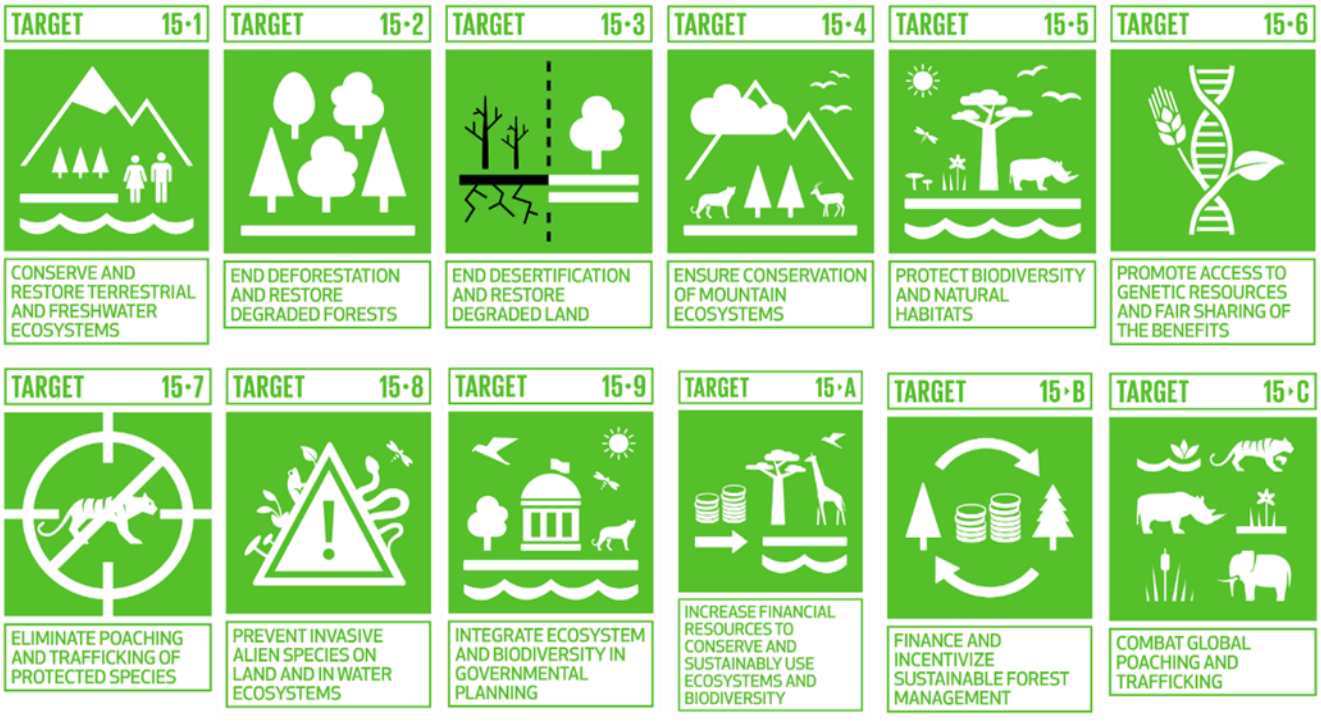
15 LIFE ON LAND

KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY
KIIT Deemed to be University
(Declared U/S 3 of UGC Act, 1956), Bhubaneswar, Odisha, India

15. Introduction

KIIT University is dedicated to advancing **SDG 15 – Life on Land** through research, education, and active conservation efforts focused on protecting terrestrial ecosystems. The university conducts research on land ecosystems, biodiversity conservation, sustainable land management, and the impact of human activities on natural habitats, providing valuable insights for environmental preservation. Through education, KIIT raises awareness among students and the community about the importance of protecting forests, wildlife, and natural resources, integrating environmental sustainability into the academic curriculum. The university supports land ecosystems through action by organizing tree plantation drives, habitat restoration projects, and community outreach programs aimed at preserving local flora and fauna. Land-sensitive waste disposal practices are strictly implemented, ensuring proper segregation, recycling, and treatment of waste to prevent soil and ecosystem contamination. These sustainable practices reflect KIIT's holistic approach to maintaining ecological balance, promoting biodiversity, and ensuring the health and resilience of land ecosystems for future generations.

The SDG 15 (Life on Land) report focuses on the progress, key initiatives, and impact achievements across the following targets:



15.1 KIIT's Commitment to SDG 15 (Life on Land): Research Publications, Patents Filed, Global Collaborations, Citations Received, Events Organized, and Community Activities – Key Figures

15.2 Supporting Land Ecosystems through Education

KIIT promotes the conservation and sustainable use of terrestrial ecosystems through education, research, and community engagement. The University's academic programs in environmental science, agriculture, and rural management include modules on biodiversity conservation, afforestation, and soil health. Regular awareness campaigns, workshops, and field-based learning initiatives sensitize students and local communities to the importance of maintaining ecological balance and protecting wildlife habitats. Through plantation drives, soil conservation projects, and biodiversity mapping, KIIT students gain hands-on experience in ecosystem restoration, integrating classroom knowledge with real-world sustainability action.

