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sustainability initiatives

Green School Project

CSR REPORT

2025 - 2026

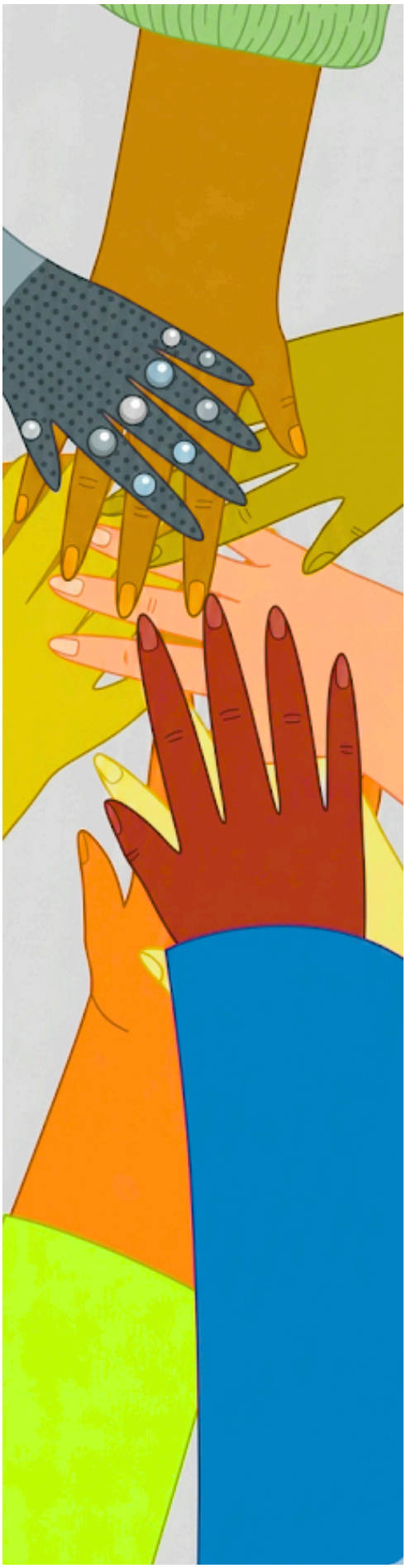


ACKNOWLEDGEMENT

Sustainability Initiatives extends its sincere gratitude to **Tata AutoComp Systems Ltd.** for their invaluable support and commitment towards this CSR initiative under the **Green School Projects.** Their vision and dedication towards promoting environmental sustainability have played a pivotal role in successfully implementing integrated interventions across the selected Zilla Parishad schools.

This collaborative effort has enabled the execution of key sustainability initiatives including **solar energy systems, rainwater harvesting, waste management, and green cover development,** contributing significantly to improving environmental conditions and fostering sustainable practices within school ecosystems.

We would like to express our heartfelt appreciation to all stakeholders, including school authorities, teachers, students, and community members, whose cooperation and active participation have been instrumental in the successful implementation of this project. We also acknowledge the dedicated efforts of the teams from **Tata AutoComp Systems** and **Sustainability Initiatives,** whose collective contributions in planning, execution, monitoring, and awareness-building ensured the overall success and impact of this initiative.



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ABOUT THE REPORT

As part of its **Corporate Social Responsibility (CSR)** commitment towards environmental sustainability and strengthening the education ecosystem **Tata AutoComp Systems Limited**, in collaboration with **Sustainability Initiatives (SI)** , implemented the **Green School Initiative** across 4 selected Zilla Parishad schools in the Chakan region during FY 2025–26.

The initiative was conceptualised in response to sustainability challenges commonly observed in semi-rural government schools, including dependence on conventional electricity sources, limited water conservation mechanisms, unmanaged organic waste, and restricted exposure to practical environmental education. Recognising schools as critical institutions for shaping environmentally responsible behaviour among future generations, the project adopted an integrated approach combining sustainable infrastructure development with awareness-building and capacity strengthening.

The project was implemented across 4 selected Zilla Parishad schools in the Chakan region — **Birawadi, Deshmukhwadi, Torne, and Ranmala Kadus** benefiting students, teachers, and the wider community. The interventions were designed to enhance resource efficiency, promote renewable energy adoption, strengthen water conservation practices, improve waste management systems, and embed environmental stewardship within daily school operations.

The initiative was executed through a structured CSR implementation model that combined Tata AutoComp CSR funding and strategic oversight with on-ground planning, coordination, and execution by Sustainability Initiatives. Close collaboration with school authorities ensured context-specific design, smooth implementation, and effective handover of facilities.

KEY FOCUS AREAS



RENEWABLE ENERGY



WATER CONSERVATION



WASTE MANAGEMENT

This also demonstrates how structured corporate–NGO collaboration can transform educational spaces into environmentally responsive learning environments. The Green School model provides a scalable and replicable framework for fostering long-term sustainability within rural school ecosystems.

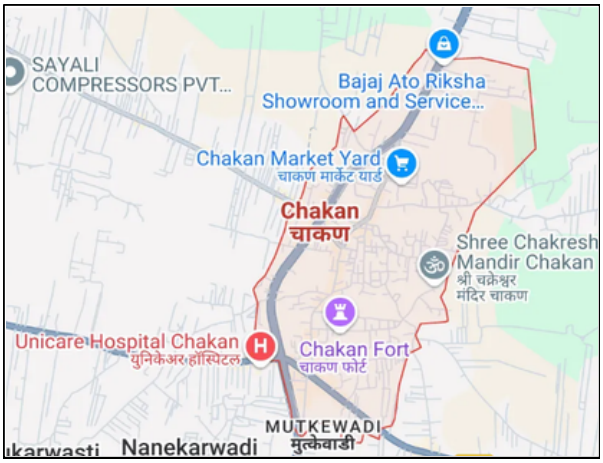
Key Interventions Included:

- Installation of solar photovoltaic systems to promote clean energy adoption.
- Implementation of rooftop rainwater harvesting systems to support groundwater recharge and water conservation.
- Installation of water-efficient fixtures to optimise water use.
- Deployment of wet waste composting systems to reduce organic waste disposal.
- Tree plantation and biodiversity enhancement within school campuses.
- Conducting structured environmental awareness sessions and formation of student-led sustainability groups to foster behavioural change.

ENVIRONMENTAL EDUCATION

CAPACITY BUILDING

CHAKAN - 18.75° N, 73.70° E.





IMPLEMENTATING PARTNERS

Tata AutoComp Systems Limited

Tata AutoComp Systems Limited is a leading automotive component manufacturer under the Tata Group, committed to responsible business practices and sustainable development. Through its CSR framework, the company supports education, environmental sustainability, community development, and inclusive growth.

For the Green School Initiative, it acted as the CSR sponsor and strategic facilitator, providing financial support, governance oversight, and project direction ensuring alignment with CSR objectives and compliance with Schedule VII of the Companies Act, 2013. The initiative reflects its commitment to fostering environmental responsibility in schools and strengthening community resilience through measurable interventions.

Sustainability Initiatives

Sustainability Initiatives is a non-profit organisation working in environmental sustainability, community development, and climate resilience, focusing on practical, context-specific solutions that build long-term community capacity.

As the implementation partner for the Green School Initiative, the organisation conducted site assessments, designed technical interventions, coordinated vendors, supervised installations, facilitated awareness programmes, and ensured structured monitoring and reporting working closely with school authorities for smooth execution and effective system handover.

Through collaborative planning and coordinated implementation, Sustainability Initiatives ensured alignment of interventions with local needs, operational feasibility, and long-term sustainability.

