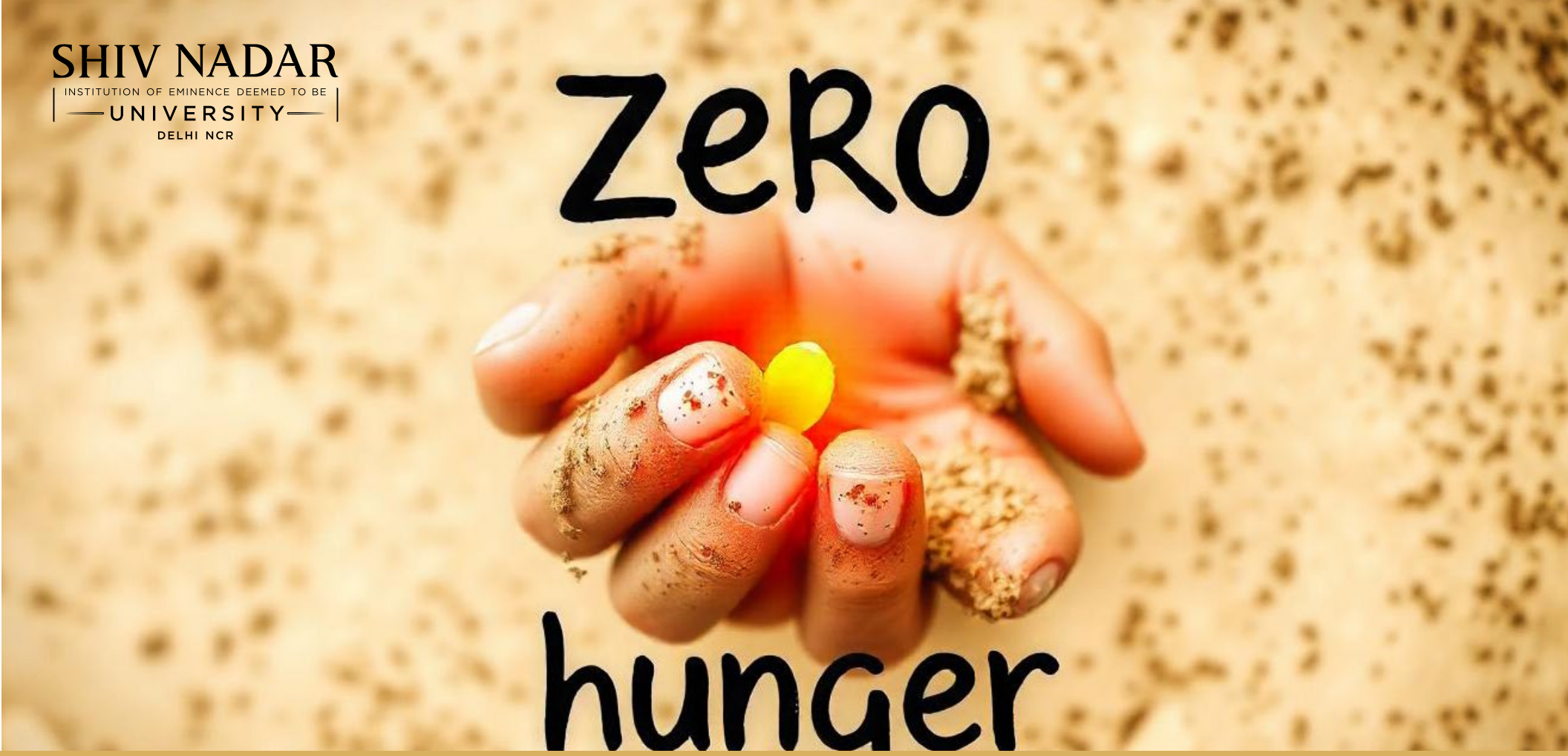
SHIV NADAR
INSTITUTION OF EMINENCE DEEMED TO BE
UNIVERSITY
DELHI NCR




# SUSTAINABLE DEVELOPMENT GOAL 2

## ZERO HUNGER

**End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.**

# Overview

> **There is enough food in the world for everyone. But not everyone has enough food.**
>
> **- Kofi Annan**

The Sustainable Development Goal of Zero Hunger has eight targets and 13 indicators that aim to address the massive problem of nearly two billion people who do not have access to safe, sufficient, and nutritious food. Even though enough food is produced today to feed the planet, hunger is rising in some parts of the world. The disparity in food distribution and the importance of addressing hunger through equitable access and systemic change calls for a holistic and multi-dimensional approach to address the issue and achieve the goal.

At Shiv Nadar University, we contribute to SDG 2 through teaching and research on agriculture, food sustainability, hunger, and malnutrition. We are committed to monitoring and tackling food wastage and addressing hunger among students and local communities through engagement and advocacy.

