

# Teacher's Innovative Idea

The institution, Rajkiya Kanya Mahavidyalaya (RKMV), Shimla, promotes environmental sustainability through **teachers' innovative ideas translated into action-oriented practices with active student participation**. Keeping in view the ecological sensitivity of Himachal Pradesh, the college adopts experiential learning approaches that ensure **students' involvement in real-life environmental issues**, thereby helping to inculcate in them a sense of responsibility towards environmental conservation. These initiatives are designed not only to make students aware of the environmental problems around them but also to encourage their **meaningful contribution through practical engagement**, enabling them to become informed and responsible stakeholders in protecting their surroundings. During the academic year 2024–25, the Departments of Environmental Science and Home Science implemented several impactful, teacher-led initiatives focused on sustainable waste management and conservation practices.

The **Department of Environmental Science** undertook key activities such as the **Milk Bag Recycling Project**, the **Single-Use Plastic (SUP) Collection and Handover Programme** in collaboration with the Municipal Corporation (MC) Shimla, and **biodegradable waste management through composting**. These initiatives engaged students in hands-on processes including waste collection, segregation, recycling, and compost preparation, thereby transforming them into active participants in environmental protection.

## 1. Milk Bag Recycling Project

During the academic year 2024–25, the Department of Environmental Science at Rajkiya Kanya Mahavidyalaya (RKMV), Shimla implemented the Milk Bag Recycling Project as a teacher-led, action-oriented initiative. Under this project, used plastic milk packets generated on the college campus and in nearby households were systematically collected with the active involvement of students and staff. Students, under faculty guidance, carried out the cleaning, drying, and segregation of the collected waste.

These low-density polyethylene (LDPE) packets, which are otherwise difficult to manage through conventional waste systems, were aggregated and sent to authorized recycling units. Approximately 100 kg of milk packets were sent to the Milk Packet Project, a Mumbai-based NGO, for recycling during 2024–25, ensuring their safe diversion from landfills and contributing to the protection of the fragile hill ecosystem.

To further strengthen this effort, the institution has also signed a Memorandum of Understanding (MoU) with the Milk Packet Project, a Mumbai-based NGO, thereby reinforcing its commitment to plastic waste reduction, environmental sustainability, and student sensitization through hands-on engagement.



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## 2. Single-Use Plastic (SUP) Collection and Handover Programme (in collaboration with MC Shimla)

Another significant **teacher-driven, action-oriented initiative** undertaken by the Department of Environmental Science was the *Single-Use Plastic (SUP) Collection and Handover Programme*, implemented in collaboration with the Municipal Corporation (MC) Shimla. The programme ensured **active student participation** through awareness campaigns, cleanliness drives, and systematic collection of plastic waste from the college campus, nearby schools, and surrounding residential areas.

Under faculty supervision, the collected plastic waste was carefully segregated and formally handed over to MC Shimla for scientific processing. During the academic year 2024–25, approximately **400 kg of single-use plastic waste** was transferred for proper management, including recycling and its utilization in sustainable applications such as road construction. The initiative significantly contributed to **raising awareness and encouraging responsible behavior among students towards reducing plastic pollution**.

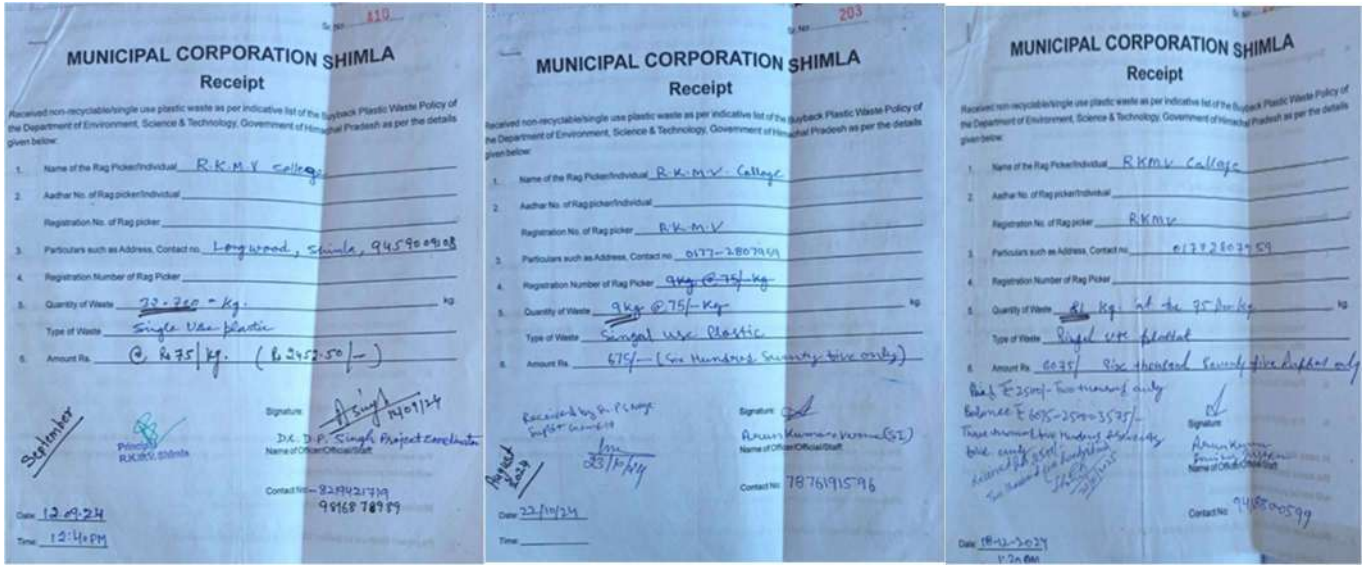
To institutionalize these efforts, RKMV became the **first college in Himachal Pradesh to sign a Memorandum of Understanding (MoU) with MC Shimla** for the proper collection and disposal of plastic waste. As part of this collaboration, the college was officially declared a **Single-Use Plastic Collection Centre** by the Municipal Corporation. The agreement ensures regular collection of non-biodegradable waste on a fortnightly basis, facilitating its scientific processing