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📍 Zilla Parishad School, **BIRADWADI**



📍 Zilla Parishad School, **DESHMUKHWADI**



📍 Zilla Parishad School, **TORNE**



📍 Zilla Parishad School, **RANMALA KADUS**

BACKGROUND & NEED ASSESSMENT

The selected Zilla Parishad schools operate in semi-rural areas of the Chakan region and serve students primarily from agrarian and labour-based households. Rural educational institutions across India face increasing sustainability challenges related to water stress, energy dependency, and waste management.

According to the **Central Ground Water Board (CGWB, 2022),** a significant proportion of groundwater assessment units in India are experiencing declining water levels, leading to seasonal water stress. The **World Health Organization (WHO, 2020)** emphasises that adequate water, sanitation, and hygiene (WASH) facilities in schools are essential for ensuring health and educational continuity. Furthermore, the **Government of India Energy Statistics (2023)** indicate that coal continues to contribute over half of India's electricity generation, highlighting the carbon intensity of grid-based power supply.

Within this broader national context, the assessed schools demonstrated:

- Complete reliance on grid electricity without renewable integration.
- Dependence on borewell or municipal water supply without rainwater harvesting systems.
- Conventional water fixtures without low-flow efficiency mechanisms.
- Absence of decentralised composting despite biodegradable waste generation.
- Environmental engagement largely limited to textbook-based instruction.



Site Baseline: Existing Conventional Water Systems

1. Zilla Parishad School, BIRADWADI



- **Full Name:** Zilla Parishad Primary School, Birwadi
- **Location:** Village Biradwadi, Tal. Khed, Dist. Pune, MH
- **UDISE No:** 27250813501
- **Current student strength:** 250
- **Grade:** Class 1st to 7th
- **Teachers & Support staff:** 9
- **Drinking Water Availability:** Yes
- **Current Water Source Supply:** Gram Panchayat
- **Electricity & Power Availability:** Intermittent
- **Organic Waste Generated:** approx 4.5 kg/day (Mid-Day Meal + Classrooms)
- **Occupation of Parents:** Blend of Migrant Labourers and Agricultural Workers

2. Zilla Parishad School, DESHMUKHWADI



- **Full Name:** Zilla Parishad Primary School, Deshmukhwadi
- **Location:** Village Deshmukhwadi, Tal. Khed, Dist. Pune, MH
- **UDISE No:** 27250812201
- **Current student strength:** 103
- **Grade:** Class 1st to 7th
- **Teachers & Support staff:** 7
- **Drinking Water Availability:** Yes
- **Current Water Source Supply:** Gram Panchayat
- **Electricity & Power Availability:** Solar
- **Organic Waste Generated:** approx 2-2.5 kg/day (Mid-Day Meal + Classrooms)
- **Occupation of Parents:** Agricultural Workers & Farmers

3. Zilla Parishad School, TORNE



- **Full Name:** Zilla Parishad Primary School, Torne
- **Location:** Village Torne, Tal. Khed , Dist. Pune, MH
- **UDISE No:** 27250809701
- **Current student strength:** 44
- **Grade:** Class 1st to 7th
- **Teachers & Support staff:** 4
- **Drinking Water Availability:** Yes
- **Current Water Source Supply :** Gram Panchayat
- **Electricity & Power Availability:** Intermittent
- **Organic Waste Generated:** approx 1 kg/day (Mid-Day Meal + Classrooms)
- **Occupation of Parents:** Agricultural Workers & Farmers

4. Zilla Parishad School, RANMALA KADUS



- **Full Name:** Zilla Parishad Primary School, Ranmala Kadus
- **Location:** Village Birwadi, Tal. Khed , Dist. Pune, MH
- **UDISE No:** 27250807401
- **Current student strength:** 107
- **Grade:** Class 1st to 7th
- **Teachers & Support staff:** 7
- **Drinking Water Availability :** Yes
- **Current Water Source Supply:** Gram Panchayat
- **Electricity & Power Availability:** Solar
- **Organic waste generated:** approx 2 kg/day (Mid-Day Meal + Classrooms)
- **Occupation of Parents:** Agricultural Workers & Farmers

A structured baseline assessment was conducted to establish measurable pre-intervention benchmarks across water consumption, electricity usage, waste generation, and environmental awareness levels. The assessment combined institutional profiling, sectoral norms, and operational observations to identify infrastructure and behavioural gaps.

Key baseline findings are summarised below:

- **Water Consumption**

As per the **WHO WASH Guidelines (2020),** recommended water availability in schools ranges between **20–25 litres per student per day** to meet drinking, sanitation, and hygiene requirements. Based on enrolment levels, the assessed schools demonstrated water consumption broadly aligned with these norms; however, the following gaps were identified:

- No rainwater harvesting systems in place.
- Absence of groundwater recharge mechanisms.
- Conventional taps without low-flow water-saving fixtures.
- No structured monitoring of water usage.

- **Electricity Usage**

According to the Government of India Energy Statistics (2023), rural educational institutions typically consume between **150–350 kWh per month,** with predominant reliance on grid supply. Baseline observations included:

- Complete dependence on conventional grid electricity.
- No installation of renewable energy systems prior to intervention.
- No energy efficiency or monitoring mechanisms in place.





Rainwater Harvesting System





Solar Panels

Site Snapshots - Installation Phase

- **Waste Generation & Disposal**

The **Central Pollution Control Board (CPCB, 2022) reports that biodegradable waste constitutes over 50% of India's municipal solid waste stream.** Within the assessed schools, waste generation included both kitchen and classroom biodegradable waste. Baseline gaps identified:

- Organic waste from mid-day meals disposed without composting.
- Classroom biodegradable waste (paper, dry leaves) not segregated.
- No decentralised waste treatment mechanisms.
- Mixed waste disposal practices.

- **Environmental Awareness**

Environmental awareness levels were primarily curriculum-based. There were:

- No structured eco-clubs or sustainability groups.
- Limited experiential exposure to renewable energy or composting systems.
- No sustainability monitoring or reporting mechanisms.



Installation of Composting Units



Environmental Awareness Session Planning – All Schools

OBJECTIVE

A. Overall Objective

To transform selected Zilla Parishad schools in the Chakan region into resource-efficient and environmentally responsible institutions through the integration of sustainable infrastructure and structured environmental awareness initiatives, thereby promoting long-term institutional resilience and climate-responsive practices.

B. Specific Objective

The project aims to achieve the following specific objectives:

- Install renewable energy systems to reduce dependency on conventional grid electricity and promote clean energy adoption.
- Establish rainwater harvesting systems to enhance water conservation and groundwater recharge.
- Improve water-use efficiency through installation of low-flow fixtures.
- Implement decentralised organic waste composting systems to promote waste segregation and nutrient recycling.
- Strengthen environmental awareness among students and staff through structured training sessions and experiential learning activities.
- Build institutional capacity for long-term sustainability monitoring and maintenance of installed infrastructure.









DESIGN & SCOPE OF WORK

1. 1 Rainwater Harvesting System

Rainwater harvesting is a critical water conservation strategy, particularly in regions experiencing groundwater stress. According to the **Central Ground Water Board (CGWB, 2022),** several regions in India are witnessing declining groundwater levels due to over-extraction. Additionally, the **NITI Aayog Composite Water Management Index (2018)** reported that nearly 600 million people in India face high to extreme water stress. The **World Health Organization (WHO, 2020)** further emphasises the importance of sustainable water management systems in institutions to ensure long-term water security and hygiene standards.

In this context, integrating rainwater harvesting within school campuses enhances water resilience, reduces dependence on borewell extraction, and promotes sustainable resource management practices.