- **School of Rural Management (KSRM)** emphasizes sustainable use of land through dedicated courses, expert lectures, and community projects. These programmes focus on sustainable agriculture, soil health, and responsible land management to promote harmony between human activity.
  - **Agribusiness Management Program:** Masters / PhD programme (Business Administration) in Agribusiness Management & UG / PG / PhD programme in Biotech. is being offered in the KIIT University.

    https://ksrm.ac.in/

    https://biotech.kiit.ac.in/

  The aim of the course is to prepare qualified and well-trained professionals to cater to various needs of the agribusiness sector. This course has direct relevance to agricultural input industry, food processing industry, retail industry, development sector, E-commerce, agricultural commodity trading centre, agricultural warehousing sector and agricultural export houses.

  - School such as KSRM, School of Biotechnology, and School of Civil Engineering conduct capacity-building programs, student seminars, and awareness drives on topics like Soil Conservation, Sustainable Agriculture, and Waste Management.
  - The **Student-Led Sustainability Society** (https://sustainability.kiit.ac.in/student-led-society/) organizes interactive campaigns aligned with global environmental observances including Earth Day, Environment Day, and World Soil Day, ensuring youth participation in conservation efforts.

- **5th National Agribusiness Konclave 2024: Advancing Innovation and Sustainability in Agriculture**

The National Agribusiness Konclave was a premier event that brought together policymakers, researchers, industry leaders, agribusiness professionals, and students to deliberate on emerging challenges, opportunities, and innovations in the Agri-input and agri-food supply chain. The conclave aimed to promote farmers' welfare and chart a path toward agricultural prosperity by fostering collaboration between academia, industry, and government. It served as a vibrant platform for exchanging ideas on sustainable agribusiness practices, technological advancements, and policy reforms. The event also provided inquisitive minds with an excellent opportunity to engage with and be inspired by leading experts and practitioners in the field.

❖ **Empowering Farmers on Cluster Concepts and Government Scheme**

With the objective to bring awareness on the cluster concept and different government schemes among farmers, Kalinga Youth Association (Implementing Agency) with the support from Institute for Entrepreneurship Development (IED), Odisha (Nodal Agency) and KIIT-Technology Business Incubator (Technical Agency) organized an "Awareness Workshop on Cluster Concepts and Government Scheme" at Kukudakhandi Corn cluster, Ganjam district, Odisha in 2024. The Kukudakhandi Corn Cluster, established in the year 2020 is one of the progressive clusters under the SFURTI scheme of MoMSME, GoI. It aims to produce a range of value-added corn-based products, including corn flakes, corn chips, corn flour, corn syrup, and extruded snacks etc. The awareness programme was intended to familiarize farmers on cluster concept, the activities that will be conducted as part of SFURTI project, its long-term benefit to them and different government schemes available related to agriculture for farmers and request their collaboration and cooperation for the successful implementation of the project.

https://sfurti.kiitincubator.in/

❖ **Green Campus Initiatives:** KIIT University exemplifies sustainability through its vibrant green campus, designed to preserve biodiversity and promote eco-friendly living. The campus features extensive tree cover, landscaped gardens, rainwater harvesting systems, and efficient waste management practices. Regular plantation drives, energy-efficient infrastructure, and pollution-free mobility initiatives contribute to maintaining ecological balance. These efforts not only create a serene and healthy environment but also reflect KIIT's commitment to achieving SDG 15 by integrating sustainability into everyday campus life.

❖ Sustainably Farmed Food on Campus

KIIT's commitment to sustainable food systems and land ecosystems is reflected in its academic and policy engagements.

- **Promotion of Millets and Sustainable Agriculture at KIIT University**

KIIT University actively promotes **millets as a sustainable and nutritious food source** through its campus dining programs, academic initiatives, and collaborations with local farming communities. In alignment with the **Odisha Millet Mission**, these efforts enhance food security, support local farmers, and encourage climate-resilient agricultural practices.

- Rather than operating large-scale farms on campus, KIIT focuses on **research, education, and technological innovation** in sustainable agriculture. Through collaborations with global institutions such as the **University of Florida**, research on topics like **nitrogen management**, and participation in **national agricultural policy discussions**, KIIT advances knowledge and practices that contribute to environmentally responsible and economically viable food systems.

"KIIT University Koraput Cafe" refers to the Koraput Coffee & Millet Hub, located on the KIIT campus in Bhubaneswar, which serves Koraput coffee and millet-based snacks.

- KIIT University promotes sustainable food practices by encouraging responsible consumption, minimizing food waste, offering balanced and eco-friendly meal options, and supporting local and seasonal produce. The initiative focuses on raising awareness among students and staff about the environmental impact of their food choices, fostering habits such as portion control, mindful eating, and preference for plant-based options. Additionally, surplus edible food is redistributed through NGO partnerships, and organic waste is managed via composting and recycling programs to support a circular food system.