Here is a glimpse of our work.

# Teaching and Learning

We offer several courses to give a holistic understanding of food, Agriculture, hunger, malnutrition, and related topics. The International Relations and Governance department offers Agri-Food Systems (INT 145), Agriculture Vs. Environment (INT 232); the Department of Sociology provides interesting courses like food, sustainability, and culture (SOC 396); and Agrarian Worlds: Readings in the Anthropology of Agriculture (SOC 213). Ecology, Water, Climate Change and Energy (RTM 106), Agriculture, Livestock and Forestry (RTM 105), Education, Health and Nutrition (RTM 107). All undergraduate students are offered a compulsory common course curriculum program on Agricultural land and water crises and responses (CCC 718).

## A two-year master's program in Rural Management program launched with a unique pedagogy

In 2023, Shiv Nadar University launched a one-of-a-kind multi-disciplinary master's program. The program aims to develop gen-next innovators and creative leaders with the requisite understanding and skill sets demanded by rural India's emerging challenges and opportunities. The program envisions providing students with an in-depth, multi-disciplinary understanding of the problems of rural India and nurturing their capacity to find innovative and far-reaching solutions.

Based on a unique pedagogy, the program combines innovative classroom and studio teaching and dedicates two semesters to field education, including internships with the best practitioners in rural India. With a commitment to address complex global challenges through interdisciplinary and innovative approaches, every student has a mentor throughout and beyond the program. After a successful launch with 42 students for 2023-25, the program for 2024-26 commences in August 2024 with 45 students who are not only individuals passionate about and committed to serving in and working on issues related to rural India but are also from disadvantaged regions and communities.

# Social Sector Internship

All undergraduate students in the School of Management and Entrepreneurship undertake a Social Sector Internship (SSI). In this program, students undergo a rigorous 8-week on-site internship immersion in rural and non-urban ecosystems. During their tenure, our students work with local indigenous communities to ameliorate social enterprise challenges or create growth models for the social sector.

### 1. Hardik Gupta interned with Nature Conservancy

His project, 'Promoting Regenerative and No-Burn Agriculture (PRANA),' is a research-based project that requires studying various aspects of crop residue management machinery under the CRM scheme. Evaluating different rental models of service provision, understanding constraints faced by service providers, as well as identification of factors that influence the decisions of the service providers to rent out machinery for CRM and potential strategies to encourage the participation and usage of CRM machines instead of continuing the practice of stubble burning.

### 2. Akash interned with HCL – Samuday.

His project on analysis of multiple crop diversification models and their impact on household income involved evaluating the effects of crop diversification models by Samuday on household income and assessing how Community-Led Custom Hiring Centers (CHCs) affect small farmers' income by providing access to affordable farming equipment and services.

### 3. Kshitiz Goyal worked with the National Skill Foundation of India (NSFI).

Kshitiz worked on a project that focused on global warming caused by life style. His work Primarily focused on marketing research on the agriculture sector.

# Research

## Water Management Field Laboratory

To address the critical issues of food & water security nexus, water management, and the impact of climate change on water availability, the Department of Civil Engineering established the Water Management Field Laboratory in April 2021. The laboratory is co-funded by the Government of India, and the university serves as a state-of-the-art research facility. It has an extensive crop experimentation facility equipped with a drip irrigation system and research equipment facility for monitoring crops and soil parameters.

The Ministry of Water Resources and the Ministry of Agriculture & Farmers' Welfare, Government of India, have marked these research areas as of national importance. These areas are also aligned with the focus of the government's national missions on more crops per drop (increasing water use efficiency), har khet ko pani (increasing the cultivated area under irrigation), and Goal 4 (Improving water use efficiency by 20%) and Goal 5 (promotion of basin level integrated water resources management) of the National Water Mission.

Dr. Gopal Das Singhal, the lead faculty member, and his research team are developing AI-based decision-support systems for improved crop water use efficiency under a regulated deficit drip irrigation regime against the backdrop of climate change. It will provide /water-saving solutions for the two widely grown and consumed crops, rice and wheat. The research group in the lab regularly interacts with local farmers to provide knowledge regarding different irrigation methodologies and their benefits concerning saving water. Other areas of research and dialogue include soil testing, irrigation water testing, and dissemination of weather data for local farmers.

