JSS ACADEMY OF HIGHER EDUCATION & RESEARCH
(DEEMED TO BE UNIVERSITY) MYSURU

JSS Academy of Higher Education & Research

(Deemed to be University) (Accredited A+ Grade by NAAC)

COMPENDIUM ON SDG-13

CLIMATE ACTION

Compendium of Activities in Achieving UN Sustainable Development Goals

2024-25

JSSMC

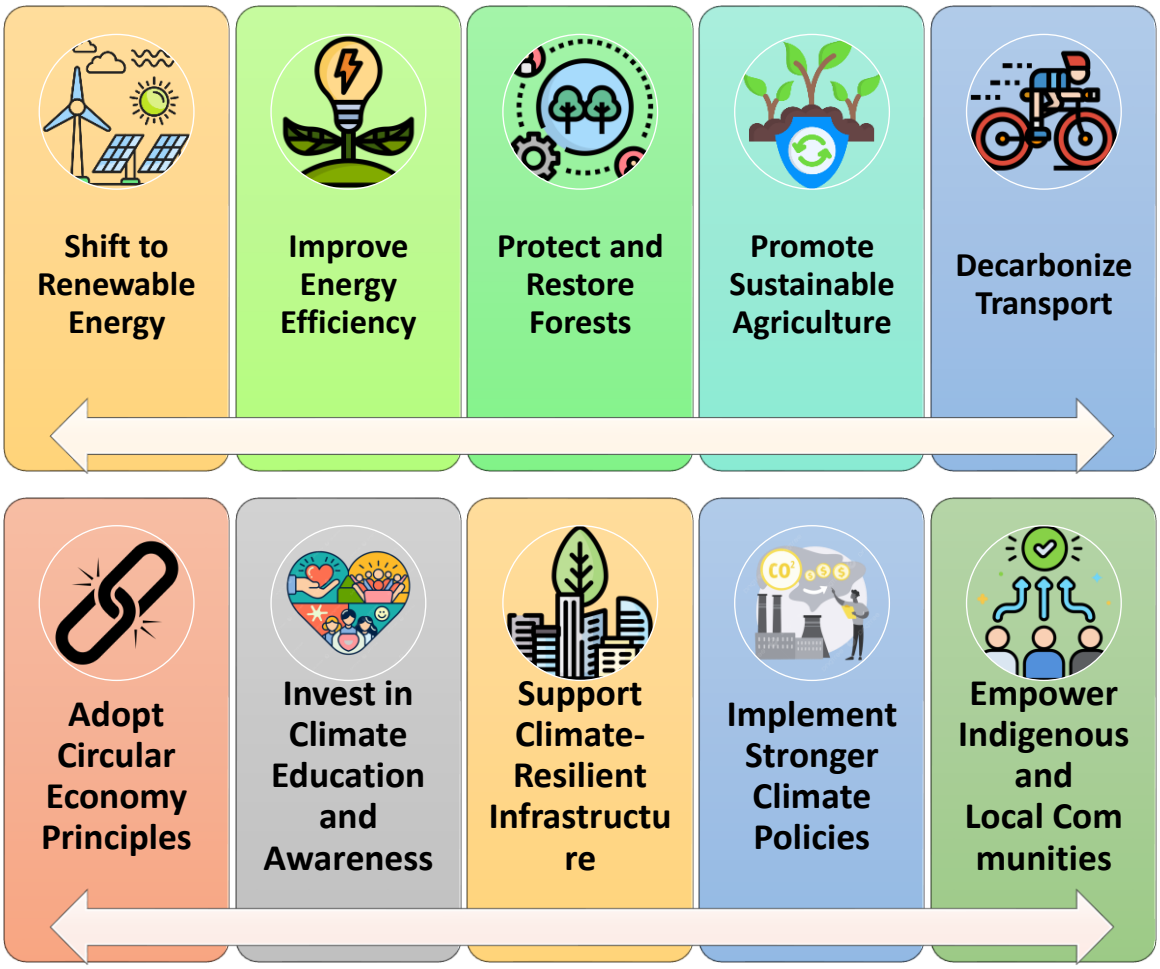
"The climate crisis is not a political issue, it is a moral and spiritual challenge to all of humanity."- Al Gore (USA, Former Vice President, Nobel Laureate)

"The climate crisis is not a distant threat — it's happening now. We must act with courage and urgency." - Greta Thunberg (climate activist, 21st century)

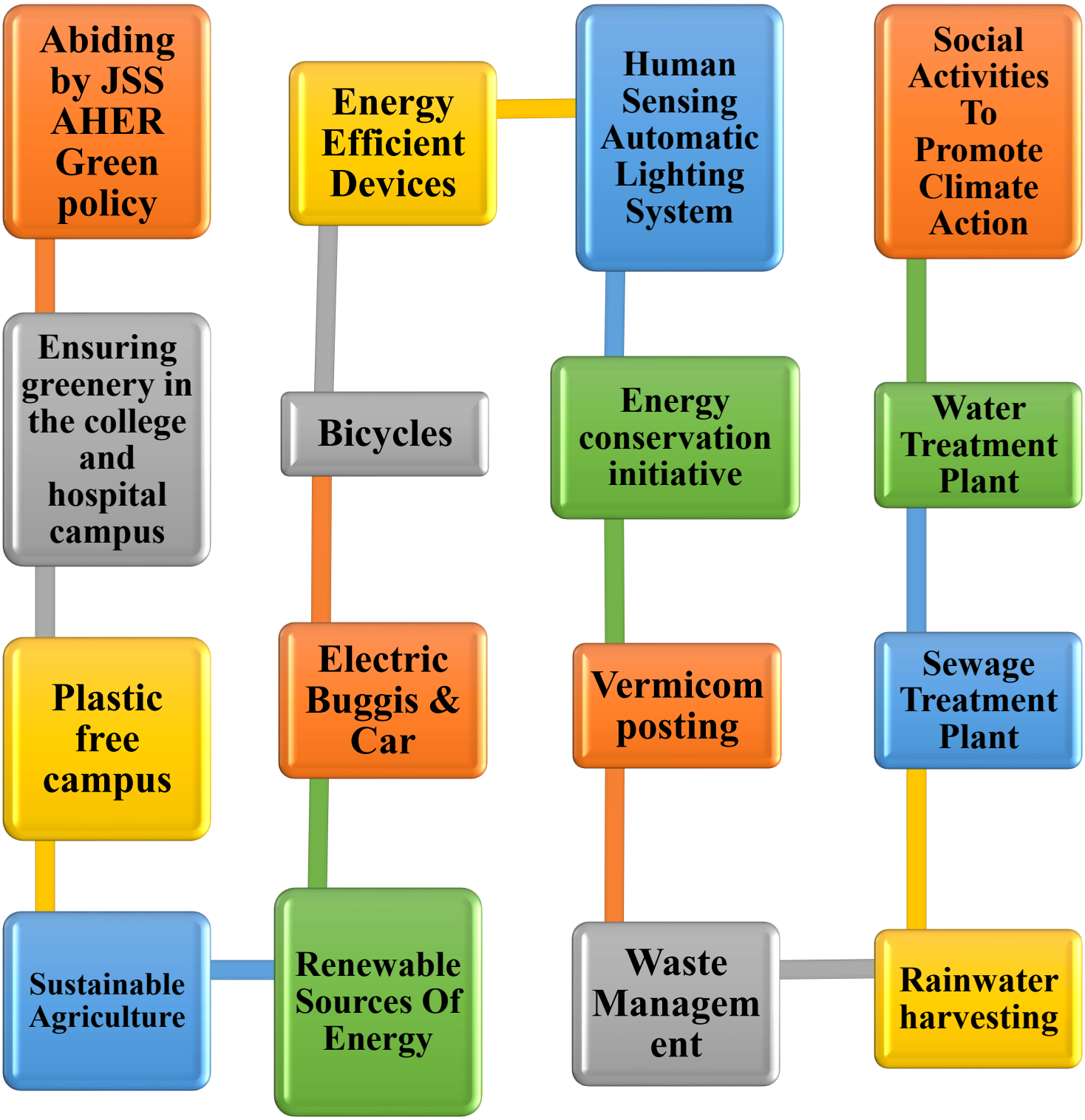
CLIMATE CHANGE AND THE GROWING GLOBAL CRISIS

Climate change is one of the most urgent challenges of our time, driven by human activities such as burning fossil fuels, deforestation, and industrial pollution. Global temperatures have risen by about 1.2°C since the late 19th century, with 2020–2024 being the warmest years on record. Its impacts are already evident — extreme heatwaves, erratic rainfall, floods, droughts, and rapid polar ice melt. In 2023 alone, climate-related disasters displaced over 43 million people. The Arctic is warming nearly four times faster than the global average, causing sea-level rise that endangers coastal regions. These changes threaten food security, public health, and economic stability, hitting vulnerable communities hardest, especially in the Global South, which contributes less than 10% of global emissions. Despite over 150 nations pledging net-zero targets, progress is slow. Climate change is a present-day crisis requiring urgent, united, and sustained global action.

KEY SOLUTIONS TO COMBAT CLIMATE CHANGE



A GLANCE AT EFFORTS BY JSSAHER



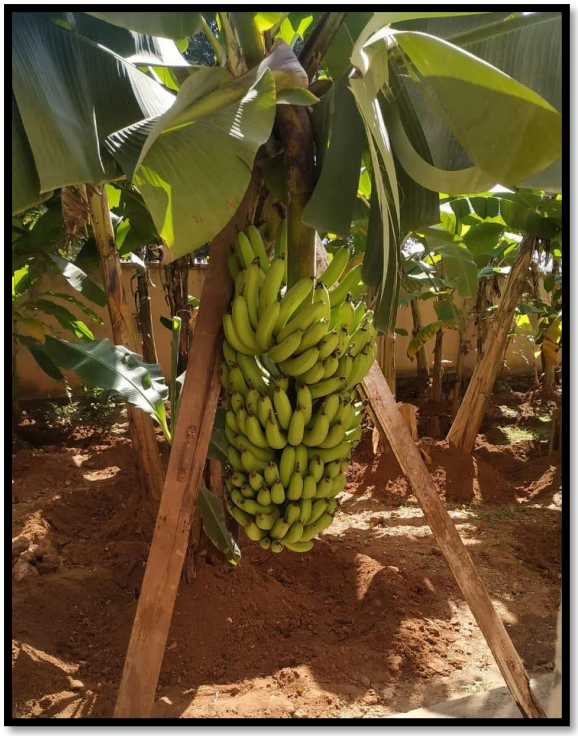
GREEN POLICY OF JSSAHER

JSS Academy of Higher Education and Research (JSS AHER) is committed to promoting sustainability and environmental responsibility across all its campuses. The following measures are strictly implemented as part of its Green Policy:

- **Clean, Green, and Smart Campus Maintenance:** Systematic segregation and disposal of waste through authorized agencies.
- **Safe Waste Disposal:** Biomedical, chemical, and e-waste are disposed of strictly in accordance with the Karnataka State Pollution Control Board (KSPCB) guidelines.
- **Energy Conservation:** Adoption of energy-efficient practices such as the use of CFL/LED lighting, solar water heaters, air source heat pumps in hostels, motion sensor-controlled lighting in corridors, and signage encouraging responsible electricity use.
- **Plastic-Free Environment:** All campuses maintain a strict no-plastic policy.
- **Water Conservation:** Implementation of rainwater harvesting systems and wastewater treatment facilities.
- **Minimizing Paper Usage:** Emphasis on reducing paper-based communication to conserve resources.
- **Awareness Campaigns:** Regular organization of Swachh Bharat Abhiyan activities to foster environmental awareness and responsibility among students.
- **Architectural Design:** Buildings are designed to maximize the use of natural lighting.