**Memorandum of Understanding (MOU) with the Municipal Corporation, Shimla**



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**“Community Outreach for Sustainable Waste Management”**

The institution extends its sustainability initiatives beyond the campus through **community-oriented environmental action**, including cleanliness drives, plastic bottle collection campaigns, and the *Plastic Picker Campaign*. As part of this initiative, shopkeepers from IGMC to Lakkar Bazar were sensitized about proper plastic waste disposal, promoting **active community participation in environmental conservation**. Further strengthening this effort, the RKMV Eco-Club undertook **area adoption from IGMC to the Ridge**, where students conducted awareness drives to educate local vendors and tourists on responsible waste disposal practices.



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These integrated efforts highlight **active student involvement and teacher guidance**, fostering environmental awareness, strengthening community engagement, and creating a meaningful impact at both institutional and community levels.

### 3. Biodegradable Waste Management through Composting

The Department also conceptualized and guided the *Composting of Canteen Waste Initiative* as part of its commitment to sustainable practices. This **teacher-led, experiential learning activity** promoted the principle of “waste to wealth” by engaging students in the daily collection and processing of biodegradable waste generated from the college canteen. Through on-campus composting techniques, approximately **350 kg of nutrient-rich compost (“black gold”)** was produced during 2024–25. The compost was effectively utilized in maintaining the college gardens and green spaces, reducing dependence on chemical fertilizers and enhancing soil health. The initiative provided **hands-on learning to students while inculcating values of sustainability and resource conservation**.



Collectively, these initiatives reflect the institution's emphasis on **teachers' innovative ideas translated into action-oriented practices**, ensuring **active student involvement, environmental awareness, and meaningful contribution towards conservation efforts**.

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## II. Project KATRAN

Project KATRAN is an innovative initiative of **the Department of Home Science** aimed at promoting upcycling as a sustainable solution for textile waste management. Conceptualized as a teacher-led, action-oriented practice, the project aligns with national efforts to reduce waste reaching municipal dumps and to foster a circular economy by extending the lifecycle of textiles and minimizing the use of virgin materials.

India being among the top 10 textile manufacturing hubs, the growing demand and foray of fast fashion contributes to textile waste. The country grapples with managing a staggering 7800 kilo tones of textile waste annually, accounting for 8.5 per cent of the total global waste. About 51 per cent of this waste originates from post-consumer sources, like discarded clothing, while 42 per cent comes from pre-consumer waste generated during production such as fabric off-cuts and yarn scraps and remaining 7 per cent as imported clothes.

In order to deal with this massive pile of discarded fabric waste, the students plan to make a small effort to reduce, recycle, reuse and even up-cycle of the same through the project named *KATRAN*.

**Date of Initiation:** 26<sup>th</sup> February, 2024

**Aims:** This project is working for two aims:

1. An environment-friendly stride through fabric waste management
2. Making *potlis* using jute burlap- woven canvas woven from natural fibre

**Objectives:**

1. To inculcate environmental values in students through emphasis on the concept of:
  - up-cycling of pre-consumer fabric waste.
  - three R's- Reduce, Recycle, Reuse for a cleaner and healthier environment.
  - using natural fibre textile for making articles to minimize the use of synthetic fibre, as an eco-friendly approach
2. To equip the students with the concept of designing home furnishings, apparels and accessories with best usage of fabric waste.
3. To make students capable of earning from skillful learning.

**Plan of Action:**

1. A group of dedicated KATRAN volunteers has been formed.
2. Discarded textiles left from fabric off-cuts are being collected by these volunteers from the tailors in surrounding areas to protect it to reach to municipal dumps.
3. Students are being educated about how to transform/ up-cycle the collected fabric waste into new useful products viz. bags, pouches, runners, wall panels, table mats, file folders, etc. with a higher value or function with less investment.
4. Each article is being labelled with the price tag which includes the cost of raw material (minimum), labour and profit margin.
5. Selling the above upcycled products make it a viable option for students to earn while they learn.

  
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