Type of Rainwater Harvesting Implemented

The project adopted a Rooftop Rainwater Harvesting System in all 4 selected schools, wherein rainwater collected from school rooftops is channelled through filtration units and directed towards recharge or storage structures.

This method is suitable for institutional buildings due to:

- Defined roof catchment area
- Controlled water flow
- Higher runoff efficiency
- Ease of integration with existing infrastructure









RWH System Installation

Storage and Usage Techniques

The harvested rainwater can be managed through:

a. **Storage Tanks:**

- Above-ground or underground tanks (rain barrels/cisterns)
- Used for immediate non-potable purposes such as watering plants, cleaning, or toilet flushing

b. Recharge Structures:

- Recharge pits or wells
- Facilitate groundwater replenishment

Components of the Rainwater Harvesting System

The installed system comprises the following key components:

- **Catchment Area:** The rooftop surface that receives rainfall.
- **Conveyance System:** PVC/GI gutters and downpipes transporting water.
- **Filtration System:** Sand, gravel, or mesh filters to remove debris and contaminants.
- **Storage/Recharge Structure:** Tanks or recharge wells where harvested water is stored or percolated into the ground.

1. 2 Outcome & Impact Analysis

The assessment has been conducted by **VK:e Environmental, Pune, a NABET-accredited organization,** ensuring that the design and implementation of the rainwater harvesting (RWH) systems adhere to standard engineering practices and environmental guidelines. An initial site assessment was carried out to evaluate rooftop areas, rainfall patterns, and groundwater recharge potential across the selected schools.

Based on this assessment, suitable rainwater harvesting systems comprising rooftop collection, filtration, and recharge pits with borewell integration have been designed and implemented. The project, executed under **Sustainability Initiatives,** reflects a structured approach toward sustainable water resource management.









RWH System Installation

A. Rainwater Harvesting Potential:

The rainwater harvesting potential has been assessed based on rooftop catchment area, average annual rainfall (700 mm), and a runoff coefficient of 0.95 for roof surfaces. Additionally, approximately **50 rainy days per year** have been considered for estimating daily runoff. The rooftop areas across the schools range from 358 m^2 to 520 m^2, resulting in the following estimated annual runoff potential:

- **Biradwadi (450 m^2):** 299.25 m^3/year **(5.99 m^3/day)**
- **Deshmukhwadi (510 m^2):** 339.15 m^3/year **(6.78 m^3/day)**
- **Torne (358 m^2):** 238.07 m^3/year **(4.76 m^3/day)**
- **Ranmala Kadus (520 m^2):** 345.80 m^3/year **(6.92 m^3/day)**
- **Total runoff** potential across all schools: **1222.27 m^3/year.**

These values form the basis for designing recharge structures capable of capturing and managing site-specific runoff volumes.

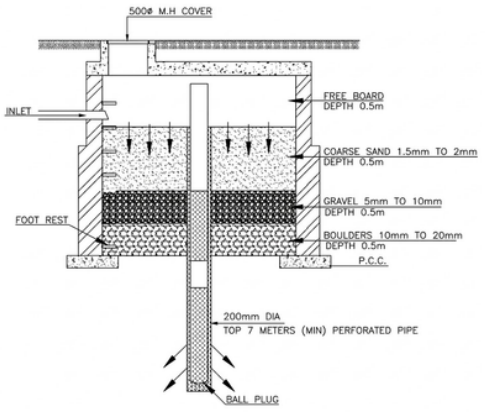


Diagram 1 : Schematic System Diagram for Rainwater Harvesting

RAINWATER HARVESTING POTENTIAL AND SYSTEM EFFICIENCY							
Sr. No.	Z.P. School	Roof Area (m^2)	Annual Runoff (m^3/year)	Daily Runoff (m^3/day)	Recharge Capacity (m^3/year)	RWH Efficiency (%)	System Adequacy
1	Biradwadi	450	299.25	5.99	323.8	108.20%	**Fully Adequate**
2	Deshmukhwadi	510	339.15	6.78	323.8	95.47%	**Nearly Adequate**
3	Torne	358	238.07	4.76	323.8	136.01%	**Highly Adequate**
4	Ranmala Kadus	520	345.8	6.92	323.8	93.64%	**Moderately Adequate**
Total		**1838**	**1222.27**	–			

Table 2 : Rainwater Harvesting System Performance and Efficiency Analysis

B. System Performance and Efficiency

The performance of the rainwater harvesting systems has been evaluated based on the percentage of runoff effectively recharged into the ground, considering a recharge capacity of approximately 323.80 m^3/year per site.

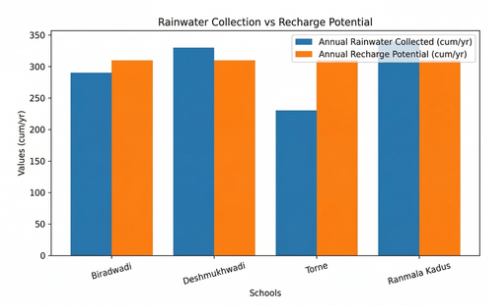
- **Torne:** 136.01% → Surplus recharge capacity **(~85.73 m^3/year excess)**
- **Biradwadi:** 108.20% → Fully sufficient **(~24.55 m^3/year surplus)**

Zilla Parishad School	Population		
	Students	Teachers & Staff	Total
Biradwadi	250	9	259
Deshmukhwadi	103	7	110
Torne	44	4	48
Ranmala Kadus	107	7	114
TOTAL			**531**

Table 1 : Population Distribution of Zilla Parishad Schools (Students and Staff)

- **Deshmukhwadi:** 95.47% → Near balance **(~15.35 m³/year deficit)**
- **Ranmala Kadus:** 93.64% → Moderate deficit **(~22.00 m³/year deficit)**

Systems at Torne and Biradwadi exceed runoff handling requirements, while the remaining sites achieve **>90% efficiency,** indicating strong performance.



Graph 1 : Rainwater Harvesting Efficiency Across Project Locations

C. Environmental and Operational Impact

The implementation of rainwater harvesting systems contributes significantly to:

- **One recahrge pit capacity: 6.48 m³/day**
- **Total recharge potential (4 schools): ~1295 m³/year** (4 No. of recharge pits in each schools)
- Reduction in **surface runoff and localized flooding**
- Improved **aquifer recharge and water table stability**

From an operational perspective, the system is **low-maintenance and sustainable,** requiring:

- Cleaning of rooftops and filters (pre-monsoon)
- Monitoring of overflow and recharge performance
- Periodic inspection of borewell and filtration systems

With proper maintenance, the system ensures **long-term functionality and efficiency.**



D. Conclusion

The rainwater harvesting potential across the four Zilla Parishad schools has been estimated based on rooftop catchment areas ranging from **358 m² to 520 m²,** with an average annual **rainfall of 700 mm.** The analysis indicates a total runoff potential of approximately **1222.27 m³ per year,** which forms a significant source for groundwater recharge.



On an average, each school contributes approximately **305.5 m³ of rainwater recharge annually,** highlighting the distributed and decentralized nature of the system. In addition, the total recharge potential translates to approximately **12,22,270 liters per year,** resulting in a per capita groundwater recharge of nearly **2,300 liters per person annually** across a total population of **531 individuals.**

KEY RAINWATER HARVESTING IMPACT INDICATORS				
Sr. No.	**Parameter**	**Calculation**	**Result**	**Interpretation**
1	Per Capita Recharge	12,22,270 L ÷ 531	~2,300 L/person/year	Each individual contributes significantly to groundwater recharge annually
2	Average Recharge per School	1222.27 m^3 ÷ 4	~305.5 m^3/year	Each school contributes substantial recharge volume
3	Daily Recharge Potential	1222.27 m^3 ÷ 50 days	~24.4 m^3/day	High recharge potential during rainfall events
4	Equivalent Water Impact	12,22,270 L ÷ 730	~1,675 people/year	Equivalent to annual water needs of over 1,600 people

Table 3 : Key Performance Indicators for Rainwater Harvesting Systems across Zilla Parishad Schools

During rainfall events (considering ~50 rainy days), the system enables recharge of approximately **24.4 m^3/day & one recharge pit capacity per site is ~323.80 m^3/year across all schools,** ensuring effective capture and utilization of rainwater. In terms of broader impact, the total annual recharge is equivalent to the yearly water needs of over **1,600 people,** demonstrating the significant contribution of the system toward water sustainability.