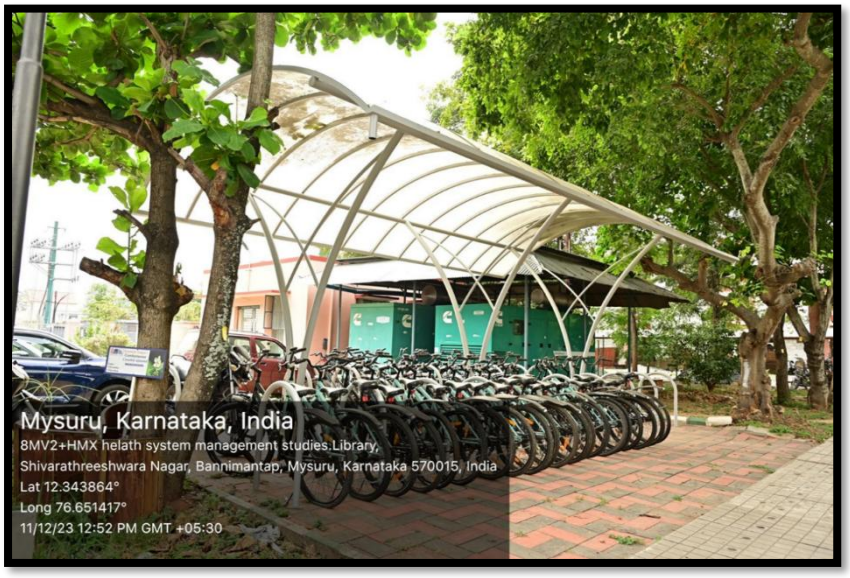
GREEN CAMPUS

PLASTIC FREE CAMPUS



SUSTAINABLE AGRICULTURE (Kitchen Garden in the hostel campus)

Solar panels

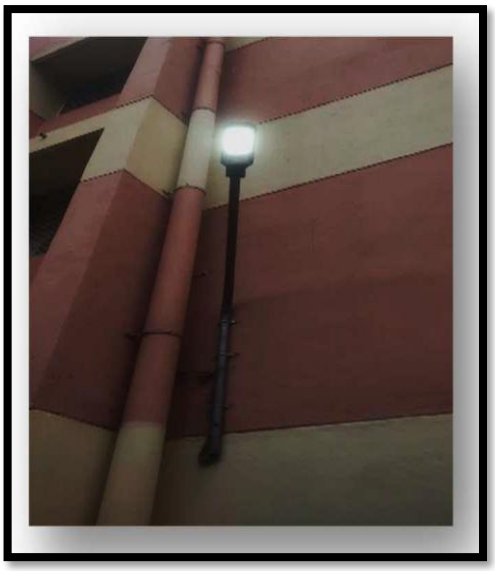


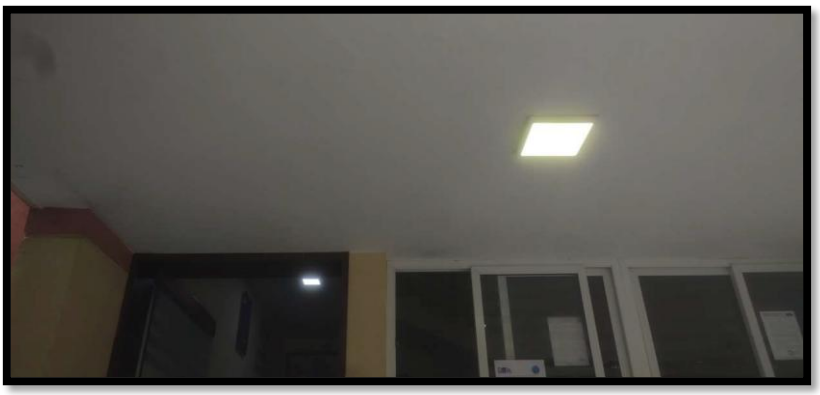
BICYCLES

ELECTRIC BUGGIES & CAR

ENERGY EFFICIENT DEVICES

- Our implementation includes solar panels and LED as they reduce energy consumption to a great extent.
- We have provided pooled-transport systems to students to travel from college to hospital or to other campus to ensure the less use of petroleum fuels.
- Energy saving ceiling fans





HUMAN SENSING AUTOMATIC LIGHTING SYSTEM

A human sensing automatic lighting system uses sensors to detect the presence of people in a room or area. These sensors can be motion detectors, infrared sensors, or cameras. When the system senses a person, it automatically turns on the lights, providing illumination without manual intervention. The system enhances convenience and energy efficiency by ensuring lights are only on when needed. It can be particularly useful in offices, homes, or public spaces, helping reduce energy consumption and costs. Additionally, it can be integrated with smart home systems for greater control and customization.

ENERGY CONSERVATION INITIATIVE

JSS Medical College, Mysuru, promotes environmental sustainability through active energy conservation practices. One such initiative includes prominently placed signboards reminding students, faculty, and staff to switch off lights and fans when not in use. This simple but powerful message encourages mindful electricity usage across the campus. By fostering a culture of energy responsibility, the institution contributes to reducing its carbon footprint and supports the broader mission of creating a green and smart campus

VERMICOMPOSTING

Vermicomposting is a simple biotechnological process of composting, in which certain species of earthworms are used to enhance the process of waste conversion and produce a better end product.

A team started the project Vermicomposting in JSS AHER campus. The prior knowledge and the assistance for the vermicomposting were received by the direction of scientists from the ICAR JSS KVK, Mysore.

RAINWATER HARVESTING

Rainwater harvesting collection tank of 30,000 Litres storage capacity. 10 no's of Groundwater & bore well recharge pits and infiltration tank of about 15,000 Litres capacity. STP of 25 KLD capacity by using SWR technology has been installed for treating sewage & kitchen wastewater of PG Guest Hostel & the treated water is used for the gardening area developed surrounding the building. One tank of 10,000 litres capacity is made for reuse of RO rejected water for gardening Purposes Water sprinklers are in place.

WASTE MANAGEMENT

I. Biomedical Waste Management

Biomedical waste at JSS Hospital, Medical College, and associated health centres is managed as per the Biomedical Waste Management Rules, 2016.

The waste generated is processed through specific steps before final treatment.

Guidelines and instructions are also displayed in the local (regional) language.

II. General Waste

• Dry and wet waste segregation and collection are systematically followed.

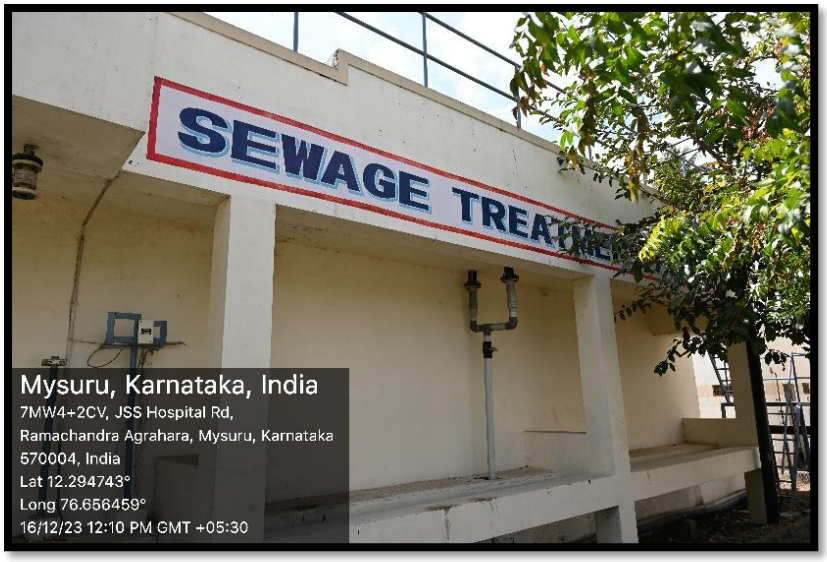
• Color-coded bins are installed throughout the campus.

• Municipal lorries regularly collect waste from all designated areas.

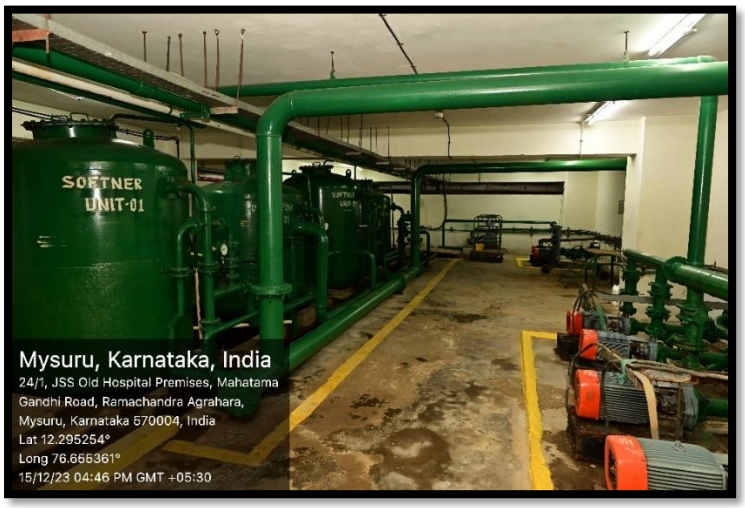
• Swachh Sarvekshan awareness posters are displayed at various points in the hospital, college, and hostel areas.