## Promoting agroforestry on sand dunes for desertification control in arid regions

This research focuses on tackling the issue of fertile land turning into desert in arid regions. It proposes a solution involving financial incentives based on payment for ecosystem services (PES) to encourage the transformation of privately owned sand dunes into agroforestry systems. Under the proposed mechanism, farmers plant Acacia nilotica trees and pearl millet on sand dunes, providing resilient economic returns in regions with harsh climatic conditions. In addition, acacia trees help to prevent crop damage on neighboring farms through stabilizing sand dunes and serving as shelterbelts. A dynamic optimization model of land-use decisions between open millet farming and acacia-based agroforestry derives optimal afforestation of sand dunes under varying PES payments, crop incomes, and farm size endowments. Results suggest that such agroforestry systems can effectively prevent the spread of desertification in arid regions.

Ranjan, Ram. "Promoting agroforestry on sand dunes for desertification control in arid regions." *Journal of Environmental Planning and Management* (2023): 1-26.

## Hundreds of millions in the tropics need wild harvests and other economic development for their well-being.

Global resource demand and large-scale conservation interventions diminish local access to "wild," common-pool terrestrial and aquatic resources. Many theories suggest that the well-being of wild harvesters can be supported through transitions to other livelihoods, improved infrastructure, and market access. However, new theories argue that such benefits may not always occur because they are context-dependent and vary across dimensions of well-being. The authors test these theories by comparing how wild harvesting and other livelihoods have been associated with food security and life satisfaction in different contexts across ₹ 10,800 households in the tropics. Wild harvests coincided with high well-being in remote, asset-poor, and less-transformed landscapes. Yet, overall, well-being increased with electrical infrastructure, proximity to cities, and household capital. This provides large-scale confirmation of the context dependence of nature's contributions to people and suggests a need to maintain local wild resource access while investing in equitable access to infrastructure, markets, and skills.

Wells, Geoff J., Casey M. Ryan, Anamika Das, Suman Attiwilli, Mahesh Poudyal, Sharachchandra Lele, Kate Schreckenberg, et al. "Hundreds of millions of people in the tropics need both wild harvests and other forms of economic development for their well-being." *One Earth 7*, no. 2 (2024): 311-324.

## Highlighting the role of agriculture and geospatial technology in food security and sustainable development goals

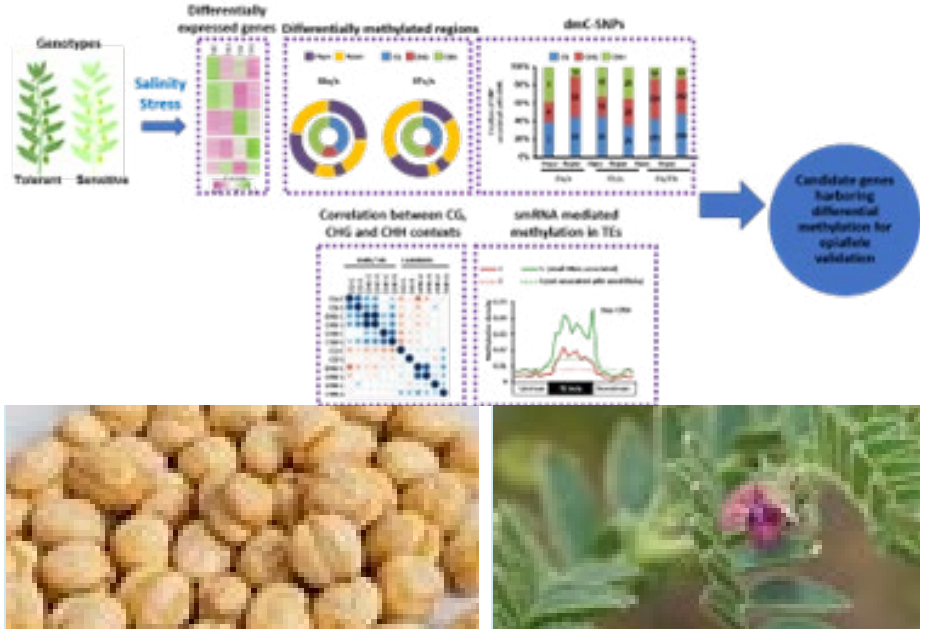
Food security is a global challenge that aligns with several Sustainable Development Goals (SDGs), including SDG 1 - "No Poverty," SDG 2 - "Zero Hunger," SDG 3 - "Good Health and Well-being," SDG 13 - "Climate Action," and SDG 15 - "Life on Land.". To effectively address this issue, a convergence of agriculture and technology is crucial, incorporating precision agriculture, sustainable agriculture, bioeconomy, advanced technologies such as machinery, Artificial intelligence-machine learning, and geospatial technology. Recent trends in food security worldwide have witnessed the adoption of technological advancements. However, it is essential to consider biodiversity when implementing and adopting technological advancements. The integration of technology in agricultural practices aims to reduce chemical usage in farms, while increased production remains the main objective of smart farming and Precision Agriculture. The study emphasizes that achieving the SDG objectives is attainable through agriculture, which has direct and indirect connections to all SDGs. Geospatial technology is vital in supporting the objectives at spatial and temporal scales by facilitating agricultural practices, ensuring food security, preserving biodiversity, monitoring soil and crop conditions, and promoting sustainable development.