KIIT Hostel Mess Menu:

SPECIAL MENU

DAY	BREAKFAST	LUNCH	SNACKS	DINNER
MONDAY	DOSA,SAMBAR,GROUNDNUT CHUTNEY,FRENCH TOAST, HALF BOILED VEG(CUCUMBER,CARROT,CALIFLOWER),WATERMELON JUICE,CORN FLAKES,COLD MILK,OATS,TMC,BBJ,.	PANEER BRIYANI, AVARAKAI PORIYAL,RICE,MOCHA KARA KUZHAMBU,RASAM,PHULKA,BUTTER MILK,SPORUTS,DHAL ,ONION RAITHA.	BHEL POORI/VEG ROLL,TMC	PEPPER CHICKEN GRAVY WITH CAPSICUM,TRIYANGLE CHAPATHI,RICE,RASAM,CARROT PORIYAL,NOODLE SOUP,GREEN DHAL,GULAN JAMUN,BUTTER MILK.
TUESDAY	PAVV BAJJI,POORI,ALOO SUBJI, PINE APPLE KESARI,SCRAMBLED EGG,MUSKMELON JUICE,CORN FLAKES,COLD MILK,OATS,TMC,BBJ.	VEG FRIED RICE WITH SWEET CORN,GOBI MANCHURIYAN,RICE, RASAM,RAJMA, BINDI PORIYAL,CURD,PULKA,PAPAD, SPICY SPORTS.	WHITE SAUCE PASTA	PULKA,PANNER GRAVY,RICE,RASAM,MINT LEMON JUICE,BOTTLE GOURD PORIYAL,ICE CREAM,DHAL,MUSHROOM SOUP,CHAPPATHI, GREEN BANANA.
WEDNESDAY	IDLY,COCONUT CHUTNEY,SAMBAR,POHA,OMLET, PINE APPLE JUICE, VADA,TOMATO,CUCUMBER,CORN FLAKES,COLD MILK,OATS,TMC,BBJ.	CHICKEN 65,RICE,RASAM,RADDISH SAMBAR,BABY CORN FRY,PHULKA,BUTTER MILK,SPORUTS,ONION,LEMON.	CREAM CAKE	CHOLE BHATURE,SAI THUKADA,RICE,RASAM,YAM PORIYAL,BLACK DHAL,FRUITS SALAD,OIL CHAPATHI,TOMATO SOUP,
THRUSDAY	PANEER PAROTHA,SEMIYA UPPMA,BOILED EGG,HALF BOILED CUCUMBER CARROT WITH PEPPER, GRAPES JUICE,CORN FLAKES,COLD MILK,OATS,TMC,BBJ.	SAMBAR RICE,POTATO CHIPS,CURD,PAPPAD,MUSHROOM GRAVY,CHAPPATHI,RICE,RASAM, SPICY SPORUTS, PAYASAM,TOMATO,CARROT,FRYUMS.	SAN VEG	MATHI CHAPATHI,ALOO CAPSICUM SUBJJI,RICE,RASAM,KOVAKAI PORIYAL,GREEN PEAS MASALA,SWEET CORN SOUP,EGG GRAVY,PAPAYA,BADAM MILK.
FRIDAY	ONION UTTAPPAM,SAMBAR,TOMATO CHUTNEY,PONGAL,VADA, POMAGRANATE JUICE,SCRAMBLED EGG,CORN FLAKES,COLD MILK,OATS,TMC,BBJ,.	LEMON RICE,FRENCH FRIES,RICE,RASAM,SWEET PONGAL,MORE KUZHAMBU WITH VADA,CHAPATHI, MIX VEG CURRY,PAPPAD.	VEG PUFF/SAMOSA	CHETTINADU CHICKEN GRAVY,WHEAT PAROTHA,RICE,RASAM,PANEER BURJI,BUTTER MILK,ICE CREAM, WATER MELON.
SATURDAY	MIX VEG PAROTHA,CURD,OMELLET,IDIYAPPAM, COCONUT MILK,CHENNA GRAVY,GUVA JUICE,CORN FLAKES,COLD MILK,OATS,TMC,BBJ,.	CURD RICE WITH FRUITS,PULKA,CARROT BEANS PORIYAL,RICE,RASAM,SWEET CORN GRAVY,CURD,SPORUTS,PAPAD.	PANI POORI	PODI IDLY,SAMBAR,MINT CHUTNEY,RICE,RASAM,GOBI PORIYAL,LADDU,VEG SOUP,PINE APPLE.
SUNDAY	DOSA,VADA CURRY,SAMBAR,CHUTNEY,SEMIYA KICHDI,SCRAMBLED EGG,PINE APPLE JUICE ,CORN FLAKES,COLD MILK,OATS,TMC,BBJ,.	PAYASAM,RICE,RASAM,BUTTER MILK,SAMBAR,ALOO GREEN PEAS PORIYAL,JAIN GOBI SUBJI,PHULKA,MYSORE DHAL,LEMON JUICE.	SWEET CORN	CHICKEN BRIYANI,BRINJAL CURRY,ONION RAITHA,RICE,RASAM,VEG BRIYANI,LEMON JUICE,SPRING ONION SOUP,JELABI

Approved by, ... for March & April

❖ KIIT University Ecosystems' Biodiversity

KIIT University has developed extensive green infrastructure that enhances biodiversity and environmental quality. The campus houses Rose Gardens, Green Parks, Bird Sanctuary, Eco-art Sculpture Park and open spaces designed to provide ecological balance and aesthetic value.



Public Access to Green Spaces: KIIT's open and eco-friendly green spaces are freely accessible to the public. The campus includes lush green areas and a rose garden contributing to a serene environment.








KIIT Bird Sanctuary: The KIIT Bird Sanctuary within the university's green campus serves as a vibrant habitat for diverse avian species, promoting biodiversity conservation and ecological balance. It provides a safe refuge for resident and migratory birds while fostering environmental awareness among students and visitors. The sanctuary reflects KIIT's commitment to SDG 15 (Life on Land) by protecting terrestrial ecosystems, supporting wildlife habitats, and promoting sustainable coexistence between humans and nature.