III. Sanitary Napkin Disposal: Appropriate provisions are made for the safe and hygienic disposal of sanitary napkins.

Sewage Trearment Plant



WATER TREATMENT PLANT (HOSPITAL)



IRCLASS
SYSTEMS AND SOLUTIONS PRIVATE LIMITED

CERTIFICATE OF APPROVAL

Issued by Indian Register Quality Systems
(A Division of IRCLASS Systems and Solutions Private Limited)

This is to certify that the Energy Management Systems of

Organisation: JSS Academy of Higher Education & Research

Address: Site 1 -
JSS Medical Institutions Campus,
Sri Shivarathreeshwara Nagara,
Mysuru - 570 015, Karnataka, India

has been assessed and found conforming to the following requirement

Standard: ISO 50001:2018

Scope: Providing Undergraduate and Post Graduate Education In Medicine, Dentistry, Pharmacy and Life Sciences

Certificate No.: IRQS/241000699- A

Initial Certification Date: 18/04/2024

Current Date of Granting: 18/04/2024

Expiry Date: 17/04/2027

Shashi Nath Mishra
Head IRQS

This approval is subject to continued satisfactory maintenance of the Energy Management Systems of the organization to the above standard which will be monitored by IRQS. The use of the Accreditation Mark indicates accreditation with respect to activities covered by the certificate with accreditation no. EN 001. Condition Overleaf

Head Office: 52A, Adi Shankaracharya Marg, Opp.Powai Lake, Powai, Mumbai - 400 072, India.

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Address: Site-1: JSS Medical College,
JSS Medical Institutions Campus,
Sri Shivarathreeshwara Nagara,
Mysuru - 570 015, Karnataka,
India

has been assessed and found conforming to the following requirement

Standard: ISO 14001:2015

Scope: Providing Undergraduate And Post Graduate Education In Medicine

Certificate No.: IRQS/240300698/A

Initial Certification Date: 16/04/2024

Current Date of Granting: 16/04/2024

Expiry Date: 15/04/2027

Shashi Nath Mishra
Head IRQS

This approval is subject to continued satisfactory maintenance of the Environmental Management Systems of the organization to the above standard which will be monitored by IRQS. The use of the Accreditation Mark indicates accreditation with respect to activities covered by the certificate with accreditation no. EM 005. Condition Overleaf

Head Office: 52A, Adi Shankaracharya Marg, Opp.Powai Lake, Powai, Mumbai - 400 072, India.

JSS Medical College campus has successfully been certified for ISO 50001:2018 (Energy Management systems) and ISO 14001:2015 (Environmental Management systems) on 18-04-2024

RESEARCH PROJECTS – ONGOING (EXTERNAL)

Sl No	Title of the project	Principal Investigator	Funding agency	Amount sanctioned	Duration
1	Phytoremediation of indoor air pollution in urban homes to improve air quality using innovative-sustainable technology based-plant wall air filtration system	Dr. Rajesh Kumar T Professor of Biochemistry	ICMR	40,31,649.00	3 Yrs.
2	Adverse effect of outdoor and indoor air pollution on respiratory and vascular function among adolescents	Dr.Mahesh P A	Swedish Heart Lung foundation, Karolinska Institute, Sweden	15 Lakhs Received	21-03-2022 to 02-06-2023
3	Development of Millet based dietary fiber for protection of allergic asthma by modulating gut microbiome derived short chain fatty acids	Dr Kiran (PI), School of Life Sciences	ICMR	40,00,000.00	3 Yrs
4	Epidemiology of chemical hazards among workers in different spectrum of agriculture activities of Southern India: a community based exploratory survey	PI: Dr Nayanabai Shabadi Assistant Professor, Department of Community Medicine	ICMR	36,96,817.00	3 Yrs.
5	Longitudinal effects of Air Pollution Exposures on Lung growth and development of biomarker of lung function deficit in Urban Children	Dr. Rajesh Kumar T. & Dr.P A Mahesh	India Alliance DBT-Welcome	3,50,00,000.00	5 Yrs.

6	Molecular patho-mechanism of biomass smoke induced chronic obstructive pulmonary disease among women: Population based- and in vitro exposure studies	Dr.Mahesh P A	Swedish Heart Lung foundation, Karolinska Institute, Sweden	80,53,000.00	01-07-2019 to 31-12-2022
7	Understanding the role of lung micro biome in biomass smoke exposure related chronic obstructive pulmonary disease	Dr.Mahesh P A	Swedish research council, Karolinska Institute, Sweden	54,38,000.00	01-01-2021 to 31-12-2022
8	Adverse effect of outdoor and indoor air pollution on respiratory and vascular function among adolescents	Dr.Mahesh P A	Swedish Heart Lung foundation, Karolinska Institute, Sweden	15,00,000.00	21-03-2022 to 02-06-2023

FACULTY DEVELOPMENT PROGRAMME [FDP] ATTENDED BY FACULTY

Sl.No.	Name & Designation	Title of the programme	Date, Name of the Institution & Place	Certificate & Photo
1	Dr Anil S Bilimale	Delivered a session on How to line healthier and longer amidst climate change in the National Seminar on Environmental challenges and resilience strategies by University of Mysore	University of Mysore Offline 23.12.2024	

PUBLICATIONS

Sl no.	Title	IF	Indexed	Department	Article Type
1	Simuzar S Mammadova, Himansu Baijnath, Antonia Neidilê Ribeiro Munhoz, Gholamreza Abdi, Ravindra B Malabadi, Kiran P Kolkar, Raju K Chalannavar, Sadiya Mr, Tea(Camellia sinensis) leaves accumulate higher levels of Aluminum: Potential Health Risk- Alzheimer's disease(AD): An updated review of evidence, GSC Advanced Research and Reviews, 2024 Jul;20(1):313-337.		Google Scholar	BioChemistry	Journal
2	Sham Kishore K, Dr Smitha Rani, Dr Gurupadayya Bm, Dr Balaraj B M, Estimation Of Dimethoate Residue On The Surface Of Mangoes, Journal of Forensic Medicine and Toxicology, 2024 Aug;41(1):22-25.		Scopus/ Google Scholar	Forensic Medicine	Journal

3	H K Ranjini, K Manju, Baker Syed, Raj S Niranjan, Akhila, Prasad M N Nagendra, K P Kripali, Apeksha V, Vinayak Hegde Shreya, H Shayista, P Ashwini, Plant-endosymbiont mediated synthesis of silver nanobactericides with bioautography-guided partial purification of novel 1,2-benzenedicarboxylic acid, decyl octyl ester, Plant Nano Biology, 2024 Aug;9:100089.		Scopus/ Web Of Science/ Google Scholar	Microbiology	Journal
4	Ashwaghosha Parthasarathi, Tina George, Muruga Bharathy Kalimuth, Sudhindra Jayasimha, Mohammed Kaleem Ullah, Rutuja Patil, Ajay Nair, Urvi Pai, Esther Inbarani, Anil G Jacob, V J Chandy, Oommen John, Thambu David Sudarsanam, Padukudru Anand , Exploring the potential of telemedicine for improved primary healthcare in India: a comprehensive review, The Lancet Regional Health - Southeast Asia, 2024 Aug;27:100431-100431.	5	Scopus/ Web Of Science/ Google Scholar	BioChemistry., TB and Respiratory Medicine	Journal
5	Gopika Indu, Shiva Nagendra S M, Padukudru Anand Mahesh, Indoor air pollution in rural south Indian kitchens from biomass-fuel usage and the predicted lung deposition in women, Atmospheric Environment, 2024 Nov;336:120732-120732.	4.2	Scopus/ Web Of Science/ Google Scholar	TB and Respiratory Medicine	Journal
6	Joytri Dutta, Sabita Singh, Mandya V Greeshma, Mahesh P A, Ulaganathan Mabalirajan, Diagnostic Challenges and Pathogenetic Differences in Biomass-Smoke-Induced versus Tobacco-Smoke-Induced COPD: A Comparative Review, Diagnostics, 2024 Sep;14(19):2154.	3	Scopus/ Web Of Science/ Google Scholar	TB and Respiratory Medicine	Journal
7	Mahesh P A, Praveena A S, Mandya V Greeshma, Vikram Patil, Jayaraj B S, Kjell Larsson, Lena Palmberg, Swapna Upadhyay, Koustav Ganguly, Respiratory Outcomes Among Women Using Biomass Cooking Fuel in India: Evidence Generation for Policy Action, SSRN, 2024 Sep.	3.4	Scopus/ Google Scholar	TB and Respiratory Medicine., Not Available., Radiology	PrePrint
8	Dommasandra Rajanna Y, Kulkarni P, Rajaram P, Basheer S, Shabadi N, Assessment of indoor air pollution in causing respiratory illness among women residing in rural areas of Mysuru, Journal of Air Pollution and Health, 2024 Oct;9(3):373-382.		Scopus/ Google Scholar	Community Medicine	Journal
9	Zhao J, Ren R, Beeraka N M, Pa M, Xue N, Lu P, Bai W, Mao Z, Fan R, Liu J, Pr H V, Bulygin K V, Nikolenko V N, Correlation of time trends of air pollutants, greenspaces and tracheal, bronchus and lung cancer incidence and mortality among the adults in United States, Frontiers in Oncology, 2024 Jul;14.	3.5	Scopus/ Web Of Science/ Google Scholar	Pulmonology	Book Chapter

10	Channaraya Aradita, Srihari Sahana, P S S Ranugha, Garehatty Rudrappa Kanthraj, Prevalence of polysensitivity in allergic contact dermatitis: A five-year retrospective study, Indian Journal of Dermatology, Venereology and Leprology, 2024 Sep;1-3.		Pubmed /Google Scholar	Dermatology, venereology and Leprosy	Journal
11	Malamardi S, Lambert K, Singh S, Salvi S, Kabra S K, Singh M, Awasthi S, Sharma A K, Mohammed S, Sukumaran T U, Ghoshal A G, Singh N, Mangal D K, Barne M, Sinha S, Kochar S K, Singh U, Singh V, Erbas B, Padukudru Anand M, Exposure to traffic and greenspace, and associations with respiratory health in urban India, Urban Climate, 2024 Nov;58.	6	Scopus/ Web Of Science/ Google Scholar	TB and Respiratory Medicine	Journal
12	Rakesh M, Annaram Ravali, Shruddha , Sunil Kumar D, Perception and practice of household solid waste management practices in rural Mysuru district: a cross-sectional study, International Journal of Community Medicine and Public Health, 2024 Nov;11(12):4941-4947.		-	Community Medicine	Journal
13	Kakoli Banerjee, Pradeep Kumar, Ajay Kumar, Kamal Upreti, Shubham Mahajan, Mohammad Shahnawaz Nasir, Computation of Water Quality Index and Its Estimation Using Machine Learning Techniques, Research square, 2025 Jan.		Scopus/ Google Scholar	Not Available	PrePrint
14	Adarsh Tripathi, Sathyanarayana Rao T S, Environmental Pollutants, Climate Change, and Its Far-reaching Impacts on Sexual and Reproductive Health, Journal of Psychosexual Health, 2025 Apr.		Google Scholar	Psychiatry	Journal
15	Tolly E G Epstein, Andrew C Rorie, German D Ramon, Anjeni Keswani, Jonathan Bernstein, Rosa Codina, Christopher Codispoti, Mahesh Padukudru Anand, Anita N Wasan, Impact of climate change on aerobiology, rhinitis, and allergen immunotherapy: Work Group Report from the Aerobiology, Rhinitis, Rhinosinusitis & Ocular Allergy, and Immunotherapy, Allergen Standardization & Allergy Diagnostics Committees of the American Academy of Allergy, Asthma & Immunology, Journal of Allergy and Clinical Immunology, 2025 Apr.	11.4	Scopus/ Google Scholar	TB and Respiratory Medicine	Journal
16	Yadav Sneha, Thinley Tenzin, Divya Vinod, Mudassar Shahid, Ramith Ramu, David Jenkins, Sumana Kumar, Harikaranahalli Puttaiah Shivaraju, Photocatalytic degradation of trimethoprim and growth inhibition of pathogens using g-C3N4/AgMoO4 heterojunction catalyst, Journal of Water Process Engineering, 2025 Jan;70:106924.	6.3	Scopus/ Web Of Science/ Google Scholar	Biotechnology and Bioinformatics;Environmental Science;Microbiology	Journal
17	Shivarudraswamy D, Bhavana D, Soundarya Shree K R, Ashwini J, D Guru Kumar, Dharma Prasad, Nagalambika Prasad, Fictibacillus: A Novel Genre For Exploring As Biosurfactant Source, Pollution Research, 2025 Jan;44:33-42.		-	BioChemistry;Microbiology;Microbiology and	Journal