Pandey, Prem Chandra, and Manish Pandey. "Highlighting the role of agriculture and geospatial technology in food security and *sustainable development* goals." Sustainable Development 31, no. 5 (2023): 3175-3195.

## Understanding plant environment interaction through epigenetic lens.

Dr Rohini Garg and her group at the Department of Life Sciences are working to understand the contribution of epigenetic and genetic variations and their interaction with changing environmental conditions in phenotypic variability in chickpeas. Chickpea (Cicer arietinum) is the third largest grown and most widely consumed legume plant that provides dietary protein to both animals and humans. However, its production is hampered by various abiotic and biotic factors, with salinity and drought stress causing significant yield loss globally.

The study revealed genotype-dependent DNA methylation changes under salinity stress in chickpeas, suggesting more contribution of genetic variations in regulating plant environment interaction. **The SERB Women Excellence Award and INSA Young Scientist Award funded this research.**




K Gupta, R Garg. (2023). Unraveling Differential DNA Methylation Patterns in Genotype Dependent Manner under Salinity Stress Response in Chickpea. IJMS, 24 (3), 1863. (*corresponding author). (IF = 5.6)

## Crop water stress index and its sensitivity to meteorological parameters and canopy temperature

The adverse impacts of climate change and the disparity between water availability and demand in agriculture necessitate the development of water-efficient irrigation schedules. The empirically derived crop water stress index (CWSI) is a popular tool for detecting water stress in crops and scheduling water-efficient irrigation regimes. However, the sensitivity of the empirical CWSI to the input parameters, i.e., air temperature (Ta), canopy temperature (Tc), and relative humidity (RH), is rarely studied. This study is conducted on wheat crops in the Uttar Pradesh province of India. Four irrigation scheduling strategies/treatments are used to study CWSI and its sensitivity to TC and meteorological parameters (Ta and RH). Two irrigation scheduling strategies correspond to drip irrigation, and the remaining two correspond to flood irrigation. The study results show that the water stress, as reflected by the CWSI values, was significantly lower for drip irrigation treatments than flood irrigation treatments.

Yadav, Aditi, Hitesh Upreti, and Gopal Das Singhal. “Crop water stress index and its sensitivity to meteorological parameters and canopy temperature.” *Theoretical and Applied Climatology* 155, no. 4 (2024): 2903-2915.

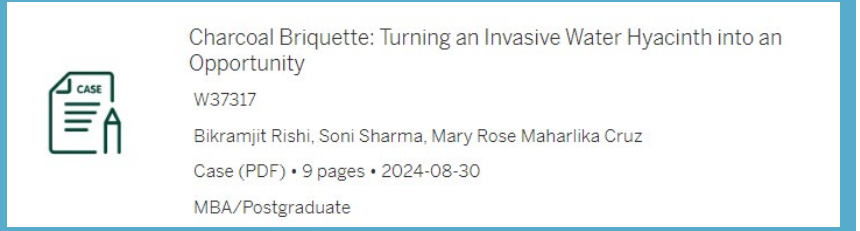
## Applications of drones in precision agriculture: future of intelligent and sustainable farming

Agricultural drones/unmanned aerial vehicles are aerial devices that can be employed in precision agriculture (PA). This technology not only helps the farmers increase their farm productivity but also helps in timely and convenient crop monitoring in the fields. Drones facilitate seed sowing, soil condition monitoring, irrigation scheduling, assessing crop conditions for their health, estimating stress, and livestock management. This chapter provides insight into the applications of drones in PA and is helpful to planners and decision-makers in agricultural research.

Tyagi, Ritvik, and Prem Chandra Pandey. "Applications of drones in precision agriculture: future of smart and sustainable farming." In *Remote Sensing in Precision Agriculture*, pp. 429-453. Academic Press, 2024.