The performance analysis indicates that **Torne (136.01%) and Biradwadi (108.20%)** achieve full runoff management with surplus recharge capacity, while **Deshmukhwadi (95.47%) and Ranmala Kadus (93.64%)** achieve over **90% efficiency,** with minor scope for improvement. Overall, the systems are capable of capturing and recharging more than 90% of the total runoff, ensuring minimal surface discharge and enhanced groundwater replenishment.

From an operational perspective, the system is low-maintenance and sustainable, requiring periodic cleaning of rooftops and filters, monitoring of recharge performance, and routine inspection of system components. With proper maintenance, the system ensures long-term efficiency and reliability.

Overall, the initiative demonstrates a **technically robust and scalable model for decentralized rainwater management,** combining effective design, strong performance, and measurable environmental impact.









2. 1 Solar Photovoltaic (PV) Installation

The adoption of solar energy in institutional buildings supports national clean energy goals and reduces dependency on fossil fuel–based electricity. According to the **Government of India Energy Statistics (2023),** coal continues to account for more than half of India's electricity generation, contributing significantly to carbon emissions. The **International Renewable Energy Agency (IRENA, 2022)** highlights decentralized solar systems as a cost-effective and climate-resilient solution for public institutions, particularly in semi-rural areas. Additionally, India's commitment under the **National Solar Mission (MNRE)** promotes increased solar adoption to enhance energy security and reduce carbon intensity.

In this context, installing off-grid solar photovoltaic systems in schools strengthens energy reliability, reduces operational costs, and promotes clean energy awareness among students.

Type of Solar System Implemented – Off-Grid Solar PV

The project implemented an Off-Grid Solar Photovoltaic System, designed to operate independently from the main electricity grid.

This system includes battery storage, allowing:

- Electricity generation during sunlight hours
- Storage of surplus power in batteries
- Power supply during outages or low-grid availability
- Reduced dependence on conventional grid supply

Off-grid systems are particularly suitable for semi-rural schools where grid reliability may fluctuate. Under this initiative, Off-Grid Solar PV systems were installed in **2 Zilla Parishad Schools: Torne (3 kW) & Biradwadi (6 kW).**









On-site Solar Infrastructure and Battery Setup

Components of the Off-Grid Solar System

The installed system comprises:

- **Solar PV Panels:** Convert sunlight into direct current (DC) electricity.
- **Mounting Structure:** Supports panels at optimal tilt angle.
- **Charge Controller:** Regulates voltage and prevents battery overcharging.
- **Battery Bank:** Stores generated energy for later use.
- **Inverter:** Converts DC power into usable AC electricity.
- **Wiring & Distribution System:** Connects solar output to school load points.









2. 2 Outcome & Impact Analysis

The assessment has been conducted by **VK:e Environmental, Pune, a NABET-accredited organization with specialized expertise in renewable energy and sustainable infrastructure,** ensuring that the methodology and system design adhere to recognized environmental standards and regulatory frameworks. An initial site visit and assessment were conducted to evaluate the electrical load requirements, rooftop suitability, and energy usage patterns across the selected schools.

Based on this assessment, appropriate solar PV system capacities were identified and proposed to meet the energy demands of each school efficiently. The project, implemented under **Sustainability Initiatives,** reflects a structured and practical approach toward promoting clean and renewable energy in school ecosystems.

A. Energy Consumption Details:

The assessment of electricity consumption for the selected schools has been carried out based on actual load data, operating hours, and diversified demand.

ELECTRICAL LOAD SHEET – ZILLA PARISHAD SCHOOL									
Sr. No.	Description	Power for 1 Unit (W)	BIRADWADI			TORNE			Operating Hours
			No. of Units Installed	Consumption per day (kWh)	Diversified Power (kW)	No. of Units Installed (Biradwadi)	Consumption per day (kWh)	Diversified Power (kW)	
1	Ceiling Light	20	48	4.032	0.576	24	2.016	0.288	7 hrs
2	Fan Point	60 / 80	26	6.552	0.936	6	2.016	0.288	7 hrs
3	LED Screen	300	12	15.12	2.16	3	3.78	0.54	7 hrs
4	6 Amp Half	80	20	2.24	0.32	10	1.12	0.16	7 hrs
5	Street Light	60	10	2.52	0.36	10	2.394	0.342	7 hrs
6	Computer Point	400	4	4.48	0.64	5	5.04	0.72	7 hrs
7	16 Amp Switch & Socket	150	14	2.835	0.405	11	2.31	0.33	7 hrs
Total Daily Consumption (kWh)				37.779 kWh/day	5.397 kW	-	18.676 kWh/day	2.668 kW	-

Table 4 : Electrical Load in Z.P. Schools

Table 4 presents the electricity consumption pattern for the two Zilla Parishad schools.

- **Z.P. School, Biradwadi** has a higher energy demand with a **daily consumption of 37.78 kWh/day,** translating to **755.58 units/month.**
- **Z.P. School, Torne** has a comparatively **lower demand of 18.68 kWh/day**, amounting to **373.52 units/month.**

The **combined electricity consumption** across both schools is approximately **56.46 kWh/day (~1128 units/month).**

This energy assessment forms the basis for designing suitable solar PV systems aligned with the load requirements of each school.

B. Solar Energy Generation Analysis

Based on the installed system capacities and a generation factor of 4.2 units per kW per day, the solar PV systems generate:

- **Torne (3 kW system):**

Daily Generation: **12.6 kWh**
Monthly Generation: **378 units**

- **Biradwadi (6 kW system):**

Daily Generation: **25.2 kWh**
Monthly Generation: **756 units**

The **total solar generation** across both schools is approximately **37.8 kWh/day (~1134 units/month).**

As illustrated in the energy comparison graph, the solar systems significantly offset the electricity demand of both schools, with Biradwadi showing near-complete demand matching and Torne slightly exceeding its consumption.



OVERALL CONSUMPTION	
Parameter	Torne School
Daily Consumption (kWh)	18.68
Monthly Consumption (Units) (20 days)	373.52
Solar Capacity (kW)	3 kW
Daily Generation (kWh)	12.6

Table 5 : Unit Consumption Pattern in Torne

OVERALL CONSUMPTION	
Parameter	Biradwadi School
Daily Consumption (kWh)	37.78
Monthly Consumption (Units) (20 days)	755.58
Solar Capacity (kW)	6 kW
Daily Generation (kWh)	25.2

Table 6 : Unit Consumption Pattern in Biradwadi

Additionally, The system is supported by lead-acid battery banks to ensure uninterrupted power supply during non-sunlight hours and backup for essential loads.