- **KIIT Students Celebrate International Dog Day with a Compassionate Food Drive**

KIIT Animal and Environmental Welfare Society, KSAC works tirelessly to make a difference and to keep the environment safe for us as well as for our furry friends! The society believes in the motto "Let's change ourselves, not them". On International Dog Day, in 2024, KAEWS organized a successful food drive to feed stray dogs in and around the KIIT University campus. The event aimed to raise awareness about dog adoption, responsible care for strays, and the urgent need for animal rescue. The initiative witnessed the heartfelt participation of 70 compassionate students whose collective efforts made the drive a resounding success.






- **9th International Congress & Exhibition on Arsenic in the Environment (As2024) at KIIT**

With a global perspective, the 9th International Congress & Exhibition on Arsenic in the Environment took place at Kalinga Institute of Industrial Technology (KIIT) in Bhubaneswar, Odisha, India, from 20th to 24th October 2024. Known as As2024, the Congress was themed "Arsenic and Other Pollutants, Water Security and One Health under Global Climate Change Scenario" and was endorsed by the Executive Board of the International Society of Groundwater for Sustainable Development, Sweden.

❖ Sustainable Management of Land for Agriculture and Tourism

KIIT supports sustainable land-management practices through educational outreach that links agriculture, rural livelihoods, and ecosystem stewardship.

Public Access to Buildings: KIIT allows visitors to access culturally significant buildings and heritage sites on campus.

- **Sculpture Garden:** KIIT University's Sculpture Garden is an open-air art space displaying works by renowned and emerging artists, blending creativity, culture, and nature to inspire learning and artistic appreciation.

- **KIIT Souvenir Gallery:** The KIIT Souvenir Gallery showcases artworks, crafts, and memorabilia that capture the university's heritage, achievements, and creative spirit, offering visitors a glimpse into KIIT's cultural journey.

- **Public Access to Museums:** Museums, exhibition halls, and art galleries showcase artworks and artefacts for community viewing.

  The KIIT Museum is the **"Kirti Kalpa- The KIIT Art Gallery,"** a public contemporary art gallery located on the KIIT campus in Bhubaneswar. It features a variety of art, including paintings, stone and wooden sculptures, and tribal artifacts, and is open to the public daily from 9:00 AM to 6:00 PM, except for Sundays and public holidays.

  Exhibits: Paintings, abstract paintings, granite stone sculptures, wooden sculptures, art installations, artifacts, tribal artifacts, and ceramic sculptures.




- **Preserve Cultural Heritage:** KIIT documents and preserves regional folklore, traditions, and indigenous knowledge, safeguarding cultural heritage.
  - ✓ **Consultancy for Heritage Sites:** KIIT's School of Architecture and Planning has worked with the National Monuments Authority (NMA) on a project to develop heritage byelaws for centrally protected monuments in Odisha.
  - ✓ **Contributing to Preservation:** This involves site-level surveys, assessments, and recommendations to help preserve cultural and architectural significance of sites like the Konark Sun Temple.

- ✓ The serene **Jagannath Temple** located within KIIT's campus is open to the public, serving as both a spiritual center and a symbol of cultural heritage. The temple encourages harmony, with visitors and students alike finding solace and inspiration.

15.3 Supporting Land Ecosystems through Action

- ❖ **Sustainable Use, Conservation and Restoration of Land:** KIIT's Centre of Excellence for Sustainability & Equity formulates policy frameworks and institutional plans that promote sustainable land-use, habitat restoration and conservation of natural landscapes on and around campus. Through strategic guidelines addressing land-management, native habitat restoration and ecosystem resilience, the University supports the long-term integrity of terrestrial ecosystems.

  https://sustainability.kiit.ac.in/wp-content/uploads/2025/10/Restoration-of-Land_compressed.pdf

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Sustainable Use, Conservation, and Restoration of Land – Guidelines at KIIT

KIIT University is committed to advancing sustainability by integrating conservation principles into its campus operations and long-term development vision. While current efforts focus on sustainable practices such as Habitat Restoration, Water Conservation, Waste Management, and Biodiversity Protection, KIIT recognizes the need to further align with global frameworks like the IUCN in order to enhance its role in species and ecosystem conservation.

Current Conservation and Sustainability Practices:

- **Water Conservation**: Adoption of water-efficient fixtures, rainwater harvesting systems, and smart irrigation practices to reduce water consumption.
- **Waste Management**: Segregation, recycling, composting, and responsible e-waste disposal to minimize environmental impact.
- **Awareness and Engagement**: Mass campaigns promoting responsible water use, waste reduction, and sustainability awareness across the campus community.
- **Habitat Protection**: Sustainable land management and biodiversity-friendly planning to preserve and enhance campus ecosystems.
- **Green Infrastructure**: Integration of eco-friendly building materials, energy-efficient designs, and green roofs to minimize the ecological footprint of infrastructure development.

Biodiversity and Land Use Policy Framework:

- **Biodiversity Action Plan**: Development and implementation of a comprehensive plan to protect and restore natural habitats, improving ecological resilience within the campus.
- **Sustainable Land Management**: Promotion of organic gardening, restoration of native species, and environmentally sensitive landscaping practices.
- **Water-Efficient Landscaping**: Use of native and drought-tolerant plants to reduce water stress, combined with rainwater harvesting and advanced irrigation systems.
- **Waste Reduction in Land Use**: Recycling of construction and landscaping waste to reduce landfill impact and support circular resource use.