**Case Studies – selected for their positive societal and environmental impact.**

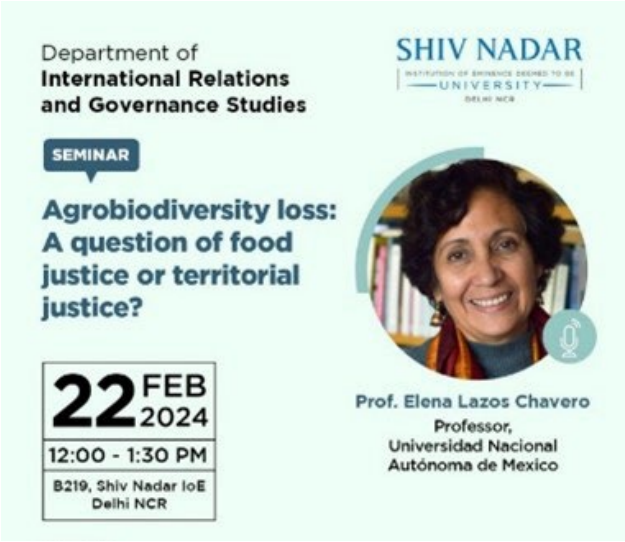
**Dr. Bikramjit Rishi, a Professor of Marketing, has been working on Case Studies with a specific focus on agriculture, natural resources, and climate change. His recent examples include:**

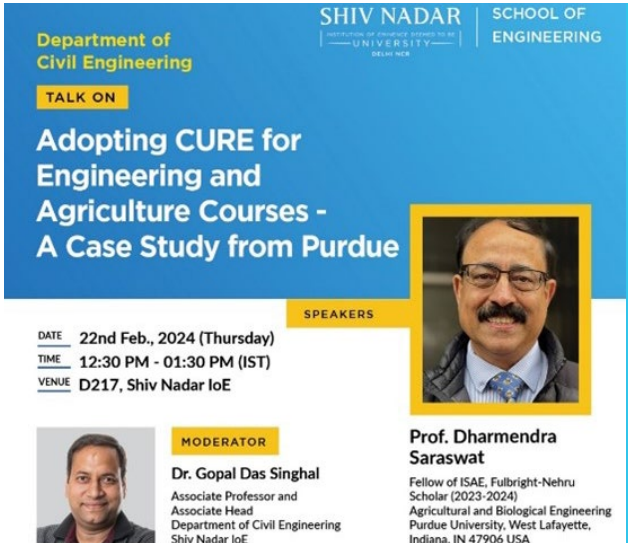




1. **Center for Sustainable Agriculture (CSA): Expanding a Business Model** – the case study was submitted to the prestigious 2024 Financial Times Responsible Business Education Award Case Competition. The Financial Times case competition spotlights business school education that contributes to a fairer, greener world.

2. **Charcoal Briquette: Turning an invasive water hyacinth into an opportunity** – the case study explores 'how communities around Laguna De Bay, Philippines, are transforming the invasive water hyacinth into sustainable charcoal briquettes, creating economic opportunities while helping to preserve the environment.' One can dive into this innovative solution and discover how a challenge can become a sustainable win-win for both people and nature. The case study reflects on many SDG goals, such as 2, 3, 6, 8, and 13.

## Conversations on Campus







### Celebrating National Milk Day on campus in partnership with Amul

National Milk Day is celebrated on November 26 every year to commemorate the efforts of Dr. Verghese Kurien, the brain behind the White Revolution in India. Dr. Kurien played an instrumental role in developing the dairy industry in India. His efforts also made India self-sufficient as far as its dairy needs were concerned.

The university partnered with Amul for the National Milk Day. A tree plantation drive was organized on campus. Students, faculty, and staff of the university, along with the representatives from Amul, participated in the drive.

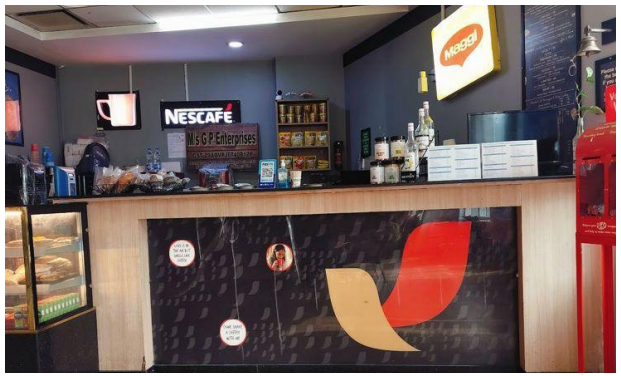
# University Operations

## Initiatives to ensure food security on campus

The University has taken several measures to give students access to affordable and nutritious food on campus. Since this is a residential campus, careful planning and thought have gone behind in enabling this access, keeping in view affordability, variety, nutrition, and taste for a diverse body of students, staff, and workers on campus.

The facilities on campus include vegetarian, non-vegetarian, vegan, and other special meals in the three dining halls, ten food kiosks around academic blocks, and vending machines for snacks, tea, and coffee. A large student activity center has various food options, a large cafeteria, and a marketplace to buy groceries and readymade foods. Besides, the pantry on each floor in the academic area and the hostel are equipped with purified drinking water for 3000+ students/staff/residents inside the campus. The students are provided sustainable food choices considering the rich diversity of the student population on campus. We promote reducing food wastage on campus by catering to various scheduled menus and food options.