- **Torne:** 150 AH × 6 = **900 AH total storage**
- **Biradwadi:** 150 AH × 8 = **1200 AH total storage**





C. Energy Balance & System Performance

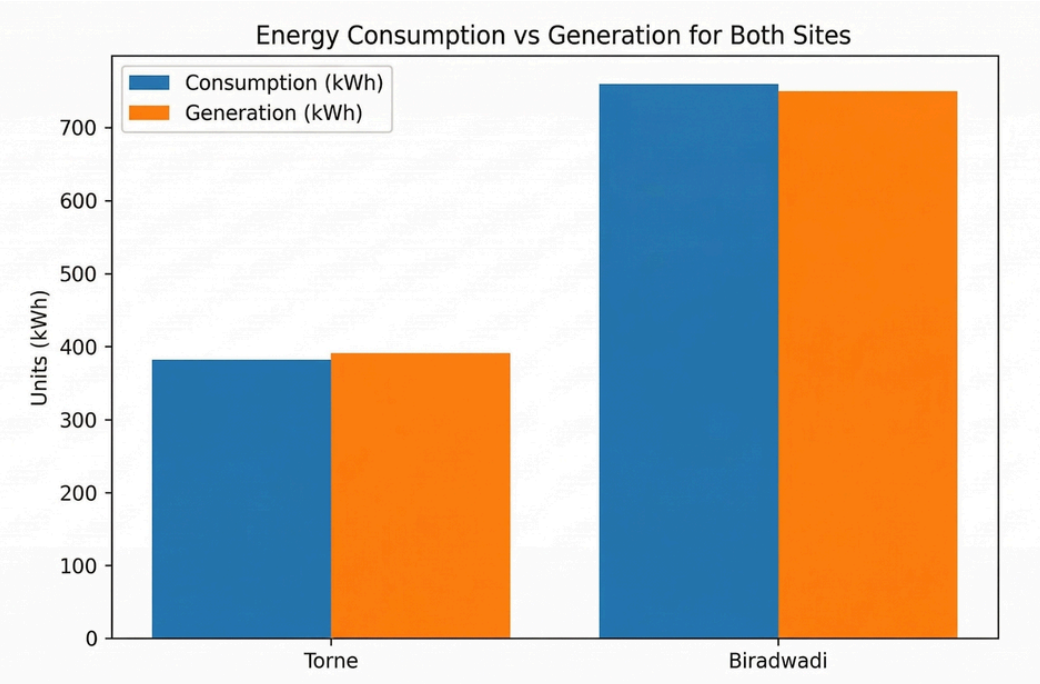
The comparison between energy demand and solar generation indicates:

- **Total Demand:** 56.46 kWh/day
- **Total Solar Generation:** 37.8 kWh/day

This implies that approximately **65–67% of the total energy requirement** is being met through solar energy.

The systems are designed to:

- Prioritize essential loads such as lighting, fans, and digital infrastructure
- Ensure reliable power supply through battery storage
- Provide flexibility to support additional future loads (streetlights, pumps, etc.)



Graph 2 : Generation vs Electricity Consumption across Schools

D. Carbon Emission Reduction Analysis

Electricity generated from conventional grid sources contributes significantly to greenhouse gas emissions. By shifting to solar energy:

- **Total Annual Solar Generation:** 1134 units/month × 12 = **13,608 units/year**
- **Emission Factor (India):** 0.82 kg CO_2/kWh
- **Carbon Emissions Avoided:** 13,608 × 0.82
  = **11,158 kg CO_2/year (~11.15 tons CO_2/year)**

This demonstrates a substantial reduction in carbon footprint due to the adoption of renewable energy.

E. Financial Impact Analysis

At an electricity tariff of ₹17 per unit:

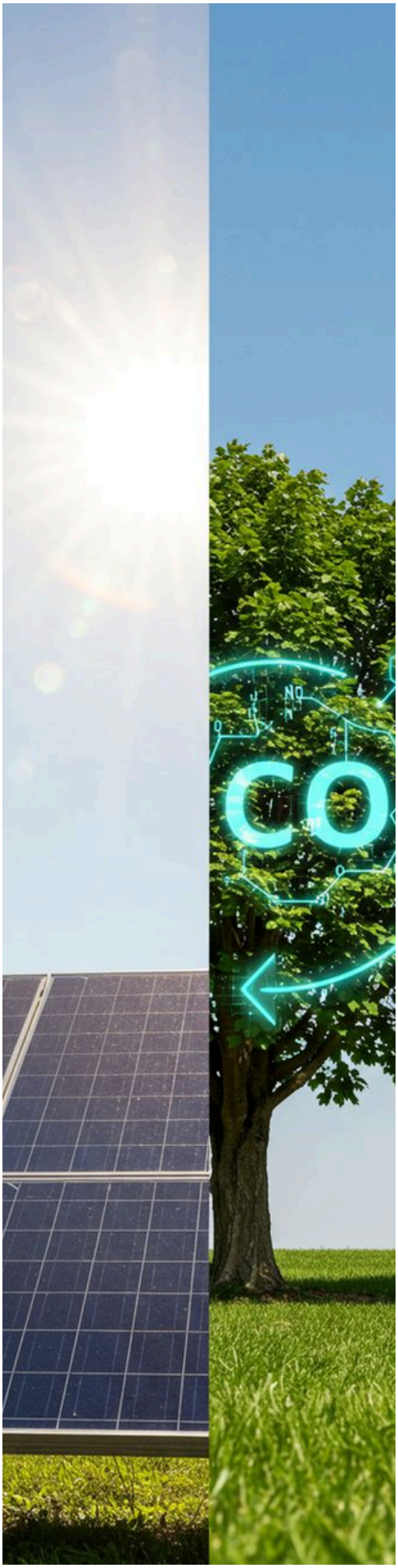
- **Torne Savings:** ₹6,350/month
- **Biradwadi Savings:** ₹12,845/month
- **Total Monthly Savings:** ₹19,195
- **Annual Savings:** ₹2,30,340

This highlights that the solar PV systems are not only environmentally sustainable but also economically beneficial.

F. Conclusion

The implementation of solar PV systems across the selected Zilla Parishad schools has proven to be efficient, sustainable, and economically viable, delivering both environmental and financial benefits. The initiative has led to a significant reduction in electricity expenditure, improved energy reliability, and an annual reduction of approximately 11 tons of CO_2 emissions, highlighting its contribution to climate change mitigation.

By utilizing rooftop infrastructure for clean energy generation, the project promotes energy self-reliance in rural schools while also serving as a practical learning platform that enhances awareness of renewable energy among students. The systems are designed to meet essential energy demands effectively and are scalable to accommodate future load expansion.



From an operational perspective, the solar PV systems require minimal operation and maintenance, primarily involving periodic cleaning of panels, routine system inspections, and battery maintenance to ensure optimal performance. The solar panels typically have a lifespan of **20–25 years,** while inverters require replacement every **8–10 years,** and batteries (lead-acid) may require replacement every **4–5 years,** depending on usage and maintenance practices.

Overall, the initiative demonstrates a decentralized, impactful, and scalable clean energy model, making it a replicable solution for educational institutions aiming to achieve sustainability, reduce operational costs, and transition towards renewable energy adoption over the long term.



3. 1 Organic Waste Decomposter System

Organic waste management is an essential component of sustainable institutional operations, particularly in educational campuses generating biodegradable waste from mid-day meals, food leftovers, paper waste, and garden litter. According to the **Central Pollution Control Board (CPCB, 2022),** biodegradable waste constitutes more than **50% of India's municipal solid waste stream,** highlighting the importance of decentralized composting systems.

Additionally, the **Food and Agriculture Organization (FAO, 2019)** emphasizes that composting organic waste reduces landfill burden, prevents methane emissions, and supports soil health through nutrient recycling.

In this context, installing organic waste composters within school premises enables efficient on-site waste management while promoting environmental awareness among students and staff.

