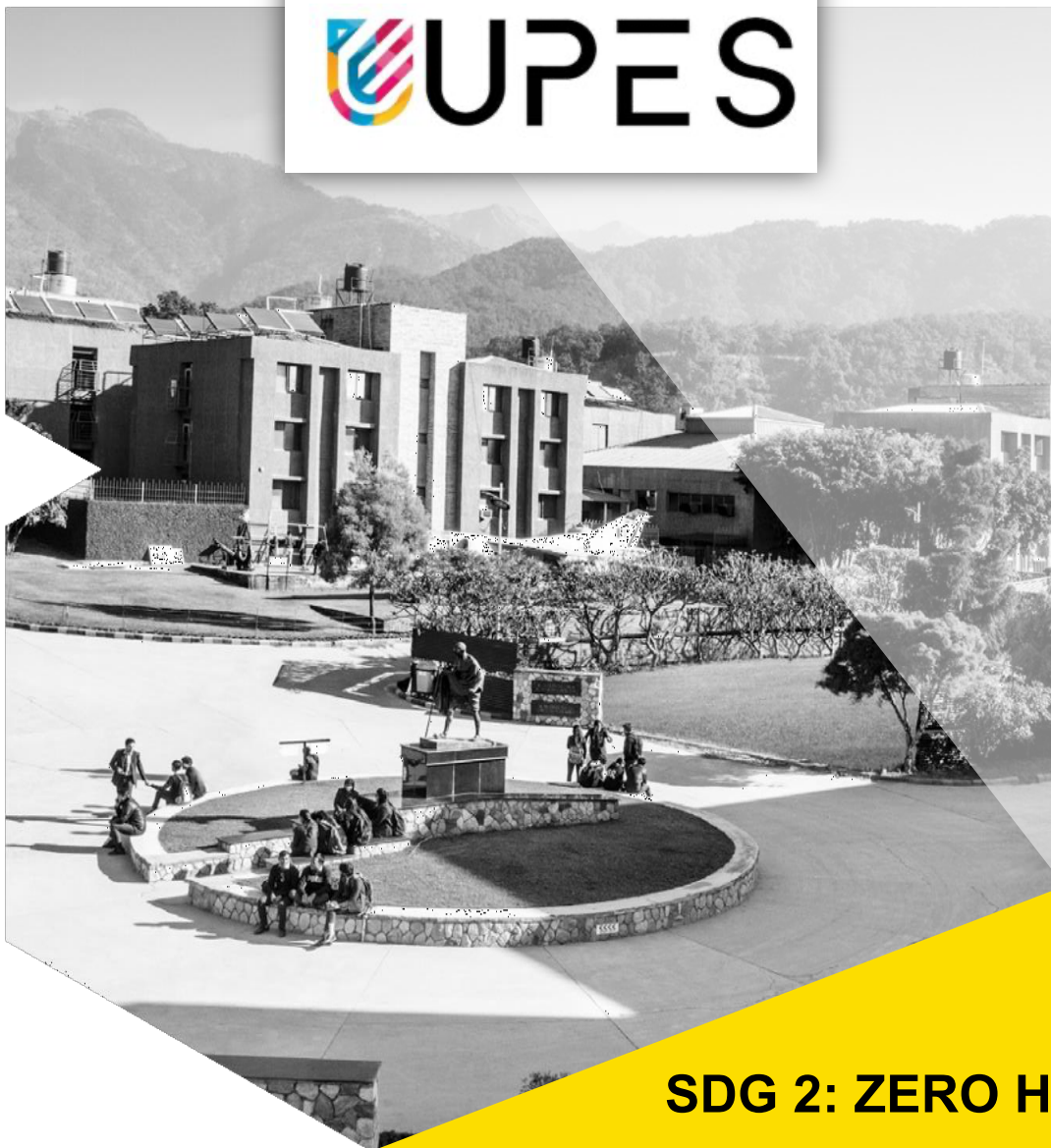




# SUSTAINABLE DEVELOPMENT GOALS



**SDG 2: ZERO HUNGER**

**2025**

## Table of Contents

<b>SDG 2: ZERO HUNGER</b> .....	3
UPES University's Contributions to SDG 2: Zero Hunger (2018–2025) .....	3
Campus-Based Efforts for Food Security .....	3
Mid-Day Meal Program for Workers' Children.....	3
Efforts to Reduce Food Waste.....	3
Culturally Appropriate and Healthy Options .....	4
Community Engagement and Outreach Initiatives .....	4
Food Donation Drives and Relief Efforts .....	4
Partnerships with Hunger Relief Organizations.....	4
Supporting Local Farmers and Rural Communities .....	4
Nutrition Education Camps .....	5
Academic and Research Contributions to Zero Hunger .....	5
Teaching Programs in Food and Nutrition.....	5
Research on Sustainable Agriculture and Food Systems.....	5
Innovations in Food Technology.....	5
Field Projects and Scholarly Work .....	6
Innovation and Policy for Sustainable Food Systems .....	6
Student-Led Social Innovations .....	6
Technological Solutions for Agriculture .....	7
Institutional Policies and Committees.....	7
Advocacy and Awareness.....	7
Conclusion .....	8
References.....	9