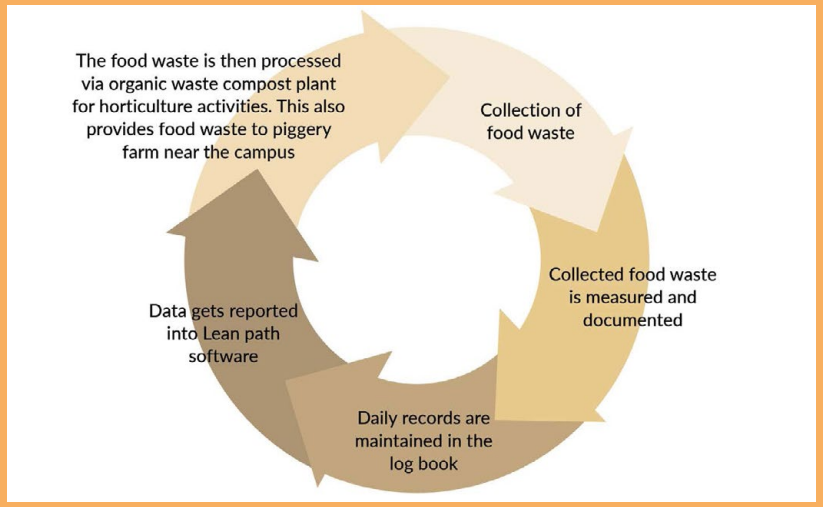
## Free meals for students from economically weak backgrounds

The University believes in creating opportunities while supporting deserving students from economically backward areas of rural India. One such example is students from VidyaGyan School[1] who are from rural India and potential high achievers at par with their urban counterparts. Every year, under rural scholarship, the university covers the educational and living expenses and free-of-cost meals for the students.

Besides, the University provides food to all third-party staff at subsidized rates.

## Campus Food Waste Tracking System

The university has a comprehensive and documented food waste tracking system to monitor and measure food waste at each level, i.e., production, handling, storage, processing, and distribution. Taking efficient measures and maintaining a daily food waste log has reduced food wastage per person from 9.36 kg to 9.22 kg. **So, we reported a 1.43% decrease in food waste per person from 2022-23 to 2023-24.**





| Year | Per capita waste generation |
|---|---|
| 2018-19 | 26.52 kg |
| 2021-22 | 9.2 kg |
| 2022-23 | 9.36 kg |
| 2023-24 | 9.22 kg |

[1]VidyaGyan schools were established in 2009 by the Shiv Nadar Foundation to identify and nurture gifted students from economically underprivileged rural backgrounds and transform them through high-quality education into future leaders

# Partnership

## Department of Science and Technology, Government of India, supports start-up research projects.

Dr. Gopal Das Singhal, Professor, Dr. Hitesh Upreti, Assistant Professor, and Dr. Ellora Padhi from IIT Roorkee received funding from the Department of Science and Technology to improve S&T Infrastructure (FIST). The grant runs until 2027 and includes sanctioned equipment like recirculating tilting flume and hyperspectral camera.

**Background:** In the present scenario, the usage of freshwater resources has increased, and the availability of the same has become erratic due to climate change driven by increased global temperatures and erratic rainfall behavior. In the Indian context, the situation is significantly more alarming since our country is home to around 18% of the world's population but only possesses about 4% of the total global freshwater reserves (World Bank, 2019). Therefore, there is an urgent need to plan and manage the available water resources in a scientific manner. This is particularly important in agriculture and irrigation planning as the contribution of agriculture to the abstraction of freshwater is more than 80% in our country. The primary reason behind this is the poor water use efficiency in Indian agriculture. For this reason, the Government of India has started initiated missions such as "more crop per drop" (increasing water use efficiency), "har khet ko pani" (increasing the cultivated area under irrigation), and Goal 4 (Improving water use efficiency by 20%) of the National Water Mission.

The project aims to provide solutions for developing water-efficient irrigation strategies and mapping crop water stress, which is vital for ensuring sustainable food production and water availability. Also, cascading instream storage strategies will be developed to promote self-sustained water and to mitigate flood scenarios. The project focuses on Sustainable Development Goals 2 and 6.

Dr. Gopal Das Singhal

Dr. Hitesh Upreti

Dr. Ellora Padhi

## Our undergraduate students conduct their OUR projects on local farms in the vicinity.

We have established the focus on undergraduate research from the start of the university's founding. The Opportunities for Undergraduate Research (OUR) program enables undergraduate students to undertake research projects with faculty members in any discipline.