				Tissue Culture	
18	K Ganguly, A S Praveena, M V Greeshma, V Patil, J B Siddaiah, K Larsson , L Palmberg, S Upadhyay, P A Mahesh, Household Air Pollution and Respiratory Outcomes Among Women Using Biomass Fuel For Cooking in India, 2025 May;211(Abstracts):A7401-A7401.	19.3	Google Scholar	TB and Respiratory Medicine., Radiology	Journal

SIGNIFICANT CLIMATE ACTION-ORIENTED EVENTS ORGANIZED

The World Environmental Day 2024 – 04-06-2024

The World Environment Day 2024 was organized by the students of the School of Public Health, JSS Medical College, JSS AHER, on June 4th in JSS Hospital campus, Mysuru, under the theme "Land Restoration, Desertification and Drought Resilience," with the slogan "Our Land. Our Future. We are #GenerationRestoration,"

Dr..Madhu C.P., the Medical Superintendent of JSS Hospital, graced and addressed the occasion as the Chief Guest, Mr. Satish Chandra, Administrative Officier of JSS MC, was present as Guest of Honor.

The Other dignitaries who attended the event were Dr.. Vidya C. S., Head of the Department of Anatomy, Dr.Rajeshwari L., Professor and Head, of the Department of Physiology, Dr Vanitha Reddy Coordinator of- the Department of Nutrition and Dr.. Anil S. Bilimale, Chief MPH Coordinator – School of Public Health.

All the Faculties and students from the School of Public Health and other departments namely Department of Nutrition and Department of Surgery participated in the event. Saplings were adopted and planted in the new parking area of the JSS Hospital Campus as a symbolic gesture towards protecting the environment and enhancing the ecology. Later, certificates were distributed to all the participants who contributed to Environment Day by planting saplings.

A quiz competition was held among the students to mark Environment Day, enhancing their knowledge and making the event enjoyable for everyone involved. All students participated enthusiastically, contributing to a fun and educational experience.

The event emphasized the importance of nurturing nature for a better future, echoing the sentiment of sustainable environmental stewardship.

World Environment Day Quiz Competition Highlights – 04-06-2024

To mark **World Environment Day 2024**, the School of Public Health at JSS Medical College organized a quiz competition on **4th June** based on the theme *"Land Restoration, Desertification, and Drought Resilience"*, aligned with the global campaign *#GenerationRestoration*. Ten teams participated enthusiastically in the quiz, which aimed to raise environmental awareness among students. Winners were recognized during a prize distribution held on **5th June 2024**.

As part of the **Tobacco-Free Youth Campaign 2.0**, held on **28th November 2024**, students of M.Sc. Biochemistry secured prizes in the poster competition organized by the NSS Unit.

Additionally, a postgraduate from the Department of Biochemistry received **second prize in oral paper presentation** at **KRSSDI 2024** (20–22 December), for research highlighting the protective effects of vitamin D and metformin on diabetes-induced oxidative stress and kidney damage in a rat model.

These events reflect the institution's strong commitment to climate action, public health education, and student research engagement.

World Environment Day celebration a resounding success.

World No Tobacco Day 2024 – 01-06-2024

On the occasion of World No Tobacco Day, Department of Community Medicine, JSS Medical College, JSSAHER, Mysuru organized rally at Hale kesare and K R Mills as a part of Family Adoption Programme of MBBS phase 1 to create awareness on the harmful effects of tobacco. The theme for the year is "Protecting Children from Tobacco Industry Interferences" at the premises of Government Higher Primary School,Hale Kesare on 1st June 2024. Dr.Nayana Shabadi, Assistant Professor and Dr Shweta N Kurkuri, Senior Resident, Department of Community Medicine, inaugurated the rally. Staffs, Postgraduates, and medico-social workers of Department of Community Medicine, JSS Medical College and ASHA workers were also present on the occasion.

Plantation Drive as Part of World Environmental Day 2024

As part of World Environmental Day 2024, the Department of Community Medicine, JSS Medical College, Mysuru organized a Plantation Drive at Hale Kesare village under Hanchya PHC of Mysuru district on 15.06.2024. Siddlingpura Gram panchayat President Mr.Madesh was the chief guest. The program was also attended by Gram Panchayat Vice- President Mrs Jyothi, Panchayat Development Officer MR Basavaraj, Dr.Praveen Kulkarni, Vice-Principal (para clinical), JSS medical college, Dr.Ravishankar, Assistant Professor, Department of Anatomy and Dr. Manu, Associate Professor, Department of Pharmacology (NSS officers), JSS Medical College, Mrs. Gowri, Headmistress-Government Primary School, Hale Kesare, Dr.Shweta N.Kurkuri, Dr.Sunitha Singh, Dr.Mythily M R, faculty, Medico-social workers and postgraduates from the Dept of Community Medicine, JSS Medical College, other members of Siddlingpura gram Panchayat and First-year MBBS students as part of their Family Adoption Program. The program followed with a pledge to save the environment and later with planting and adopting 120 saplings of Mahagony and Honge plants donated by the Forest Department, Mysore division by the medical students. Shri N Raghavan, owner of Raghulal and Co, donated tree guards for sapling protection.

Swachhata Hi Seva – 09-10-2024

NSS organized a Swachh Bharat cleanliness drive, aimed at promoting hygiene and environmental awareness with the students at JSS Medical College on October 9, 2024. The event commenced at 6:30 AM and witnessed enthusiastic participation from 30 students, who were eager to contribute to this noble cause.

Equipped with T-shirts, caps, and gloves provided by the college, the participants gathered behind the college premises, extremely enthusiastic. Under the guidance of esteemed faculty members - Dr.Manu G, Mr.Manjunath and Mr.Venkatesh, the students divided into groups, efficiently cleaning the area. The enthusiasm was palpable as everyone worked together, fostering a sense of teamwork and responsibility towards the environment.

Throughout the morning, the students collected and filled numerous garbage bags, clearing the area of plastic waste, wrappers, and other debris within the JSS Hostel campus and also outside the campus. This hands-on experience not only enhanced the students' understanding of the importance of cleanliness but also highlighted the significant impact collective action can have on maintaining a sustainable environment.

The drive concluded with a brief reflection session, where participants shared their experiences and discussed the need for continued efforts in promoting cleanliness. This initiative by NSS aligns with the broader goals of the Swachh Bharat mission, inspiring future generations to prioritize cleanliness and environmental stewardship. The event was a resounding success, leaving a lasting impression on both the students and the community.

Poster competition – 28-11-2024

As part of the **Tobacco Free Youth Campaign 2.0**, a poster competition was organized by the **NSS Unit of JSS Medical College** on the theme **"Stop Smoking, Say No to Tobacco."** The event was held at **Rajendra Auditorium** and witnessed active participation from students across disciplines, with 9 participants showcasing their creativity through posters and sketches.

The event began at 10:30 AM with a warm welcome and was judged by senior faculty from the Departments of Community Medicine and Pharmacology. To ensure fairness, entries were anonymized. Participants had two hours to complete their artwork, and the competition highlighted powerful messages against tobacco use.

Winners were announced and honored, and the event concluded with motivational remarks from the judges. Coordinated by NSS officers and supported by college leadership, the event successfully fostered awareness, creativity, and student engagement in a vital public health cause.

Winter School in Geospatial Science & Technology (27th November to 17th December 2024)

JSS Academy of Higher Education & Research (JSS AHER), Mysuru, successfully conducted a 21-day Winter School in Geospatial Science & Technology (Level 1 Standard Program), funded by the National Geospatial Program, Department of Science & Technology, Government of India. The event was jointly organized by the Department of Community Medicine, JSS Medical College, and the Division of Geoinformatics, School of Life Sciences, JSS AHER.

The program was inaugurated on 27th November 2024 by Dr. P.G. Diwakar, ISRO Chair Professor, NIAS, who highlighted the critical role of GIS in addressing health and environmental challenges like air pollution and climate change. Senior dignitaries from JSS AHER and JSS Mahavidyapeetha graced the occasion and emphasized the program's multidisciplinary impact.

With 25 participants from diverse fields, the training focused on hands-on learning using QGIS and SAGA software, combining theory with field experience, including a visit to Suttur and an audience with His Holiness Jagadguru Sri Shivarathri Deshikendra Mahaswamiji, Chancellor of JSS AHER. The program underlines JSS AHER's commitment to capacity building in geospatial technologies for sustainable development.

Swacchatha Sarvekshan 2024, Kukkarahalli lake Swacchatha Abhiyan 16-02-2025

JSS Medical College NSS wing participated in Swacchatha Sarvekshan 2024, Kukkarahalli lake. Swacchatha Abhiyan conducted by Mysuru City Corporation on 16/02/2025 starting from Kuvempu Vana, Railway front gate, Mysuru.

The event commenced at 7:00 AM and witnessed enthusiastic participation from 25 students including MBBS and BSc students, who were eager to contribute to this noble cause.

The students collected and filled numerous garbage bags, clearing the area of plastic waste, wrappers, and other debris throughout the morning. This hands-on experience not only enhanced the students' understanding of the importance of cleanliness but also highlighted the significant impact collective action can have on maintaining a sustainable environment. The event was a resounding success, leaving a lasting impression on both the community and the students.