Type of Composting System Implemented

The project installed IBC Tank-based Organic Waste Composting Units in all selected schools. Each **IBC tank (1 m × 1 m × 1 m)** is designed to process approximately **4–5 kg of organic waste per day** through aerobic microbial decomposition.

This method is suitable for school campuses because it:

- Enables decentralized waste treatment
- Reduces dependence on external waste disposal systems
- Produces nutrient-rich compost for school gardens and plantation
- Encourages waste segregation practices among students

Components of the Composting System

The Each composting unit consists of the following materials and equipment:

- **IBC Tank:** Primary composting container

(1 m × 1 m × 1 m)









- **Compost Matrix:** Organic base medium supporting decomposition
- **Treated Coir:** Maintains aeration and moisture balance
- **Coconut Shell:** Improves airflow within compost layers
- **Decomposing Culture:** Microbial culture accelerating decomposition
- **Tricompost Culture:** Enhances compost quality and nutrient enrichment
- **IVEM:** Integrated Vermi-Enrichment Material supporting microbial activity
- **Rake (Medium Size):** Used for turning compost material
- **Spray Bottle:** Maintains moisture levels in compost
- **Hand Gloves:** Safety equipment for handling organic waste



3. 2 Outcome & Impact Analysis

The assessment has been conducted by **VK:e Environmental, Pune, a NABET-accredited organization** with **specialized expertise in Solid Waste Management**, ensuring that the methodology, calculations, and implementation approach adhere to recognized environmental standards and regulatory frameworks. An initial site visit and assessment were conducted by VK:e Environmental to evaluate waste generation patterns, infrastructure requirements, and to determine the appropriate capacity of composting systems to be installed at each school.

The project, implemented under **Sustainability Initiatives**, reflects a structured and technically validated approach to decentralized solid waste management in school ecosystems.

Zilla Parishad School	Population		
	Students	Teachers & Staff	Total
Biradwadi	250	9	259
Deshmukhwadi	103	7	110
Torne	44	4	48
Ranmala Kadus	107	7	114
TOTAL			531

Table 7 : Population Distribution of Zilla Parishad Schools (Students and Staff)

A. Waste Generation Details:

The assessment of solid waste generation for the selected schools has been carried out based on population data and actual per capita waste generation rates. The estimates serve as a baseline for planning and implementation of appropriate waste management systems. **Table No. 7** presents the population distribution across 4 Zilla Parishad schools, including both students and teaching/non-teaching staff.

WASTE GENERATION ANALYSIS OF ALL ZILLA PARISHAD SCHOOL						
Zilla Parishad Shalas	Users (Nos.)	Total Population (Nos.)	Assuming 18 gm/person/day (0.018 kg/d)	Wet Waste (kg/day)	100% of Wet Waste Treated on Site (kg/day)	Capacity of Wet Waste IBC Tank Installed
Biradwadi	Students, Teachers &Staff	259	0.018	4.66	5	5 kg/day
Deshmukhwadi		110		1.98	2	
Torne		48		0.86	1	
Ranmala Kadus		114		2.05	2	
Total		531	100 % of Wet waste Treated on Site in all 4 Schools	9.55	10 kg/day	20 kg/day

Table 8 : School-wise Wet Waste Generation and Treatment Details

The total population across all schools is **531 individuals**, with **Biradwadi having the highest population (259), followed by Ranmala Kadus (114), Deshmukwadi (110), and Torne (48).**

This demographic assessment forms the basis for estimating daily waste generation and designing appropriate decentralized waste management systems tailored to each school's capacity.





B. Analysis of Waste Generation

The analysis of waste generation across the selected Zilla Parishad schools has been carried out based on the total population and an **assumed per capita waste generation rate of 18 gm/person/day (0.018 kg/day).** This assessment provides a consolidated understanding of biodegradable (wet) waste generated daily within the school premises and serves as a basis for evaluating the adequacy of the installed waste management infrastructure.

As presented in **Table 8**, the total wet waste generated across all four schools is approximately **9.55 kg/day (~10 kg/day), all of which is being 100% treated on-site,** ensuring complete processing efficiency through decentralized composting systems.

Wet waste generation is directly proportional to the population of each school. Accordingly, **Biradwadi contributes** the highest share of **waste (4.66 kg/day), followed by Ranmala Kadus (2.05 kg/day), Deshmukwadi (1.98 kg/day), and Torne (0.86 kg/day).**

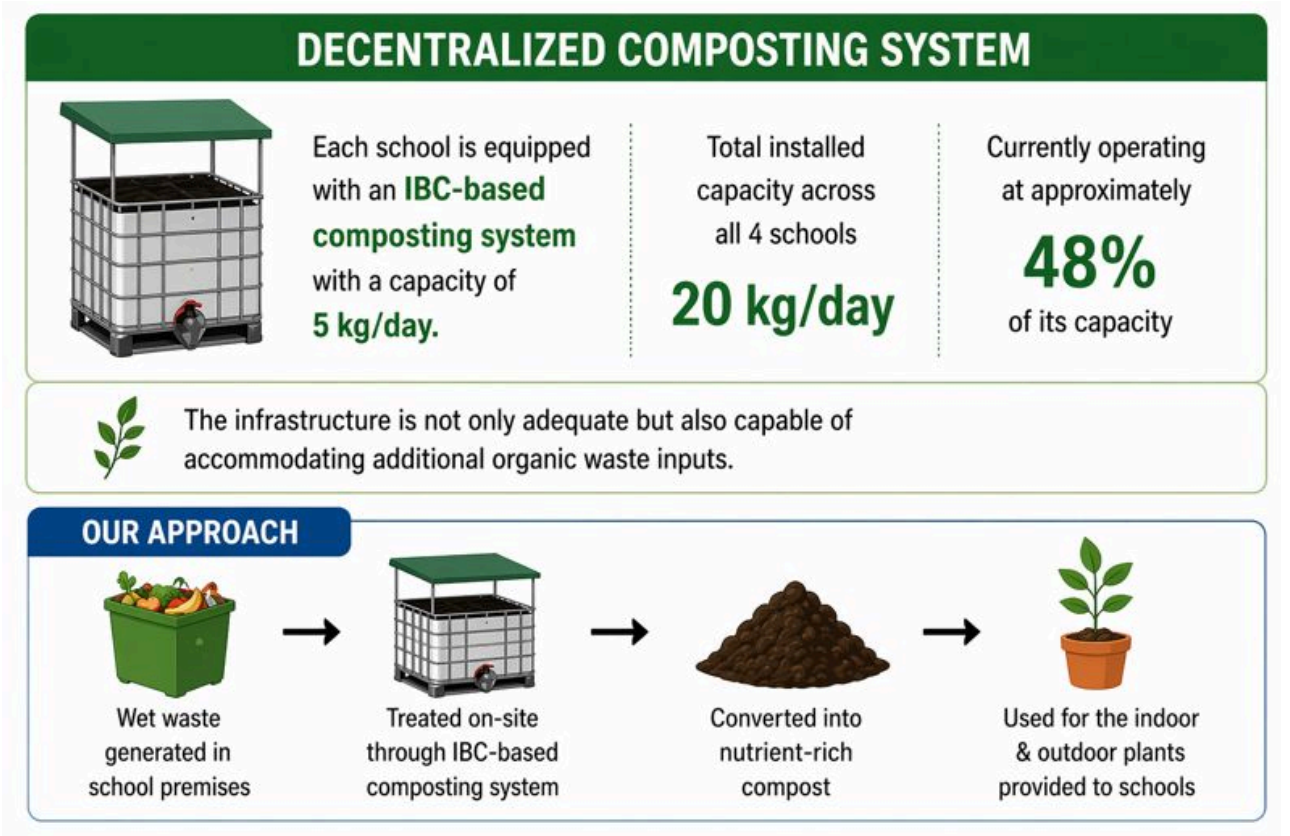
NOTE: Schools are encouraged to optimize the utilization of composting systems by incorporating additional biodegradable waste streams such as dry leaves, waste from occasional events and celebrations, classroom biodegradable waste, and optional household organic waste, to effectively achieve the targeted **5 kg/day processing capacity per school.**

Each school is equipped with an **IBC-based composting system with a capacity of 5 kg/day**, resulting in a **total installed capacity of 20 kg/day across all 4 schools.** The system is **currently operating at approximately 48% of its capacity**, indicating that the infrastructure is not only adequate but also capable of accommodating additional organic waste inputs.