The following are examples of OUR projects under the guidance of Dr. Gopal Das Singhal, Professor, and Dr. Hitesh Upreti, Assistant Professor, Department of Civil Engineering. These projects use satellite remote sensing for agricultural monitoring and detecting crop water stress, which is crucial for food and water security. *The project's study area is the farming fields in the vicinity of our university.* The project impacts SDG 2 and 6:

**1. Crop monitoring and detection of irrigation events in agricultural fields using remote sensing techniques**

**Chinthamaneni Sriyodh** is working on a project that uses satellite remote sensing to estimate the soil water content and detect the irrigation dates in the farmer fields near the university. Also, remotely sensed data from the optical satellites are used to monitor the harvesting dates of the crops.

**2. Assessment of crop water stress index using remote sensing and machine learning techniques**

**Likith Muni's** project is about optical and thermal data from the satellites used to monitor and map crop water stress for wheat crops grown by the farmers in the region. Machine learning models are used to predict the crop water stress values.

**3. Estimation of evapotranspiration using machine learning models and field-collected data**

**Sanjana** is working on crop water use (CWU) estimates that are predicted using machine learning models. The aim is to predict the CWU when limited data is available. Monitoring and quantifying CWU is indispensable for assessing crop health and predicting food production.

## Support sustainable food choices and the local community.

The university provides opportunities for local vendors to open food kiosks and vegetable shops on campus. This helps support the local community with significant economic opportunities and provides fresh and sustainable food choices from local sources to university residents.

## Partner with a local organic farm

The University sources organic food from Jaivik, a local organic farm 15 miles from the campus. The produce is procured weekly and used for preparing meals served on campus. Besides, an exciting, new, community-led food initiative is in progress.

## The student-run Feeding India Chapter

Shiv Nadar University has the only student-run chapter on Feeding India. Passionate about eradicating hunger and reducing food wastage on campus, the students work closely with non-government organizations and schools around the university to distribute meals and spread smiles.

**Aabhaar Drive**-is conducted occasionally to share a plate of gratitude with workers on campus. The students conduct a meal-slip collection drive out of their food money and provide meals for over 350 workers on campus.

**Adrika Drive -** the club students collaborate with AURA, the education student society of the university, and conduct a drive in partnership with a local non-profit organization, Aadrika. The aim is to deliver educational workshops to kids at Aadrika using fun and knowledge activities, concluding with a delicious, wholesome meal.

**Sard-E-Chuski-** is Feeding India's flagship event to serve hot tea to the guards on duty on cold winter nights. The drive reaches out to over 100 guards and workers on campus. The university also provides hot tea twice at night during severe winters to all staff on duty.

## Indo-Japan collaborative research project - Development of a cost-effective alternative to drone-based hyperspectral remote sensing for agricultural monitoring and yield estimation using machine learning techniques

Dr. Gopal Das Singhal, Professor, and Dr. Hitesh Upreti, Assistant Professor, Department of Civil Engineering, collaborate with Dr. Masaomi Kimura and Dr. Yutaka Matsuno, Department of Environmental Management, Faculty of Agriculture, Kindai University, Japan.

The team is working on using drone-based remote sensing data and machine learning for agricultural monitoring and water management.

Dr. Masaomi Kimura at the Water Management Field Laboratory, Shiv Nadar University in March 2024

## Partnership with Krishi Vigyan Kendra, Dadri

Dr. Gopal Das Singhal, Associate Professor, and Dr. Hitesh Upreti, Assistant Professor, Department of Civil Engineering, have collaborated with Dr. Mayank Kumar Rai, Head, Krishi Vigyan Kendra (KVK), Dadri. The collaboration discusses research and scientific inputs related to the agricultural practices currently followed by farmers near the university and ways to upgrade existing knowledge and technology around agriculture. The collaboration also involves enhancing the network with the local farmers, which is critical for any technological intervention for sustainable agriculture.

In India, the efficiency of water use in agriculture is extremely low. The rising population has increased food demands, and the critical issue of food and water security nexus is further compounded by erratic water availability and crop yield loss due to climate change. For sustainable agriculture, increasing water use efficiency significantly is critical. Additionally, with the changing climate resulting in frequent heat waves and extreme rainfall events, crop health monitoring has become imperative to ensure optimum food production. The partnership is also working to introduce end-user training and demonstration of agro-technologies to the farmers, support in the validation of agrotechnologies in farmer fields and field testing, and disseminate information on a large scale to the farmers in the remotest areas.