<u>NSS – Swachh Bharath Abhiyan 2025 – 04-03-2025</u>

NSS conducted a Swachh Bharat Abhiyan on March 4, 2025, with the goal of raising awareness of environmental issues and hygiene among JSS Medical College students. 55 students enthusiastically participated in the event, which started at 7:30 AM, and were keen to support this admirable cause.

The students cleared the area of plastic waste, wrappers, and other litter throughout the morning by gathering and filling a large number of rubbish bags. The students' comprehension of the value of cleanliness was improved by this practical experience, which also demonstrated the enormous influence that group efforts can have on preserving a sustainable environment. The gathered waste were collected by the Mysuru City Corporation vehicle.

World Asthma Day – 06-05-2025

World Asthma Day was observed on 6th May 2025 by the Department of Respiratory Medicine at the OPD premises. The event aimed to raise awareness about asthma and promote better understanding of its symptoms, early diagnosis, and effective management. This year's theme, "Make Inhaled Treatments Accessible for ALL," emphasized the importance of equitable access to inhaled medications, which are vital in controlling asthma symptoms and preventing complications. Patients attending the OPD were given detailed health education on asthma triggers, proper inhaler techniques, and lifestyle modifications. The initiative aimed to empower patients with knowledge, ensuring better disease control and improved quality of life.

World Environmental Day – 05-06-2025

"What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and one another." – Mahatma Gandhi

A healthier environment is the need of the hour, and we must not make any more delays. World Environment Day (WED) is celebrated to encourage and create awareness and to take appropriate action for the protection of the environment. In this regard to NSS unit JSS Medical College, Mysuru, conducted the sapling plantation program on 5th June 2025 in the JSSMC campus garden. Faculty and NSS student volunteers actively participated and witnessed the event.

Dr. Narayanappa D, Principal of JSS Medical College, Dr. Suma M.N., and Dr. Praveen Kulkarni, Vice-Principals of JSS Medical College, and Mr. Sathish Chandra, Administrative officer, Mrs Shilpa, Assistant Administrative Officer of JSS Medical College, Sports director Mr Lokeshappa H, planted

Jackfruit saplings in the garden to mark this event. This program was coordinated by Dr Manu G, NSS Program Officer, JSS Medical College, Mysuru.

JSSDCH

SUSTAINABLE DEVELOPMENT GOAL 13

Introduction

There is no country that is not experiencing the drastic effects of climate change. Climate change is increasing the frequency and intensity of extreme weather events such as heatwaves, droughts, floods and tropical cyclones, aggravating water management problems, reducing agricultural production and food security, increasing health risks, damaging critical infrastructure and interrupting the provision of basic services such as water and sanitation, education, energy and transport.

Global warming is causing long-lasting changes to our climate system, which threatens irreversible consequences. To limit warming to 1.5 C, global net CO2 emissions must drop by 45% between 2010 and 2030, and reach net zero around 2050. In this background, Goal 13 calls for immediate action to combat climate change and its impacts by strengthening adaptive capacity to climate- related hazards and natural disasters in all countries, by integrating climate change measures into national policies, strategies and planning, by improving education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning and by promoting mechanisms for raising capacity for effective climate change-related planning and management in least developed countries. The goal also aims to implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization.

Initiatives taken in this regard

Publications aligning to SDG 13

Chanchala H P, Manjula S, Brinda S Godhi, Avinash Tejasvi - Mapping Oral Health: Unveiling disease patterns and environmental influences through geographic information systems - Journal of Indian Academy of Oral Medicine & Radiology - Oct - Dec 2023; 35(4): 612-613 . ISSN: 0972-1363, National.

Efforts at a glance

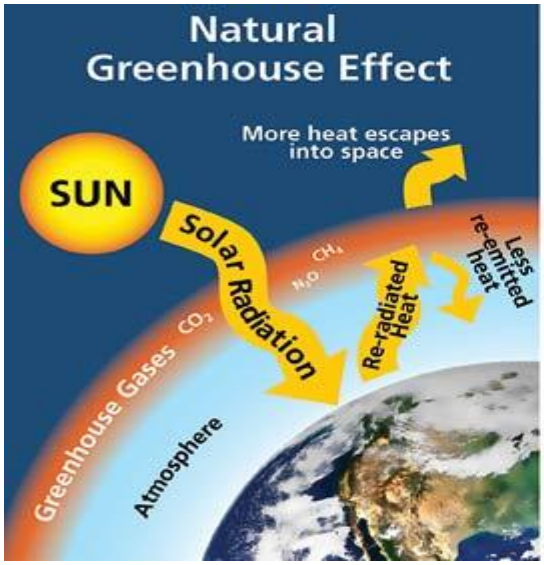
Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. **Climate change**" encompasses **global warming**, but refers to the broader range of changes that are happening to our planet. The effects of Human causing Global warming are happening now, are irreversible on the timescale of people alive today, and will worsen in the decades to come.

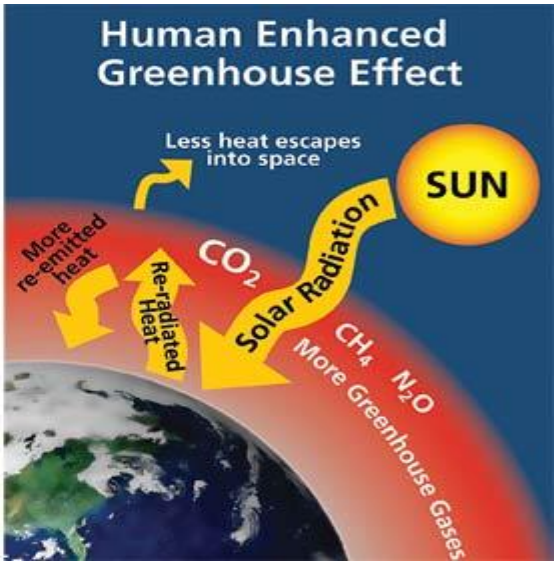
Global climate change is not a future problem. Changes to Earth's climate driven by increased human emissions of heat-trapping greenhouse gases are already having widespread effects on the environment:glaciers and ice sheets are shrinking, river and lake ice is breaking up earlier, plant and animal geographic ranges are shifting, and plants and trees are blooming sooner. Effects that scientists had long predicted would result from global climate change are now occurring, such as sea ice loss, accelerated sea level rise, and longer, more intense heat waves. Climate change affects the social and environmental determinants of health – **clean air, safe drinking water, sufficient food and secure shelter**.

Some changes (such as droughts, wildfires, and extreme rainfall) are happening faster than scientists previously assessed. In fact, according to the Intergovernmental Panel on Climate Change (IPCC) — the United Nations body established to assess the science related to climate change — modern humans have never before seen the observed changes in our global climate, and some of these changes are irreversible over the next hundreds to thousands of years.

It's a known fact that our Earth's atmosphere consists of Nitrogen (78%), Oxygen (21%) and remaining 1% of other traces of gases, what we call as "Green House Gases" (GHG's) which are contributing towards the "Green House Effect" (GHE). Amongst the GHG's – Carbondioxide forms the largest, about 56%, followed by Methane – 18%, Flourocarbons – 13% followed by Ozone – 7% and Nitrogen Oxides – 6%. These form a blanket around and helps in keeping the Earth's atmosphere warmer by about 30 degrees which helps sustain life of literally every form under their respective prevailing climatic conditions. Another major factor contributing almost to 95% of the global warming is the "Water Vapour" following the vicious cycle as a result of the excess GHG's in our atmosphere.

31% of the solar radiation is reflected back and only 69% of it is absorbed by the Earth's atmosphere. Earth upon heating, reflects infrared rays back to the atmosphere which is absorbed by the GHG's and re-emitted back to the Earth and thus prevents heat from escaping and cause heat retention and this is what is called as GHE, which is definitely helpful if it is within normal limits without which our Earth would have been still in the Ice Age as depicted in the animated movie series with the same name, where in there was definitely very less carbon dioxide concentration in the glacial periods. But what is alarming in the new millennium is the rate at which the GHG's are being emitted and the rapidity with which our earth is being warmed. And the total amount of GHG's produced by an individual or a business or a product is called the "Carbon Footprint". Since the start of the Industrial Revolution in the 18th century in Europe, the amount of GHG's emission has been increasing exponentially from all across the globe.





A Glance at Efforts

Green policy of JSSAHER

JSS AHER has its Green Policy which emphasizes on the following to be strictly followed in all its campuses.

Energy conservation strategies – For e.g. use of CFL/LED lights and Solar heaters and Air source heat pumps in the hospital and hostels

Plastic-free campuses

Conservation of water resources

Reducing paper communication: Use of electronic communication and patient management software

Provision for natural light in all its buildings Provision of a open court yard in the centre of the building.

The Institution also has included a subject Environmental Sciences in all courses as stipulated by UGC and organizes Environment Day and Water Day. The Institution believes in preserving traditional medicine and has established medicinal plants garden and promotes eco-friendly cultivation practices by organizing medicinal plants exhibition in JSS Urban Health Centre.

The below mentioned models are established in the various buildings based on the size of the building and the extent and topography of the land.

• Simple roof water collection systems - Most of the rooftop rainwater harvesting has been completed by constructing five water storage structures with a storage capacity of 1000 m3. • Land surface catchments – a simple way of collecting rainwater by retaining the flows (including flood flows) of small creeks and streams in small storage reservoirs (on surface or underground) created by low-cost dams

JSSCPM

SDG-13: Climate Action

1.1 Research on climate action

- Research supporting SDG 13: Research on Climate Action (List of publications reflecting the research towards Climate Action in Vancouver style)

13.2 Low-carbon energy use

13.2.1 Low-carbon energy tracking:

- JSS College of Pharmacy has undergone ISO 50001:2018 Energy Management System Certification.