Typically, **wet waste generated within school premises** may either be **disposed of in landfills or processed through composting.** Under this initiative, a shift toward **decentralized composting** has been successfully implemented.

Overall, the initiative demonstrates an **efficient and scalable decentralized waste management model**, promoting sustainable practices, resource recovery through composting, and a significant reduction in dependency on landfill disposal.



Scenario	Quantity (tons/day)	Total Quantity (tons/year)	Waste Treatment	Avg Emission Factor (kgCO2e/ton)	Carbon Emissions (kgCO2e/ ton/ year)
Scenario 1: Wet waste is sent to Landfill	0.01	3.65	Landfill	300	1095
Scenario 2: Wet waste is treated in Composter	0.01	3.65	Composted	30	109.5

Table 9 : Comparison of Carbon Emissions for Landfilling vs. Composting

C. Carbon Emission Analysis

A comparative analysis of carbon emissions was carried out to evaluate the environmental impact of **two waste treatment scenarios—landfilling and on-site composting**. The analysis is based on the total wet waste generated across all schools, estimated at approximately **0.01 tons/day (3.65 tons/year).**

In the landfill scenario, organic waste decomposition leads to the generation of methane, a potent greenhouse gas, resulting in significantly higher CO_2e emissions. The estimated carbon emissions due to landfilling are approximately **1095 kg CO_2e/ton/year**, based on an average emission factor of **300 kg CO_2e per ton.**

In contrast, the composting scenario demonstrates a substantially lower environmental impact, with carbon emissions estimated at **109.5 kg CO_2e/ton/year,** based on an average emission factor of **30 kg CO_2e per ton**. This results in a net reduction of approximately **985.5 kg CO_2e/ton/year** when biodegradable waste is treated through composting instead of being sent to landfill.

The findings clearly highlight that decentralized composting is a significantly **more sustainable and climate-friendly waste management approach.** By treating wet waste on-site, the project not only reduces greenhouse gas emissions but also **minimizes transportation requirements** and supports resource **recovery in the form of nutrient-rich compost.**



Overall, the shift from landfill disposal to decentralized composting demonstrates a substantial **reduction in carbon footprint,** reinforcing the effectiveness of **sustainable waste management practices in educational institutions.**

- Carbon emissions due to landfill = 1095 (kgCO2e/ ton/ year)
- Carbon emissions due to composting = 109.5 (kgCO2e/ ton/ year)

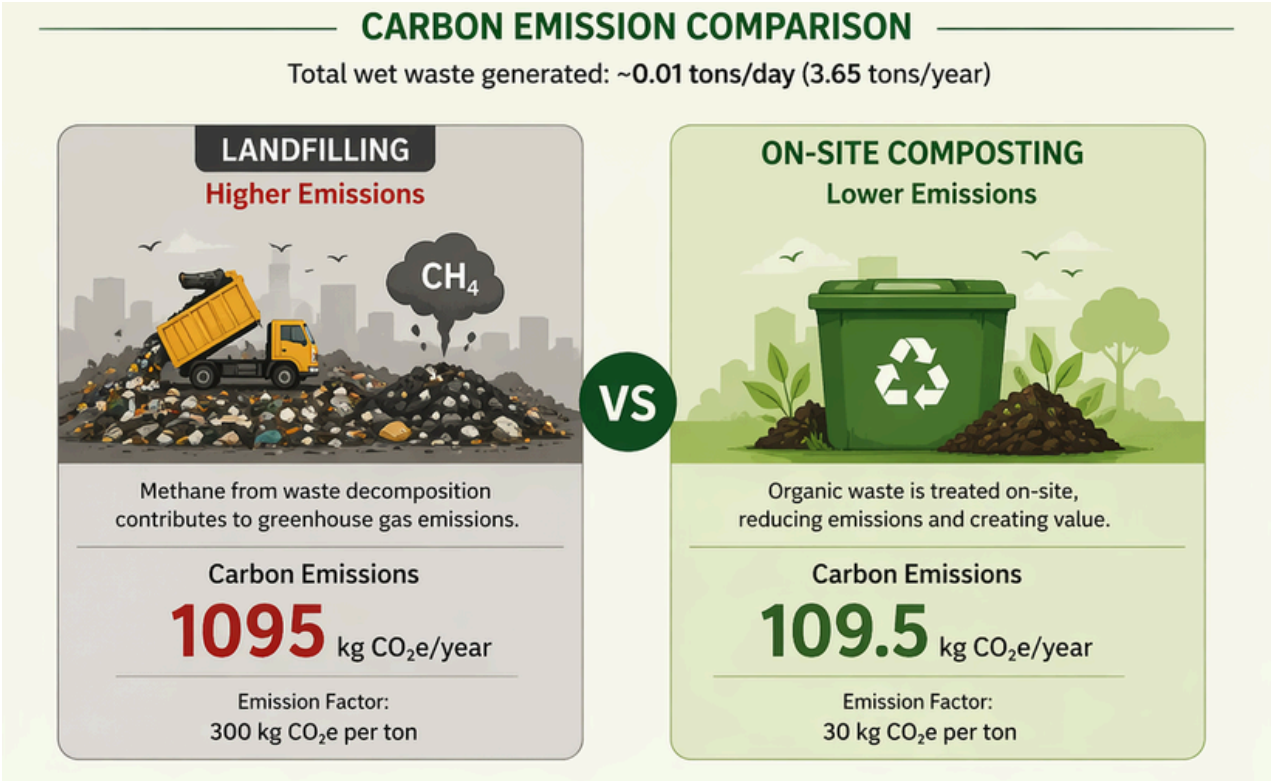
$$\text{Reduction (\%)} = \frac{\text{Landfill Emissions} - \text{Composting Emissions}}{\text{Landfill Emissions}} \times 100$$

$$= \frac{1095 - 109.5}{1095} \times 100$$

= 90%

Therefore, the shift from landfill disposal to composting of wet waste shows **90% reduction in carbon emissions, calculated** based on a decrease from 1095 kg CO_2e/ton/year (landfill scenario) to 109.5 kg CO_2e/ton/year (composting scenario).





D. Conclusion

The implementation of decentralized solid waste management systems across the four Zilla Parishad schools has proven to be **efficient, sustainable, and well-aligned with environmental best practices**. Based on the waste generation analysis, the **total wet waste generated is approximately 10 kg/day**, all of which is being 1**00% treated on-site through installed IBC composting units.**

The infrastructure provided, with a **total capacity of 20 kg/day,** is found to be more than adequate, currently operating at around **48% utilization**, thereby offering sufficient scope for handling additional biodegradable waste in the future. This highlights the robustness, scalability, and long-term viability of the system.

The transition from conventional landfill disposal to decentralized composting has resulted in a **significant environmental benefit, including an approximate 90% reduction in carbon emissions**, along with the prevention of methane generation and reduction in dependency on municipal waste systems.