Expanding Towards IUCN Alignment:

- **Habitat Restoration for Threatened Species**: Extending current restoration work to include protection of species identified on the IUCN Red List.
- **Research and Monitoring**: Establishing partnerships with academic institutions, NGOs, and government bodies to monitor and study threatened species and their habitats.
- **Community Engagement**: Extending awareness programs to neighboring communities to promote species protection and sustainable land practices beyond the campus.
- **Policy Integration**: Embedding IUCN conservation goals into KIIT's sustainability and climate action plans, ensuring biodiversity is safeguarded in all planning and development processes.

Dean, QA

❖ **Monitoring IUCN and other Conservation Species:** In response, KIIT University prioritizes species recovery programs to prevent extinction and restore vulnerable populations. The university also engages students, faculty, and local communities in conservation activities, fostering collective environmental stewardship. The overarching goal is to enhance biodiversity and ensure the long-term sustainability of ecosystems, creating a thriving, green campus that coexists harmoniously with nature.

https://sustainability.kiit.ac.in/wp-content/uploads/2025/10/Monitoring-for-IUCN-Listed_compressed.pdf

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Guidelines and Monitoring for IUCN-Listed and Other Conservation Species

Background: The number of globally threatened species continues to rise due to increasing developmental pressures and human dependence on forests for livelihoods. In India alone:

- 150+ species of plants and animals are critically endangered.
- Nearly 500 additional species are classified as endangered, requiring urgent conservation action.

Major threats include:

- Destructive extraction of plant species from forests
- Spread of invasive species
- Impacts of climate change

In response, KIIT University prioritizes species recovery programs to prevent extinction and restore vulnerable populations.

Strategies for Species Restoration: Recovery of critically endangered species requires a coordinated set of actions:

- Protective Measures: Implement safeguards to halt further decline or extinction.
- Consultations & Mitigation: Assess and minimize adverse impacts of human activities.
- Habitat Restoration: Acquire, rehabilitate, and manage critical habitats.
- Field-Based Management: Monitor and manage endangered and threatened species in their natural ecosystems.

Scales of Recovery Efforts:

- Landscape level – for ecosystem-wide conservation.
- Species level – focused interventions for high-risk species.
- Population level – localized recovery within specific habitats.

Key Strategies:

- Individual Species Management – tailored conservation measures.
- Reintroduction – release into natural habitats to rebuild populations.
- Genetic Enrichment – strengthen diversity for resilience.
- Rehabilitation – relocation into suitable new habitats.

Recovery depends on systematically removing external threats so that species populations can stabilize, regenerate, and sustain themselves naturally—an approach that KIIT University is committed to integrating into its conservation guidelines.

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❖ **Local Biodiversity Included in Planning and Development:** KIIT incorporates biodiversity considerations into its site planning and development policies, ensuring local ecosystems are embedded in infrastructure and land-use decision-making. This approach ensures that ecosystem stewardship is not an after-thought but a core dimension of campus growth and community outreach.

- **Sustainable Construction [+Ve Footprints]:** The KIIT School of Architecture and Planning, in collaboration with UltraTech Cement, hosted the 2nd ADDA Lecture Series on "Sustainable Construction: +Ve Footprints." In 2024. The event featured key insights from Er. Satyaki Sarkar, Prof. S.S Ray, Er. Pradip Kumar Jha, and Dr. Prasanna Kumar Acharya on sustainable architecture, green cement, and advanced cement technologies. Top students received the Pratibha Nirman Award, while Prof. N.C. Maharana and Prof. Chandana Parida were honoured with the Dronacharya Award 2024. The event underscored KIIT's commitment to bridging academia and industry for sustainable innovation.

- KIIT DU's new **School of Computer Science and Engineering in KIIT Campus 25** features a pond as part of its design, local biodiversity faces risks from the surrounding construction activity. Mitigation efforts include KIIT's "Green Campus" initiatives, which involve mass tree planting, waste management, and rainwater harvesting.

✓ **KIIT Campus 25 Pond's role in Local Biodiversity**

Despite the construction, the campus pond can still serve as a critical feature for local wildlife if properly managed:

- **Micro-habitat:** The pond provides a habitat for various aquatic species like fish, insects, amphibians, and reptiles.
- **Water source:** It acts as a vital water source for local animals, particularly birds and insects.
- **Vegetative corridor:** The green spaces and vegetation around the pond can serve as a vital link, or corridor, connecting different habitats for animals.

❖ **Alien Species Impact Reduction:** As part of its land-ecosystem policy agenda, KIIT emphasises the adoption of management practices that reduce the impact of invasive or alien species, promote native vegetation restoration and maintain ecological balance. By embedding such policies within institutional planning, the University contributes to protecting ecosystem integrity.

https://sustainability.kiit.ac.in/wp-content/uploads/2025/10/Managing-IAS-and-Promoting-Biodiversity_compressed.pdf

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Managing Invasive Alien Species and Promoting Biodiversity at KIIT University

KIIT University has established comprehensive guidelines to address Invasive Alien Species (IAS) on campus. These guidelines set clear criteria for identifying IAS and outline effective measures to control and reduce their impact. The University supports these efforts through Sustainable Land Management, Restoration of Native Plant Species, and active participation of the campus community in Conservation Activities. By engaging Students, Faculty, Staff, Service Providers, Vendors, and Visitors, KIIT fosters a culture of collective responsibility for Biodiversity Protection. Through its green initiatives and integration of sustainable practices into campus operations, the University demonstrates a strong commitment to minimizing environmental impacts and maintaining ecological balance.