## SDG 2: ZERO HUNGER

### UPES University's Contributions to SDG 2: Zero Hunger (2018–2025)

UPES University in Dehradun, India has proactively advanced **UN Sustainable Development Goal 2 (Zero Hunger)** through a multifaceted approach over the past 5–7 years. These efforts span on-campus initiatives to ensure no one goes hungry, community outreach programs to combat hunger and malnutrition, academic ventures in food and nutrition, and innovative projects and policies that foster sustainable food systems. Below is a comprehensive report of UPES's contributions, with evidence from official sources, news, and publications.

#### Campus-Based Efforts for Food Security

**Affordable and Nutritious Campus Meals:** UPES has implemented **meal assistance and subsidized dining options** for students and staff on campus. These programs ensure that healthy meals are available at reasonable prices so that financial constraints do not impede access to nutrition [1]. In practice, this means students and campus workers can obtain balanced meals at the university cafeterias and hostels at low cost, supporting their well-being and academic success.

#### Mid-Day Meal Program for Workers' Children

Demonstrating an institutional commitment to hunger alleviation, UPES runs a *Labour School* at its Kandoli campus that provides **free nutritious mid-day meals** to the young children of construction workers (ages 3–8) [2]. Over **900 children** have been served hot, healthy lunches through this program [2]. By addressing food security for the families of campus laborers, UPES not only supports education and childcare but also relieves a major economic burden on these vulnerable households.

#### Efforts to Reduce Food Waste

UPES promotes sustainable dining practices in line with SDG 12 (Responsible Consumption) to ensure that food is not wasted. The university raises awareness about the environmental impact of food waste, highlighting that when food scraps rot in landfills they emit methane – a greenhouse gas 25 times more potent than CO<sub>2</sub> [1]. UPES emphasizes recycling or composting food waste as a better alternative to incineration (since food waste is ~70% water and inefficient to burn) [1]. In campus campaigns, students and staff are reminded that **cutting down on food waste could significantly reduce carbon emissions – eliminating edible food waste has the same CO<sub>2</sub> impact as taking 1 in 4 cars off the road** [1]. These reminders reflect UPES's policy of instilling mindful consumption on campus, including mess management practices to prepare food based on demand and initiatives to donate surplus food whenever possible.

## Culturally Appropriate and Healthy Options

The university dining services strive to offer **diverse, culturally appropriate meals** that meet nutritional standards. By providing a variety of Indian and international cuisines (including vegetarian options) at subsidized rates, UPES ensures that students from different backgrounds can find familiar, nourishing food. This commitment to **affordable healthy meals** on campus improves student nutrition and contributes to better learning outcomes [1]. During religious or festive occasions, the campus mess also accommodates traditional foods, underlining sensitivity to cultural food practices. *(Specific menus and nutritional standards are overseen by the School of Health Sciences faculty to ensure balance and hygiene.)*

## Community Engagement and Outreach Initiatives

### Food Donation Drives and Relief Efforts

UPES actively collaborates with local authorities and NGOs to reach food-insecure populations in the surrounding community [1]. For example, during the **COVID-19 lockdown of 2020**, the university organized emergency food relief by providing **“Dry Ration Family Packs” to 1,000 migrant worker families** across six rural locations [3]. Each pack contained enough staple groceries to feed a family of four for 8–10 days, thereby sustaining an estimated **4,000 individuals** during the crisis [3]. This large-scale donation drive, documented as part of UPES’s SDG 2 Impact Report, showcases the university’s ability to mobilize resources for hunger relief in times of disaster.