Green audit for Energy Management Systems with the IRCLA system and solution

- ❖ Certificate No.: IRQS/240300698/B

Initial Certification Date:16/04/2024

Current Date of Granting: 16/04/2024

Expiry Date: 15/04/2027


IRCLASS
SYSTEMS AND SOLUTIONS PRIVATE LIMITED

CERTIFICATE OF APPROVAL

Issued by Indian Register Quality Systems
(A Division of IRCLASS Systems and Solutions Private Limited)

This is to certify that the Environmental Management Systems of

Organisation: JSS Academy of Higher Education & Research

Address: Site-2, JSS College of Pharmacy, Sri Shivarathreeshwara Nagara, Mysuru - 570 015, Karnataka, India

has been assessed and found conforming to the following requirement

Standard: ISO 14001:2015

Scope: Providing Undergraduate And Post Graduate Education In Pharmacy

Certificate No.: IRQS/240300698/B

Initial Certification Date: 16/04/2024

Current Date of Granting: 16/04/2024

Expiry Date: 15/04/2027

Shashi Nath Mishra
Head IRQS

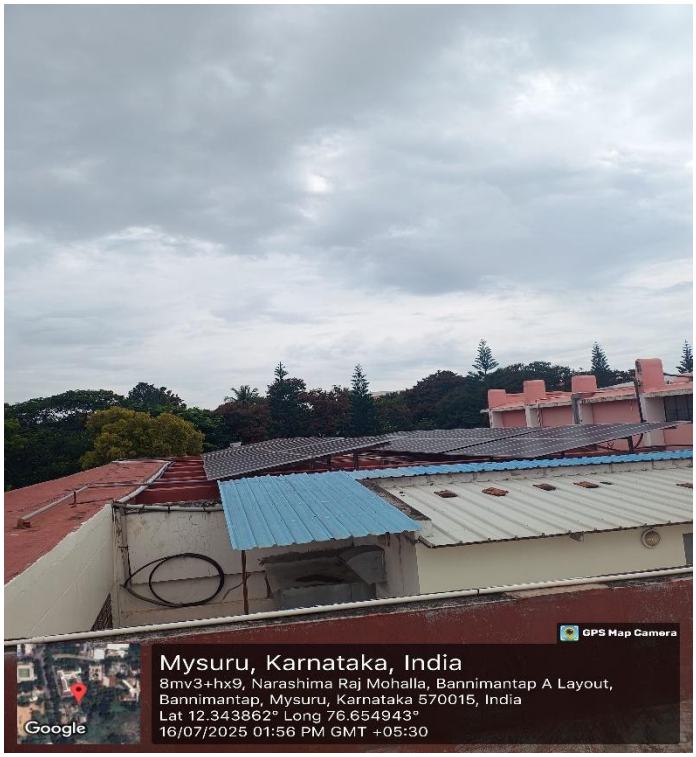
Head Office: 52A, Adi Shankaracharya Marg, Opp.Powai Lake, Powai, Mumbai - 400 072, India.

13.2.2 Low-carbon energy use

- Does your College or university measure the amount of low-carbon energy used across the University /College?

- ❖ Yes – College has set up a solar energy panel for self-sustained energy utilization.

❖ Evidence:



- **Any other Comments:**
  - ❖ The college uses solar energy for its day-to-day energy consumption. About 45% of total energy is utilized by solar energy.
  - ❖ All regular lightings are replaced with LED lights, which consumes minimum energy.
  - ❖ Light sensors are used to minimize the energy consumption
  - ❖ Faculty residing nearby places are travelling to the college by carpooling, which minimizes petrol consumption.
- **Total energy used**
  - ❖ 58449.50 Units used for the month of April 2025.
- **Total energy used from low-carbon sources**
  - ❖ 17282Units of Solar Energy used for the for the month of April 2025.
- **Proportion of electricity from low-carbon sources**
  - ❖ 33.82 %.

13.3 Environmental education measures

- **13.3.1 Does your College & University provide local education Programmes or campaigns on climate change risks, impacts, mitigation, adaptation, impact reduction and early warning?**

Local education Programmes on climate

- ❖ Yes – Smart campus initiative and Plantation done within the campus.
- ❖ Weblink to support the details: (https://jssuni.edu.in/jssaher/activities-and%20events/ActivityAndEventDetail.aspx?NOTICESID=4402)

- ❖ Weblink to support the details: https://jssuni.edu.in/jssaher/activities-and-events/ActivityAndEventDetail.aspx?NOTICESID=5382.

- **Any other Comments:**

- **13.3.2 Does your College & University have a College & University Climate Action plan, shared with local government and/or local community groups?**

Environmental education measures university climate action plan

- ❖ **Yes: Smart campus initiative and Plantation done within the campus.**
- ❖ **Herbal garden maintenance**
- ❖ Weblink to support the details: https://jssuni.edu.in/jssaher/activities-and-events/ActivityAndEventDetail.aspx?NOTICESID=4863

https://jssuni.edu.in/jssaher/college-of-pharmacy-mysuru/herbal-garden-facilities.html

- **Any other Comments:**
  - ❖ Every year we Plant sapling to create awareness and maintained herbal garden in the campus as it aids as one of the solutions to global climate change.

- **13.3.3 Does your College & University participate in co-operative planning for climate change disasters, working with government?**

Co-operative planning for climate change disaster planning

- ❖ Yes – The National Service Scheme (NSS Unit) JSS College of Pharmacy, Mysuru, Organized Plant Saplings on the occasion of World Environmental Day (5th June 2025) with the theme of our land, our future. The main aim of this occasion was to prevent & create awareness of the rising global warming to protect our nature and planet Earth.
- ❖ Weblink to support the details: https://jssuni.edu.in/jssaher/activities-and-events/ActivityAndEventDetail.aspx?NOTICESID=5128

https://jssaherstoragenew.blob.core.windows.net/jss/Notices/NEM005128a.pdf

- **Evidence:**

- **Any other Comments:**
- we organized Plant sapling in the village to create awareness and as it aids as one of the solutions to global climate change.
- **13.3.4 Does your College & University inform and support local or regional government in local climate change disaster/risk early warning and monitoring? Environmental education measures inform and support**
  - ❖ University has National Service Scheme (NSS) Unit in each college. During regular activities of NSS, such programs are organized at adopted villages to create awareness about climate changes.
  - ❖ Weblink to support the details: https://jssuni.edu.in/jssaher/activities-and-events/ActivityAndEventList.aspx?OPTION=0&COLCODE=JSSCPM&DEPTCODE=PP&CATCODE=NSS.
- **Any other Comments:**
  - ❖ During regular activities of NSS, different programs are organized at adopted villages to create awareness about climate changes.
- **13.3.5 Does your College & University collaborate with NGOs on climate adaptation?**

Environmental education collaborates with NGOs

- ❖ No, it will be collaborated in future.

- **Evidence**
- **Any other Comments:**

13.4 Commitment to carbon neutral University / College

- **13.4.1 Does your College & University have a target date by which it will become carbon neutral according to the Greenhouse Gas Protocols?**

Commitment to carbon neutral university

- ❖ The institution is selected as a piolet study center for EDGE certification leading to ZERO – Carbon by 2030
- ❖ Weblink to support the details: In process.

- **Evidence:** In process.
- **Any other Comments:**
  - ❖ JSS College of Pharmacy, Mysuru will be ZERO-Carbon by the year 2030
- **13.4.2 Carbon neutrality achieve by date**
  - ❖ 2030
- **Any other Comments:**

JSSCPO

About SDG 13- CLIMATE ACTION

At JSS College of Pharmacy, Ooty, we are committed to the mission of SDG 13: “Take urgent action to combat climate change and its impacts.” We recognize the importance of this goal and its strong connection with SDG 7, which promotes clean energy—both of which guide our approach to sustainability on campus.

In alignment with the United Nations’ policies, our institution is actively working to address the five targets of SDG 13 by 2030. We aim to strengthen our resilience and adaptability to climate-related challenges, incorporating climate action measures into our planning and policies, and fostering greater knowledge and capacity among our students and staff to effectively tackle climate change. Furthermore, we are dedicated to supporting the implementation of the UN Framework Convention on Climate Change and promoting systems that enhance our capacity for planning and management. Progress towards these objectives is tracked using specific indicators, ensuring that we contribute meaningfully to the global effort led by the UN Framework Convention, the principal body convening international collaboration on climate change.

OUR INITIATIVES FOR CLIMATE ACTION (SDG 13)

The goal is to integrate climate change measures, disaster risk management, and sustainable natural resource use into the country's development strategies. This integration seeks to minimize the impact of geophysical disasters on communities, strengthen resilience, and enhance the ability to address mitigation, adaptation, and early warning systems.

This is accomplished through the following actions:

- Adhering to the JSS AHER Green Policy
- Promoting and preserving green spaces on college and hostel grounds
- Implementing rainwater harvesting methods
- Participating in disaster response activities
- Disseminating disaster-related research via scientific publications

Green Campus Policy and Initiatives
The college campus features abundant greenery, with seasonal trees and regular garden upkeep to maintain cleanliness. To foster environmental resilience, car and scooter pooling is encouraged among staff and students living nearby. Plans are also underway to promote cycling on campus and introduce a monthly 'No Vehicle Day.' Some students have already adopted cycling as a means of commuting.

In the near future, the college intends to establish organic farming to supply vegetables and fruits and is finalizing land acquisition for this purpose. The campus also hosts an herbal

garden with medicinal plants that contribute to fresh air and health benefits. To maintain high standards of cleanliness, outsourcing housekeeping services is being considered. Additionally, tree planting drives are actively pursued both on campus and in adopted tribal villages to sustain an eco-friendly environment.

Policy and Guidelines

Based on JSS AHER policies and guidelines,

- **Energy Conservation & Recycling Policy- https://jssaherdatalake.blob.core.windows.net/jssaher-sdg/energy-conservation-and-recycling-policy-2024.pdf**
- **Smart Campus Policy- https://jssaherdatalake.blob.core.windows.net/jssaher-sdg/smart-campus-policy-2024.pdf**

The Smart Campus committee of the college recommends installing low-cost, efficient, and low-carbon energy systems across the campus. University policies emphasize energy conservation and the upkeep of a green, clean, safe, and eco-friendly environment.

Energy from Carbon Source (Diesel Fuel)

One key initiative includes the installation of a new diesel generator that complies with our parent University's environmental policies. This generator utilizes advanced technology designed to meet strict emission standards set by the Ministry of Environment, Forest and Climate Change, ensuring it is environmentally friendly. Features include:

- Optimal power-to-weight ratio
- Modern design and superior finish
- Excellent transient response
- Compliance with the latest emission standards

This generator, with a high 250 kW capacity, delivers increased power, better fuel efficiency, and meets the most recent emission norms.