KIIT's Efforts to Control Invasive Alien Species:

- **Restoration of Native Habitats:** Strengthening native plant communities to build resilient ecosystems resistant to invasive species.
- **Minimizing Habitat Disturbance:** Promoting sustainable land management and conservation to limit opportunities for invasive species.
- **Education & Awareness:** Engaging students, staff, and stakeholders through citizen science and conservation programs to identify, report, and manage invasive species.

Guideline Observance:

1. Develop a methodology to identify invasive alien species (IAS) on campus.
2. An annual IAS listing will be maintained, supported by a dedicated research committee to study their impacts.
3. The committee will recommend strategies for impact reduction and will include schools with relevant expertise.
4. Student clubs and associations will be formed to raise awareness on IAS identification and impacts.

KIIT University is committed to implementing long-term strategies to manage Invasive Alien Species (IAS), minimizing their impact on campus biodiversity. This guideline will be reviewed annually by appointed University Members, incorporating feedback from Stakeholders, Students, and Faculty. Updates will be made as needed to align with Government Regulations, Technological Advancements, and Institutional Requirements.

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Deemed to be University Quality Assurance Cell

❖ **Collaboration for Shared Land Ecosystems**

KIIT fosters collaborations for shared land ecosystems through academic programs, research initiatives, and community partnerships that align with Sustainable Development Goals (SDGs). These collaborations span local, national, and international scales and involve various stakeholders to promote sustainable land management and biodiversity.

Ongoing Projects and Consultancy:

https://kiit.ac.in/ongoing-projects/

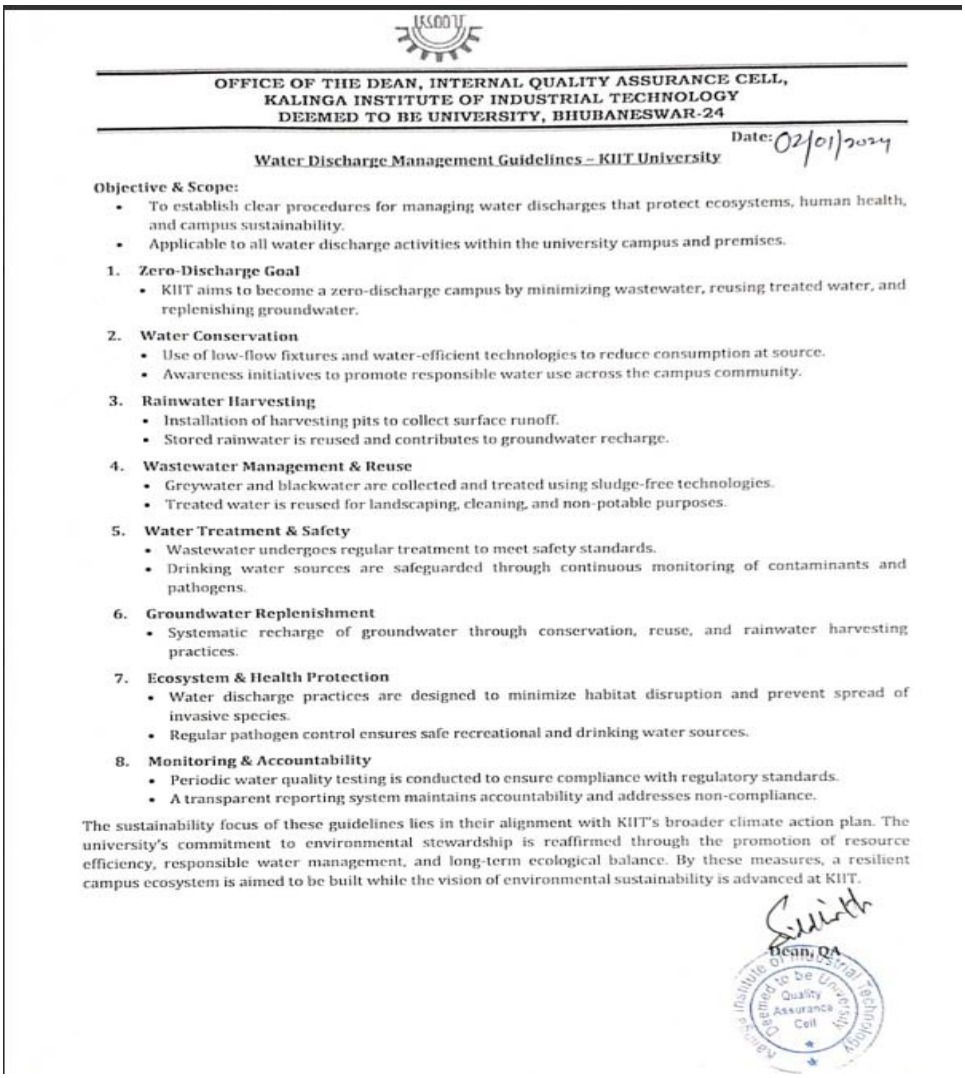
https://biotech.kiit.ac.in/collaboration/

15.4 Land Sensitive Waste Disposal

KIIT follows land-sensitive waste disposal practices to minimize environmental impact and protect soil health. Waste is carefully segregated at the source, with biodegradable waste composted and non-biodegradable materials recycled or safely processed. Hazardous waste is managed as per regulatory standards to prevent contamination. These measures ensure sustainable land use, promote resource recovery, and support a cleaner, greener campus environment.