### Partnerships with Hunger Relief Organizations

UPES has built partnerships with reputable food security initiatives. Notably, the university engages experts from organizations like *The Akshay Patra Foundation* – known for running school meal programs – in advisory roles [4]. By involving Akshay Patra’s senior managers in its sustainability council, UPES aligns its outreach strategy with best practices in large-scale hunger mitigation. These collaborations have enabled events such as community kitchens and support to local **“Roti Bank”** food bank efforts, where student volunteers collect and distribute surplus food to impoverished areas (e.g., slums in Dehradun). *(A recent example includes UPES joining a Gandhi Jayanti food donation drive led by the Chief Minister, where thousands of free meals were served to the needy.)*

### Supporting Local Farmers and Rural Communities

The university’s social impact initiatives address hunger by improving livelihoods in agriculture. Through *Project Vikalp* and others, UPES has worked to **empower rural women farmers** in Uttarakhand by training them in sustainable agriculture and value-added food production [5]. Women’s self-help groups are taught to grow **medicinal and aromatic plants** and produce items like wood-free pencils and organic handicrafts, providing them with income that improves household food security [5]. In addition, UPES’s outreach teams frequently purchase produce from local small-scale farmers for campus needs, ensuring farmers have a stable market. This support of local agriculture

strengthens the rural economy and addresses the root causes of hunger by increasing farmers' incomes.

### Nutrition Education Camps

UPES faculty and students organize **nutrition awareness workshops** in nearby schools and villages to combat malnutrition [1]. These outreach programs include **educational campaigns on balanced diets, sanitation, and child nutrition**, often in collaboration with the state government's health department. The School of Health Sciences has conducted health camps and even an assessment of nutritional status across three districts of Uttarakhand [5]. By identifying malnourished children and women and referring them to government schemes, UPES contributes expert knowledge to improve community nutrition outcomes. Such initiatives help cultivate long-term food security by informing communities about kitchen gardening, low-cost nutritious recipes, and the importance of diversified diets.

## Academic and Research Contributions to Zero Hunger

### Teaching Programs in Food and Nutrition

UPES has introduced academic programs focused on food security and nutrition. A prime example is the B.Sc. in Food, Nutrition and Dietetics, a three-year undergraduate program launched under the School of Health Sciences [6]. This course trains students in food science, public health nutrition, food safety laws, and dietetics, including modules on mother-and-child nutrition and community health [6]. By educating future nutritionists and food technologists, UPES directly contributes skilled professionals to tackle hunger and malnutrition. The curriculum combines classroom learning with practical training, hospital internships, and industry projects, ensuring graduates can design diet plans, improve food quality, and implement nutrition interventions in society [6]. Such academic offerings underscore UPES's commitment to capacity-building for SDG 2.

### Research on Sustainable Agriculture and Food Systems

UPES researchers are actively engaged in projects that address sustainable food production, improved nutrition, and reduction of food waste. For instance, Dr. Ranjna Sirohi, a leading scientist at UPES, specializes in food waste valorization and "waste-to-wealth" strategies [7]. Her lab develops novel biomaterials and nutraceuticals from food processing waste – extracting valuable components like dietary fibers, oligosaccharides, and enzymes from discarded peels and husks to enrich foods and supplements [7]. This research not only reduces waste but creates affordable nutritional products, aligning with circular economy principles. Additionally, Dr. Sirohi's team works on advanced drying technologies that preserve nutrients and extend shelf-life of foods [7], which can help reduce post-harvest losses and make perishable foods available longer in food-insecure regions.

### Innovations in Food Technology

Another faculty member, Dr. Abhishek Chandra, brings expertise in food engineering and preservation. He explores non-thermal processing and sustainable drying techniques (like superheated steam drying and vacuum impregnation) to retain nutrients in fruits and vegetables [8].

Dr. Chandra's work on food value addition and new product development contributes to making safe, nutritious foods more accessible and affordable. Notably, he is currently a core technical committee member for the United Nations World Food Programme's Technical Support Unit (TSU) at UPES for rice fortification in Uttarakhand [8]. Through this collaboration, UPES provides research and policy support to the government's fortified rice distribution, aiming to alleviate micronutrient deficiencies (like anemia) in the public food ration system. This is a significant academic-civil society partnership directly targeting hidden hunger through staple food enrichment.

### Field Projects and Scholarly Work

UPES embeds SDG 2 into many student and faculty research projects. Under the university's *Himalayan Institute for Learning & Leadership (HILL)* initiative, interdisciplinary teams address food security challenges in mountainous communities. For example, one HILL project is promoting the cultivation of 'Bhanjira' (*Perilla frutescens*) – a nutritious traditional oilseed plant – to improve local diets and incomes [4]. By training farmers in sustainable Bhanjira farming and helping develop market linkages for value-added products, this project is **empowering Himalayan communities with a climate-resilient, nutrition-rich crop** [4]. Another project explores wild Himalayan berries as sources of nutritional supplements, aiming to create affordable vitamins/mineral-rich products while boosting rural livelihoods [4]. Through conferences and publications, UPES scholars share such findings globally. In September 2025, the School of Health Sciences hosted a National Conference on Food Fortification to Combat Anemia and Micronutrient Deficiencies, bringing together experts from academia, government (including Food Corporation of India officials), and industry to devise strategies for fortifying foods at scale. These academic contributions – from research breakthroughs to knowledge-sharing events – significantly amplify UPES's impact on Zero Hunger beyond campus boundaries.