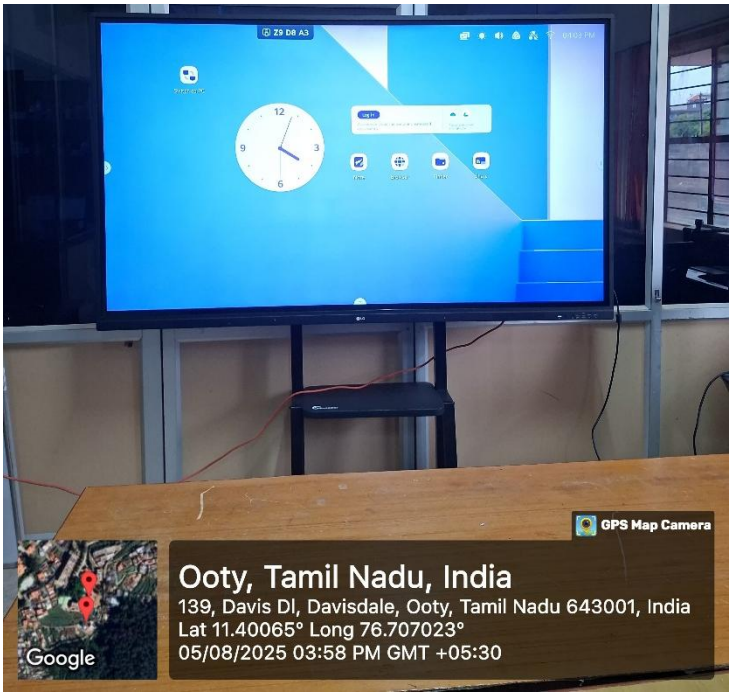
The estimates of the energy usage in a year are:

Particulars	2024-25	2023-24	2022-2023	2021-2022
Total energy used (in kWh)	568461	595202	557084	583242
Total energy used from low-carbon sources (in kWh from diesel)	20000	25000	30000	48000
Proportion of electricity from low-carbon sources (in percentage)	3.5 %	4.1 %	5.38 %	8.22 %

ENERGY MANAGEMENT

- Sources of energy: Electricity, and Diesel generators
- Number of diesel generators: 1 no. (diesel used is 3000 L in the Year 2020-21)
- Number of LED lights: 1235
- Number of T5: 340
- Number of CFL: 85
- Number of Fluorescent: 345
- Number of Solar lamps: 2
- Number of Computers: 138, operating on an average of 5 hours/day
- Printers: 56, operating on an average of 5 hours/day
- Number of Laptops: 13, operating on an average of 5 hours/day
- Number of LED Digital Interactive Panel: 15, operating on an average of 5 hours/day
- Number of Photocopiers: 03, operating on an average of 2 hours/day
- Number of Televisions: 34
- Major electrical equipment (such as hot air oven, Lift, Water Heater, Electrical Heat pumps, Water pumps(motors), refrigerators, etc)

Computers are set to power saving mode. Students and staff are instructed to switch off all electrical appliances when they are not in use.



Energy Efficient Digital Panels replacing LCD projectors

GREEN INITIATIVES

- Garden area inside the college: 3.03 acres
- The trees and plants species present in the campus include Walnut, Plums, Peaches
- The percentage of green area, which includes any area which has grass cover, tree cover and horticulture (calculated using the following equation; MGNCRE, 2019) is 31%.

$$\text{The percentage of green area} = \frac{Total\ green\ area\ in\ square\ meters}{Total\ area\ in\ square\ meters}\ x\ 100\ x\ 0.66$$

There is a medicinal garden on campus. Besides, there are large trees across the campus giving much needed greenery and fresh oxygen. Campus has several fruit yielding trees including among others.

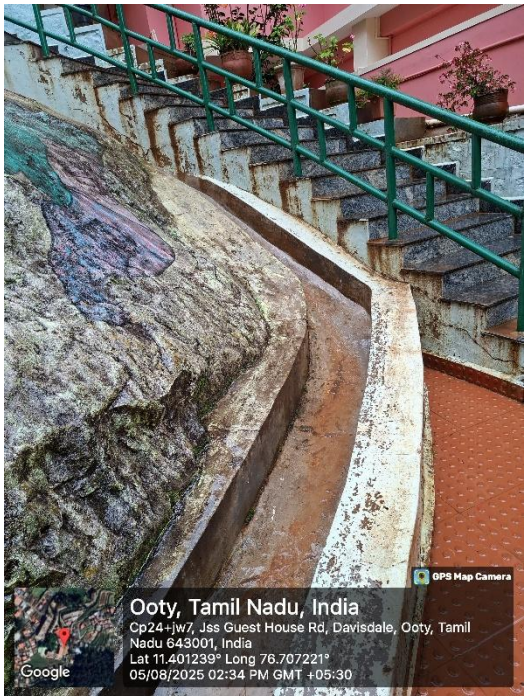
Special lecture programmes are organised by the college to create awareness about the nature. NSS and NCC Students are involved in Swachh Bharat Abhiyaan. Students are involved in sapling plantations, cleaning and watering the gardens. Several nature awareness programs have been conducted. Connecting with nature is key to understand human dependence on nature and the need to preserve that precious resource. Environmental day is celebrated with active participation from students and staff.

CARBON FOOTPRINT

- Number of persons using two wheelers: Students: ~65, Faculty: ~22, Visitors: ~20
- Number of persons using four wheelers: Faculty: ~10, Visitors: ~10
- College transport facility: 1 bus and 2 cars

Rain Water Harvesting Implementation

The college harvests rainwater, which is be utilized for non-potable purposes such as irrigation and flushing toilets. It is stored in a well which covered for prevention of leaf litter contamination.



RAIN WATER HARVESTING

OUR INITIATIVES FOR CLIMATE ACTION (SDG 13)

The objective is to incorporate climate change actions, disaster risk management, and sustainable natural resource practices into the country's development plans. This aims to reduce the effects of geophysical disasters on human populations, enhance resilience, and bolster capacity for addressing mitigation, adaptation, and early warning systems.

This is achieved by indicators:

- Following and conforming to the JSS AHER Green policy
- Promoting and maintaining green spaces on the college and hostel premises
- Implementing rainwater harvesting techniques
- Engaging in disaster response initiatives
- Sharing disaster-related research through scientific publications

Installation of Tensiometer for Developing Forewarning System for Landslides in Nilgiris

The partnership between Vellore Institute of Technology (VIT) and the Department of Science and Technology at JSS College of Pharmacy, Ooty, is focused on creating an advanced landslide early warning system for the Nilgiris region. The central aspect of this initiative is the use of Tensiometers—a key geotechnical tool—to track soil moisture and supply vital data for predicting and detecting landslides. The Nilgiris, characterized by its steep hills and frequent intense rainfall, is particularly susceptible to landslides, which can cause major property damage and endanger lives. To help mitigate these hazards, the project aims to introduce a reliable system that monitors soil moisture, a leading trigger for landslides, in order to proactively anticipate such events.

Tensiometers function by measuring soil moisture tension—the force that holds water within the soil against gravity. By installing these devices at select, high-risk areas in the Nilgiris, researchers can monitor real-time soil moisture levels. When this data is integrated with weather forecasts and other environmental indicators, it supports the development of prediction models and algorithms to identify landslide risks early.

This collaborative initiative brings together specialists in geotechnical engineering, environmental science, and data analysis, fostering a multidisciplinary strategy to confront the region’s landslide issues. The primary objective is to equip local authorities and communities with timely, accurate warnings, enabling them to take precautionary actions and improve disaster readiness. By successfully implementing the Tensiometer-based warning system, the project aims to set a benchmark for similar efforts in other vulnerable regions. Harnessing modern technology and academic know-how, this collaboration not only helps protect lives and property in the Nilgiris but also contributes to advancing global best practices in landslide risk management.

Promotion of Green Campus for Pollution free environment

Medicinal Plants garden

About SDG 13- CLIMATE ACTION

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In alignment with the United Nations’ policies, our institution is actively working to address the five targets of SDG 13 by 2030. We aim to strengthen our resilience and adaptability to climate-related challenges, incorporating climate action measures into our planning and policies, and fostering greater knowledge and capacity among our students and staff to effectively tackle climate change. Furthermore, we are dedicated to supporting the implementation of the UN Framework Convention on Climate Change and promoting systems that enhance our capacity for planning and management. Progress towards these objectives is tracked using specific indicators, ensuring that we contribute meaningfully to the global effort led by the UN Framework Convention, the principal body convening international collaboration on climate change.

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- Sharing disaster-related research through scientific publications

Environmental education measures

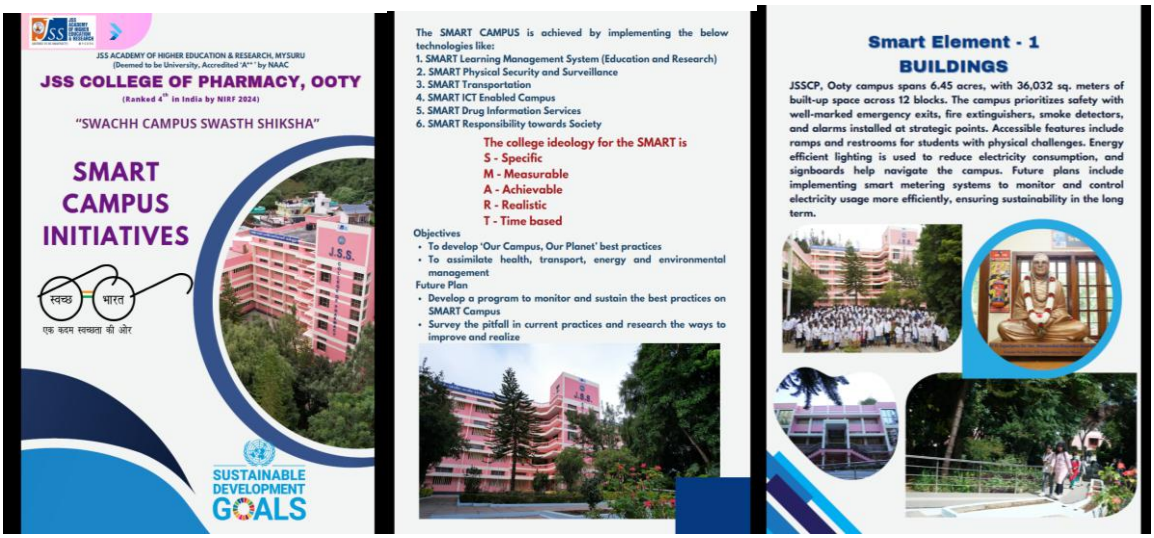
Swachh Bharat Abhiyan is a national cleanliness campaign launched by the Indian government in 2014. Its primary goal is to create a clean and hygienic India by promoting sanitation and hygiene practices. The campaign aims to eliminate open defecation, build and maintain toilets, and improve waste management systems.

Swachh Bharat Abhiyan encourages community participation, urging citizens to take responsibility for their surroundings. The initiative has made significant progress in raising

awareness about cleanliness and bringing about positive changes in sanitation across the country.

GLIMPSES OF THE INITIATIVES

Activities Report will be submitted to the local authorities- The District Collector, Nilgiris District, Ooty, Tamil Nadu



As a part of environment conservation initiatives and under the banner of Swacch Bharath Abhiyan, the College conducts campaigns on climate change risks, impacts, mitigation, adaptation, impact reduction to the local residents and adopted villages. This is performed with the assistance of National Social Service Scheme of the college.