- **Water Discharge Guidelines & Standards:** KIIT has established processes for treating wastewater and managing liquid waste streams to ensure that discharge affects surrounding ecosystems minimally. The University reports that treated wastewater is used for irrigation, gardening and groundwater recharge, aligning with standard water-quality and reuse practices.

  https://sustainability.kiit.ac.in/wp-content/uploads/2025/10/Water-Discharge-Management-Guidelines_.pdf



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Water Discharge Management Guidelines – KIIT University

Objective & Scope:

- To establish clear procedures for managing water discharges that protect ecosystems, human health, and campus sustainability.
- Applicable to all water discharge activities within the university campus and premises.

1. **Zero-Discharge Goal**
   - KIIT aims to become a zero-discharge campus by minimizing wastewater, reusing treated water, and replenishing groundwater.
2. **Water Conservation**
   - Use of low-flow fixtures and water-efficient technologies to reduce consumption at source.
   - Awareness initiatives to promote responsible water use across the campus community.
3. **Rainwater Harvesting**
   - Installation of harvesting pits to collect surface runoff.
   - Stored rainwater is reused and contributes to groundwater recharge.
4. **Wastewater Management & Reuse**
   - Greywater and blackwater are collected and treated using sludge-free technologies.
   - Treated water is reused for landscaping, cleaning, and non-potable purposes.
5. **Water Treatment & Safety**
   - Wastewater undergoes regular treatment to meet safety standards.
   - Drinking water sources are safeguarded through continuous monitoring of contaminants and pathogens.
6. **Groundwater Replenishment**
   - Systematic recharge of groundwater through conservation, reuse, and rainwater harvesting practices.
7. **Ecosystem & Health Protection**
   - Water discharge practices are designed to minimize habitat disruption and prevent spread of invasive species.
   - Regular pathogen control ensures safe recreational and drinking water sources.
8. **Monitoring & Accountability**
   - Periodic water quality testing is conducted to ensure compliance with regulatory standards.
   - A transparent reporting system maintains accountability and addresses non-compliance.

The sustainability focus of these guidelines lies in their alignment with KIIT's broader climate action plan. The university's commitment to environmental stewardship is reaffirmed through the promotion of resource efficiency, responsible water management, and long-term ecological balance. By these measures, a resilient campus ecosystem is aimed to be built while the vision of environmental sustainability is advanced at KIIT.

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Quality Assurance Cell

i. **Judicious Management and conservation of water resource.**

KIIT-DU has adopted a rooftop rainwater-based groundwater recharge system. Groundwater recharging is an excellent rainwater-capturing process. Any quantity of rainwater may be channelized to replenish the groundwater level of the surrounding areas. The average water recharged annually from the rooftop at KIIT-DU is 10980 Cu.

ii. Bore-well/Open well recharge

Rainwater collected at the rooftop in the various buildings is redirected through PVC pipes and dynamic rainwater filters to defunct and functioning borewells.

Ground Water Recharge Pit – 1

Ground Water Recharge Pit – 2

RAIN WATER HARVESTING

Here are the details of building which are equipped with rain water harvesting.

Sl no	Campus	Places	SQFT
1	11	GH QC-VI	58307
2	11	Kiit school of chemical	11925
3	15	Kp-VI(A & B)	110000
4	15	Kp-VI©	571592
5	16	BH	84600
6	16	GH	98600
7	18	BH	37004
8	18	Academic Block	34262
		T O T A L -	10, 06,290 sq. ft

Rainwater Harvesting Equipment (Location – 1)

Rainwater Harvesting Equipment (Location – 2)

Rainwater Harvesting Equipment (Location – 3)

iii. Waste Water Management

Waste water from various academic buildings, hostels, and kitchens is treated in three Sewage Treatment Plant (STP), with a total capacity of 2750 Kilometres per day (KLD), meaning 2750000 litres per day. The treated water is pumped back for watering the plants on the various campuses.

Additionally, each campus and block has a successful liquid waste treatment process. To reduce water waste, liquid trash from campuses or buildings that employ liquid chemicals is collected separately as organic and inorganic wastes and handled accordingly. The Institute has an adequate sewage system that allows for the collection and treatment of waste water. Every month, the sewage system is checked to make sure no waste water is building up unintentionally. The cleaned water is used for plantation irrigation, gardening, and groundwater recharge.

KIIT has established Water Knowledge Centers in the University and also in different parts of the state. Furthermore, the University has established one Centre of Excellence for Water Conservation since 2009 and the faculties are working in the following areas: Hydro-Environment, Groundwater Hydrology, Ports and Coastal Engineering, Water Management and Hydro Informatics, River Hydraulics, Water and Waste Water, Geo-spatial techniques, Soft Computing Techniques, Modeling Techniques etc.