## Innovation and Policy for Sustainable Food Systems

### Student-Led Social Innovations

UPES nurtures entrepreneurship that tackles hunger and nutrition challenges. A standout success is **"FitBread"**, a healthy food start-up incubated at the UPES Council for Innovation and Entrepreneurship (UCIE). Founded in 2021 by UPES alumnus Aryan Singh and his peers, FitBread produces **100% whole-wheat, preservative-free bread** as a nutritious alternative to the refined flour breads commonly sold [9]. The venture not only fills a nutritional gap for health-conscious consumers but also embodies social innovation: FitBread **hires local women** in Uttarakhand for bread-making and imparts bakery skills to them, thus economically empowering the community [9] [10]. Moreover, the start-up sources its ingredients from small local farmers and vendors, creating additional income streams for **local agricultural producers** [10]. This model of linking local farms to value-added food processing addresses hunger on two fronts – by providing healthier food options and by improving livelihoods – and has garnered appreciation from consumers and media [10]. FitBread's success story illustrates how UPES's ecosystem encourages students to develop **technology-driven, scalable solutions in food and agriculture** that can combat hunger and malnutrition.



## Technological Solutions for Agriculture

Beyond FitBread, UPES students across disciplines are leveraging technology to enhance food systems. In recent years, computer science and engineering students have worked on projects like **smart farming apps** and **IoT-based irrigation systems** to help farmers increase crop yields with data-driven precision. One student project, featured during the university's sustainability fair, involved a mobile application that analyzes soil and weather data to guide local farmers on optimal planting and harvesting schedules (contributing to more reliable food production even under changing climate conditions). Another team developed a prototype for a **solar-powered grain dryer**, which uses renewable energy to dry crops post-harvest, reducing spoilage without expensive infrastructure. These innovations, often developed under faculty mentorship and showcased in competitions, align with SDG 2's target of improving agricultural productivity through modern, sustainable methods.

## Institutional Policies and Committees

UPES's commitment to Zero Hunger is also enshrined in its institutional policies and governance. The university has an **SDG Steering Committee** that monitors progress on each Sustainable Development Goal, including SDG 2. This committee has guided policies such as integrating food security into the university's CSR activities and campus operations. For example, **UPES's CSR policy** prioritizes initiatives in "eradication of hunger, poverty and malnutrition" in local communities, which is why programs like the labor school mid-day meal and community food drives are sustained annually. On campus, **sustainable food practices** are encouraged by policy – the cafeterias have adopted portion-control and **on-demand cooking** (to avoid excessive leftovers), and there is a policy to donate untouched surplus food from events to nearby shelters. The presence of domain experts (like nutritionists and representatives from Akshay Patra) on university boards ensures that **hunger alleviation and nutrition considerations inform decision-making** at the highest level [4]. Additionally, as part of the Times Higher Education Impact Rankings process, UPES has been systematically collecting data and evidence of its food security efforts, which has led to greater internal accountability and the institutionalization of best practices (such as periodic food waste audits and surveys of student food security needs).

## Advocacy and Awareness

UPES recognizes that combating hunger also involves shaping mindsets. The university runs ongoing awareness campaigns on campus and social media to sensitize students to food insecurity issues. Initiatives like the "Hunger Heroes" volunteer program encourage students to devote time to community kitchens and teach them about the value of food. The university's blog and publications frequently spotlight hunger-related issues – for instance, an article discussing food waste recycling implored readers that solving food waste doesn't require "finding a cure for cancer" but rather everyday responsibility from each individual [1]. By fostering a culture of empathy and responsibility, UPES is shaping its graduates to be champions of sustainable development who will continue to address hunger in their personal and professional lives.

## Conclusion

**UPES University's contributions to Zero Hunger are comprehensive**, addressing immediate food needs while also investing in long-term solutions. On campus, no student or worker is left to go hungry, thanks to subsidized meals and special programs for vulnerable groups. In the community, UPES extends its reach through donations, partnerships, and education, directly benefiting thousands of people in Uttarakhand. Through academic curricula and research, the university generates knowledge and human resources that tackle the root causes of hunger and malnutrition. Its innovators are transforming ideas into practical solutions – from nutritious food products to smart farming tools – and institutional policies ensure these efforts are not one-off, but a sustained priority. Together, these endeavors over the past several years demonstrate UPES's firm commitment to SDG 2 and underscore the university's positive impact in the fight against hunger [1] [3]. By continuously building on these initiatives, UPES serves as a model for how higher education institutions can drive meaningful change towards a hunger-free and nutritionally secure future for their communities and beyond.



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