Promotion of Green Campus for Pollution free environment

Medicinal Plants garden

SLSM

1. CLIMATE ACTION (SDG 13)

Details Related to SDGs	Evidence with documents	Weblink to support the details
1.1 Research on climate action Research supporting SDG 13: Research on Climate Action (List of publications reflecting the research towards Climate Action in Vancouver style) 1. Majani, S. S., Basavaraj, R. B., Iqbal, M., Shivamallu, C., Amachawadi, R. G., KN, V., & Kollur, S. P. (2025). Enhanced photocatalytic degradation activity of SrCeO3 nanophosphors: Aloe vera gel-mediated synthesis and UV light-driven eradication of Titan Yellow dye. Optical Materials, 162, 116900. 2. Sumitha, E. (2024). Genetic modification in vitamin-rich crop biofortification. Springer Nature. ISBN: 978-1-0716-4346-4. 3. Arunakumari, S. "Climate Fiction and the Anthropocene: Eco-criticism in Kim Stanley Robinson's Novels." *International Journal of Developmental Research*, vol. 1, no. 1, 2024, pp. 6–16. Malabara College of Advanced Studies Vengara. 4. Naveenkumar R,, Stavelin Abhinandithe K* And Vidya R, Change Point Detection And Trend Analysis Of Monthly,Seasonal And Annual Rainfall Series Over The Mysore, Ijbpas, July, 2024, 13(7): 3153-3161 5. Samanth Kumar J et al. Pearl millet floral malformation under downy mildew (Int. J. Life Sci., 2023). 6. Vinod RB et al. Ethnobotanical study on herbal plants, Western Ghats biodiversity (2024). 7. Purvika, A. (2024). MOFs for CO2 reduction. *Materials Today Sustainability, 26(1), 100745.* 8. Shivaraju, H. P. (2024). NiFeAl nanofibrous for CO2 reduction. *Materials Today Sustainability, 1(1), 1-18.* 9. Loga Prashistha Pradhista, J. (2025). Climate change impacts on ecosystems. *Journal of Basic Science and Engineering, 25(7), 749-760.* 10. Tripathi, P. K. (2025). Climate change impacts on agriculture. *International Journal of Environmental Sciences, 11(21), 4798-4804.*		
13.2 Low carbon energy use		
13.2.1 Low-carbon energy tracking		
13.2.2 Low-carbon energy use	Yes	https://jssaherstoragenew.blob.core.windows.net/jssuudstorage/udp

Does your College & University measure the amount of **low carbon energy used** across the University / College?		docs/home-page-sdg-report-on-carbon-emissions-and-ambient-air-quality.pdf
Evidence:		
Any other Comments:		
Total energy used		
Total energy used from low-carbon sources		
Proportion of electricity from low-carbon sources		
13.3 Environmental education measures		
13.3.1 Does your College & University provide local **education Programmes or campaigns on climate change** risks, impacts, mitigation, adaptation, impact reduction and early warning? **Local education Programmes on climate**	Explain and attach evidence /documents supporting your explanation	
Evidence		
Any other Comments:		
13.3.2 Does your College & University have a College & University Climate Action plan, shared with	Explain and attach evidence /documents supporting your explanation	

local government and/or local community groups? **Environmental education measures university climate action plan**		
Evidence:		
Any other Comments:		
13.3.3 Does your College & University participate in co-operative planning for climate change disasters, working with government? **Co-operative planning for climate change disasters planning**	Explain and attach evidence /documents supporting your explanation	

Evidence:		
Evidence		
13.3.4 Does your College & University inform and support local or regional government in local climate change disaster/risk early warning and monitoring? **Environmental education measures inform and support**	Explain and attach evidence /documents supporting your explanation	
Evidence		
Any other Comments:		
13.3.5 Does your College & University collaborate with NGOs on climate adaptation? **Environmental education collaborates with NGOs**	Explain and attach evidence /documents supporting your explanation	
Evidence		
Any other Comments:		
13.4 Commitment to carbon neutral University / College		
13.4.1 Does your College & University have a target date by which it will become carbon neutral according to the	Explain and attach evidence /documents supporting your explanation	

Greenhouse Gas Protocols? **Commitment to carbon neutral university**		
Evidence		
Any other Comments:		
13.4.2 Carbon neutrality achieve by date		
Any other Comments:		

SLSO

1. CLIMATE ACTION (SDG 13)

Details Related to SDGs	Evidence with documents	Weblink to support the details
1.1 Research on climate action Research supporting SDG 13: Research on Climate Action (List of publications reflecting the research towards Climate Action in Vancouver style):NIL		
13.2 Low carbon energy use		
13.2.1 Low-carbon energy tracking		
13.2.2 Low-carbon energy use Does your College & University measure the amount of **low carbon energy used** across the University / College?	Yes, Smart Campus Policy is given.	https://jssaherdatalake.blob.core.windows.net/quality/sls-ooty-sdg-13-2-3-smart-campus-policy.pdf
Evidence:	Web link for Smart Campus Policy is given.	
Any other Comments:		
Total energy used		
Total energy used from low-carbon sources		
Proportion of electricity from low-carbon sources		
13.3 Environmental education measures		
13.3.1 Does your College & University provide local **education Programmes or campaigns on climate change** risks, impacts, mitigation, adaptation, impact reduction and early warning? **Local education Programmes on climate**	Yes, Students along with BISLERI joined hands and collected 40kg of plastics from Ooty town near Boat house on the theme “Bottle for change”.	

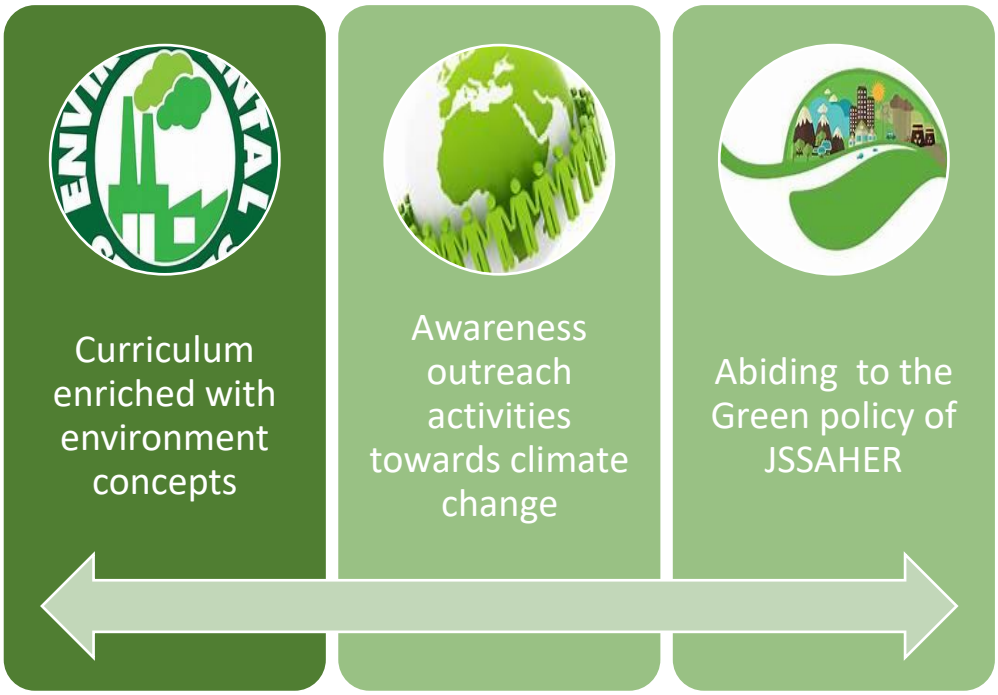
Evidence		
Any other Comments:		
13.3.2 Does your College & University have a College & University Climate Action plan, shared with local government and/or local community groups? **Environmental education measures university climate action plan**	NIL	
Evidence:		
Any other Comments:		
13.3.3 Does your College & University participate in co-operative planning for climate change disasters, working with government? **Co-operative planning for climate change disasters planning**	NIL	
Evidence:		
Any other Comments:		
13.3.4 Does your College & University inform and support local or regional government in local climate change disaster/risk early warning and monitoring? **Environmental education measures inform and support**	NIL	
Evidence		

Any other Comments:		
13.3.5 Does your College & University collaborate with NGOs on climate adaptation? **Environmental education collaborates with NGOs**	NIL	
Evidence		
Any other Comments:		
13.4 Commitment to carbon neutral University / College		
13.4.1 Does your College & University have a target date by which it will become carbon neutral according to the Greenhouse Gas Protocols? **Commitment to carbon neutral university**	NIL	
Evidence		
Any other Comments:		
13.4.2 Carbon neutrality achieve by date		
Any other Comments:		

DHSMS

Take urgent action to combat climate change and its impacts

Brief of activities:



Green policy of JSS AHER

- JSS AHER has its Green Policy which emphasizes on the following to be strictly followed on all its campuses.
- Maintenance of clean, green, and smart-campus–waste segregation and planned disposal of waste through authorized agencies only.
- Disposal of biomedical waste, Chemicals, and e-waste as per the norms of the Karnataka State Pollution Control Board
- Energy conservation strategies–For e.g., the use of CFL/LED lights Solar heaters, and Air-source heat pumps in the hostels
- Plastic-free campuses
- Conservation of water resources - Rainwater harvesting and wastewater treatment
- Reducing paper usage through e-communication and education through online portal
- The HEI actively organizes Swachh Bharat Abhiyan and creates awareness and consciousness amongst students.
- Provision for natural lighting and adequate ventilation in all its buildings

Table 20: Activities conducted aligning to Goal 13	
Curriculum	"Education can play a major part in the required transformation into more environmentally sustainable societies, in concert with initiatives from government, civil society, and the private sector," said a 2016 UNESCO report titled Education for people and planet which pushes for education as one of the tools for dealing with the environmental crisis caused by human behavior. Education and the core curriculum shape's values and perspectives of the young students who are undergoing courses. The syllabus contributes to the development of skills, concepts, and tools that can be used to reduce or stop unsustainable practices, and with this ideology, the course of Environment studies was introduced in the first-year bachelor's degree. The subject has core concepts and methods from ecological and physical sciences and their application in environmental problem solving and makes them understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales. The outcome which was intended to be achieved was to reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world and also deepen the understanding the utility of environmental source.
Activities	Complementing the academic curriculum, the department also encourages to take part in various community activities contributing towards the goal 'Climate Action'. The below information gives clear insights into the department initiatives leading to create green environment. **School cleaning and sapling plantation** The NSS volunteers representing the department at the annual NSS Camp created awareness on Health and hygiene by educating villagers on personal cleanliness, sanitation, and the importance of clean drinking water. Environmental awareness on tree plantation.