- **Plastic Waste Reduction:** The University supports a plastic-reduction policy through student-led campaigns and institutional measures such as waste-segregation systems and alternatives to single-use plastics. An example: a "No Plastic" campaign by KIIT students aimed at local vendors and awareness creation.

  https://sustainability.kiit.ac.in/wp-content/uploads/2025/10/Action-Framework-for-Plastic-Reduction_compressed.pdf

OFFICE OF THE DEAN, INTERNAL QUALITY ASSURANCE CELL,
KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY
DEEMED TO BE UNIVERSITY, BHUBANESWAR-24

Date: 02/01/2024

KIIT University Action Framework for Plastic Reduction

KIIT University has revised its waste management strategy in accordance with global best practices, with a strong focus on eliminating plastic pollution and promoting a sustainable campus environment.

1. Organic Waste Management
- Organic and inorganic wastes are carefully segregated at their source every day and stored separately.
- Organic waste is processed through two anaerobic digesters operating in tandem, converting waste into compost efficiently while ensuring continuous and reliable treatment.
- Dedicated anaerobic digesters also manage food waste generated in hostel facilities, promoting effective waste recycling.

2. Plastic Reduction Strategies
- KIIT conducts regular awareness programs and interactive sessions to educate students, faculty, and staff on the harmful impacts of single-use plastics, encouraging the adoption of sustainable alternatives.
- Cafeterias, Canteens, and Dining Halls are encouraged to adopt stainless steel utensils, reducing plastic waste and fostering a culture of reuse.
- Conferences, Seminars, and Official campus events strictly adhere to green protocols by promoting the use of cloth bags and reusable stainless-steel tumblers.

3. Green Campus Development
- Sculpture Garden, Rose Garden, and several Green Parks have been developed across the KIIT campus, creating well-maintained natural spaces that promote relaxation, enhance biodiversity, and strengthen the campus commitment to KIIT Green.
- KIIT is continuously developing additional green spaces across its campus to enrich biodiversity, promote ecological balance, and foster a healthier, eco-friendly learning environment.

4. Water Purification Infrastructure
- Installed water purifiers on every floor of academic and administrative buildings, in hostels, and near green park areas to provide easy access to safe drinking water while reducing dependence on plastic bottles and minimizing plastic waste.

5. Engagement of National Service Scheme (NSS)
- NSS volunteers actively monitor the implementation of "KIIT Green" initiatives on a daily basis, ensuring sustainable practices are followed and promoting environmental awareness among students and staff.

This action plan reflects KIIT University's strong commitment to sustainability, combining technological solutions, community involvement, and policy-driven approaches to significantly reduce plastic waste and promote eco-conscious behaviour across campus.

Dean QA
Kalinga Institute of Industrial Technology Deemed to be University Quality Assurance Cell

- **Hazardous Waste Disposal:** KIIT has implemented waste-management systems that include proper handling of hazardous chemical wastes, e-waste, and biomedical waste. The institution states that liquid wastes from buildings with chemical use are separated and treated, and there are documented procedures for disposal and recycling of hazardous materials.

  https://sustainability.kiit.ac.in/climate-plan/

Different types of waste generated in the KIIT University and their disposal

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Direct selling
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Direct selling
Solid wastes	Damaged furniture, paper waste, paper plates, food wastes	Reuse after maintenance energy conversion
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Direct selling
Sanitary Napkin		Napkin Incinerators

Food Waste Management System at KIIT University

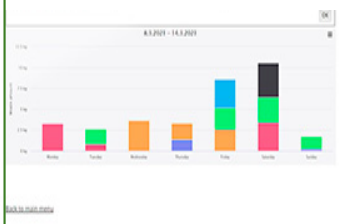
Tracking and Monitoring: Food Consumption and Waste Generation

Biometric / RFID / IoT Based Technology: Student Attendance and Meal Selections

Collection: Food Waste

Surplus Food: To NGOs

Documentation: Measured & Documented on Software



Disposal

Vegetable Waste

Dry Waste

Food Waste

Adoption of Environmentally Sustainable Practices

- **Organic Waste Composting Plant for Sustainable Horticulture Development**
- **Transported to the piggery farm located near the campus**
- **Organic waste is fed into the Biogas Plant**

Liquid Waste Treatment Plants **Use of Sensors for Overhead Water Tanks**

The University already has 4x500 kg/day capacity Bio-gas plant installed which converts organic waste into 600 cu.cm of bio-gas per day, which is used for cooking and heating purposes at the hostels. Our plan is to double our capacity by 2030.

Figure 10. Organic waste based Bio-gas generation plants placed at the campus.

- **KIIT- KSAC, NSS and KIIT Today Routinely Highlight Environmental Drives That Engage Thousands of Students in Tree Plantation, Campus Clean-Ups, and Eco-Restoration Activities.**

https://news.kiit.ac.in/

https://ksac.kiit.ac.in/latest-news/

https://news.kiit.ac.in/category/nss/

ART OF GIVING

Giving education to the deprived is like giving sight to the blind *-Achyuta Samanta*

PHILOSOPHY OF LIFE

'Art of Giving' is a not-for-profit initiative for spreading, supporting and promoting the practice of giving around the world. It is based on the philosophy of life of **Prof. Achyuta Samanta**, who has struggled through an experience of poverty, hunger, humiliation in receiving and pleasure in giving from his childhood. **He gives the credit of all his success to 'Art of Giving' and has been working relentlessly to achieve zero poverty, zero hunger and zero illiteracy since 1987.**

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