## Women-led community kitchen – through our Community Connect program

Shiv Nadar University is located in a region called Dadri in Uttar Pradesh. Dadri is a rapidly urbanizing rural region with high socio-economic inequality and low SDG outcomes. The university is deeply committed to positively impacting the area and has assumed a central role in the Dadri Development Project, a transformative initiative convened by the Shiv Nadar Foundation (SNF), a non-governmental organization. The project aims to create a "model sustainable rural community around Shiv Nadar University." This commitment is shared by the university leadership, staff, and students and is instilled in the core of the University's academic mission.

Through this project and its community connect program, we launched an innovative initiative. The initiative, called "Didi Jan Rasoi, " aims to establish three women-led community kitchens in the adjacent area around the University, mainly Dadri Block and Gautam Buddha Nagar, marking a significant step towards empowering women in our society.

The initiative works with the belief that when one empowers a woman, one uplifts an entire community and creates a sustainable social and economic development model. Implemented by ACCESS Development Services, this initiative seeks to provide economic opportunities to women from Self Help Groups and empower them to ensure that the community has access to nutritious and affordable food.

## Building a larger community of social transformers is essential to the vision that animates the field component in the master's program in Rural Management

The master's program on Rural Management at Shiv Nadar University is based on a unique pedagogy that provides students with an in-depth, multi-disciplinary understanding of the problems of rural India, combining innovative classroom and studio teaching with two full semesters devoted to field education, including internships with the best practitioners in rural India, nurturing their capacity to find innovative and far-reaching solutions.

Students intern with organizations that have done pioneering work over several decades in some of the most difficult management challenges facing rural India in areas of participatory water management, sustainable agriculture, rural livelihoods, women's empowerment, drinking water, sanitation, and innovation, to name a few.

The semester is an excellent opportunity for students to learn and receive training amidst the local communities and cultures guided by our partners, Gram Vikas , Samaj Pragati Sahayog (SPS) Advanced Center for Water Resources Development and Management (ACWADAM) , and the Center for Sustainable Agriculture .

[1]An NGO based in Odisha works to enable rural communities to lead dignified lives. This is done by building the capabilities of village communities, strengthening community institutions, and mobilizing resources.

[2]One of India's largest grass-roots initiatives working towards women's empowerment, water, and livelihood security.

[3]A not-for-profit organization that aims to establish a groundwater management agenda in India with a mission to demystify groundwater science and strengthen the hydrogeological capacity of institutions working in the water sector in India.

[4]An organization that works with a vision to become a national institution to lead the transition of Indian agriculture to become ecologically and economically sustainable

## The Atal Incubation Centre (AIC)

Atal Incubation Center at Shiv Nadar University is a tech-agnostic, hardware-focused premier incubation center established with Atal Incubation Mission, Niti Aayog, to foster a culture of innovation and entrepreneurship and create a holistic environment to help innovation-driven individuals develop and succeed in their business ventures under coordinated direction. The incubated startups receive business resources, technical assistance, and the benefit of a supportive and vibrant academia that leads and inspires them to build a sustainable business model. The incubation center is equipped with world-class facilities and state-of-the-art infrastructure spread over 10,000 sq. ft space amidst the sprawling 286 acres of land, well equipped with 154 labs, eight research centers, 24 departments, and infrastructure to attract startups from across the country to do transitional research and R&D. Some of the areas in which AIC focuses are Industry 4.0, Robot and Robotic Process, Automation, Additive Manufacturing, Life Science, EV & Power Batteries, Women-Led Startups, Space Tech, Health Tech, Ed Tech, Agri Tech and Other Disruptive Technologies

| **Name of Startup** | **Charavidhi Agri Solution Private Limited** |
|---|---|
| Startup Brief | Charavidhi provides farmers with a one-stop solution for their dairy inputs, animal markets, and veterinary medicine.<br>It is also on a mission to digitize dairy farming by introducing bartering exchanges between dairy farmers and their allied business domains. |
| Sector | Agritech |
| Product | Agri-platform |
| Founder | Sanu Kumar |
| Website | charavidhi.com |

| **Name of Startup** | **Banc-Biodegradable And Natural Composites** |
|---|---|
| Startup Brief | The startup manufactures compostable plastic granules made from agricultural residues and compostable materials. We aim to create biodegradable plastics that can compete with oil-based polymers for market share and ultimately replace them. |
| Sector | Agritech |
| Product | Compostable Plastic Granules |
| Founder | Anmol Bhatia |
| Website | www.banc.co.in |

Shiv Nadar Institution of Eminence is fully committed to the UN Sustainable Development Goals (SDGs). We have embraced a four-pronged strategy for SDGs through **teaching, research, our core institutional practices, and partnerships.**

**Deepa Hazrati**
Sr. Manager, Office of the Vice-Chancellor
deepa.hazrati@snu.edu.in

Shiv Nadar Institution of Eminence
Gautam Buddha Nagar, Uttar Pradesh, India