Beyond environmental gains, the initiative has successfully promoted **behavioral change and awareness among students and staff,** encouraging responsible waste segregation and sustainable practices. The involvement of students further strengthens the potential for wider community impact.

Overall, the project demonstrates a **replicable and scalable model for school-based waste management**, combining environmental effectiveness, operational efficiency, and educational value. With continued monitoring and engagement, the initiative has the potential to serve as a benchmark for sustainable waste management practices in educational institutions.



4. 1 Installation of Low-flow Taps

Water conservation within institutional campuses is essential for reducing wastage and improving water-use efficiency. Conventional taps often discharge water at higher flow rates, leading to unnecessary water loss during daily activities such as handwashing and cleaning. According to the **World Health Organization (WHO, 2020)**, efficient water fixtures and controlled distribution systems are important for maintaining sustainable water management in public facilities and schools.

In addition, the **Central Public Health and Environmental Engineering Organisation (CPHEEO, 2019)** recommends the use of water-efficient fixtures such as low-flow taps to reduce water consumption in institutional buildings.

In this context, installing low-flow taps within school wash areas helps regulate water discharge, minimize wastage, and promote responsible water usage behaviour among students and staff.

















Type of Water-Efficient Fixture Implemented

The project installed Low-Flow Taps fitted with flow regulators in selected wash areas across the schools. These fixtures reduce water discharge while maintaining adequate pressure by controlling the flow rate.

This method is suitable for school infrastructure because it:

- Improves water-use efficiency
- Reduces water wastage during daily usage
- Integrates easily with existing plumbing systems
- Encourages responsible water usage behaviour among students

Components of the Low-Flow Tap Installation System

The installation included the following plumbing components:

- **Bibcock:** Wall-mounted tap used for controlled water discharge in wash areas.
- **Pillar Cock:** Vertical tap installed on wash basins for handwashing.

- **Slow Flow Adaptor:** Water-saving attachment that regulates water discharge and reduces wastage.
- **Additional Pipeline with New Supply Point:** Extra plumbing line installed to extend water supply to new tap locations.

4. 2 Outcome & Impact Analysis

The assessment has been conducted by **VK:e Environmental, Pune, a NABET-accredited organization** with **specialized expertise in water conservation and sustainable infrastructure**, ensuring that the methodology and analysis adhere to recognized environmental standards and regulatory frameworks . An initial site visit and assessment were conducted to evaluate water usage patterns, user behavior, and existing plumbing infrastructure across the selected schools. Based on this assessment, appropriate low-flow tap capacities were identified and implemented to optimize water consumption without compromising functionality. The project, implemented under **Sustainability Initiatives**, reflects a structured and practical approach toward improving water efficiency in school ecosystems.

Zilla Parishad School	Population		
	Students	Teachers & Staff	Total
Biradwadi	250	9	259
Deshmukhwadi	103	7	110
Torne	44	4	48
Ranmala Kadus	107	7	114
TOTAL			**531**

Table 10 : Population Distribution of Zilla Parishad Schools (Students and Staff)

A. Water Consumption Details:

The water consumption for the selected schools was assessed using population data and standard usage norms to establish a baseline for planning conservation measures.

Table No. 10 presents the population distribution across 4 Zilla Parishad schools, including both students and teaching/non-teaching staff. The total population across all schools is **531 individuals**, with **Biradwadi** having the highest **population (259),** followed by **Ranmala Kadus (114), Deshmukwadi (110), and Torne (48).**









Specification of the low- flow tap installed

LOW FLOW TAP INSTALLATION				
Zilla Parishad School	Total Population	Baseline Flow Rate (LPM)	Baseline Daily Consumption (L/day)	Baseline Annual Consumption (l/year)
Biradwadi	259	13	3367	10,10,100
Deshmukhwadi	110	13	1430	4,29,000
Torne	48	13	624	1,87,200
Ranmala Kadus	114	13	1482	4,44,600
Total	**531 (Population of Shalas)**		**6903**	**20,70,900**

Zilla Parishad School	Total Population	Low Flow Rate (LPM)	Low-Flow Daily Consumption (l/day)	Low-Flow Annual Consumption (l/year)	Annual Water Savings (l/year)	% Savings
Biradwadi	259	6	1554	4,66,200	5,43,900	53.85%
Deshmukhwadi	110	6	660	1,98,000	2,31,000	53.85%
Torne	48	6	288	86,400	1,00,800	53.85%
Ranmala Kadus	114	6	684	2,05,200	2,39,400	53.85%
Total	**531 (Population of Shalas)**		**3186**	**9,55,800**		

Table 11 : Comparative Analysis of Water Consumption: Conventional vs Low-Flow Taps

This demographic assessment forms the basis for estimating daily water consumption and designing suitable water-saving interventions, such as low-flow tap systems, tailored to each school's usage requirements and capacity.

B. Water Usage Analysis & Comparative Assessment

A comparative analysis was conducted to assess the impact of replacing conventional taps with low-flow tap systems across the four Zilla Parishad schools. The findings **(Table 11)** indicate a substantial reduction in water consumption under the low-flow scenario.

Daily water usage has decreased from 6,903 liters to 3,186 liters, while **annual consumption** has **reduced** from approximately **20,70,900 liters to 9,55,800 liters.** This results in **total annual savings of about 11,15,100 liters**, reflecting a consistent **reduction of** approximately **53.85% across all schools.**

The reduction is directly attributed to the lower flow rate of the installed systems and is consistent across all locations. Graphical analysis further reinforces the significant contrast between conventional and low-flow scenarios, highlighting the efficiency of the intervention.

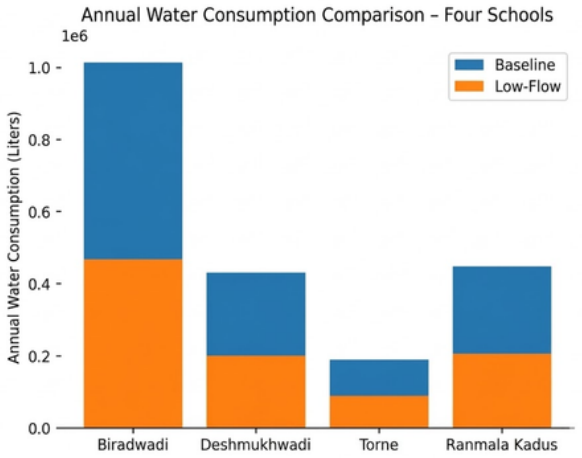
Overall, the results validate low-flow tap systems as **an effective, practical, and scalable solution for water conservation in institutional settings,** achieving significant savings without compromising functionality or user comfort.





Biradwadi

NOTE: Calculations for annual water consumption are based on an assumption of 300 operational days.



Graph 3 : Annual Water Consumption before & after installation of low-flow taps





Deshmukhwadi





Ranmala Kadus

C. Conclusion

The implementation of low-flow tap systems across the four Zilla Parishad schools **Biradwadi, Deshmukwadi, Torne and Ranmala Kadus** represents a high-impact, resource-efficient intervention delivering measurable environmental and social outcomes.

Based on a **total population of 531 users**, and considering an **average daily usage of 4 times per person with a duration of 0.25 minutes per use,** the transition from **conventional taps (13 LPM) to low-flow taps (6 LPM)** has resulted in a significant reduction in water consumption. The total daily **water usage has decreased from 6903 liters/day to 3186 liters/day**, achieving a consistent **reduction of 53.85%** across all schools and **saving approximately 3,717 liters of water daily.**

On an annual basis (considering 300 operational days), water consumption has reduced from approximately **20,70,900 liters/year to 9,55,800 liters/year**, resulting in total **savings of approximately 11,15,100 liters per year (~11 lakh liters)**.

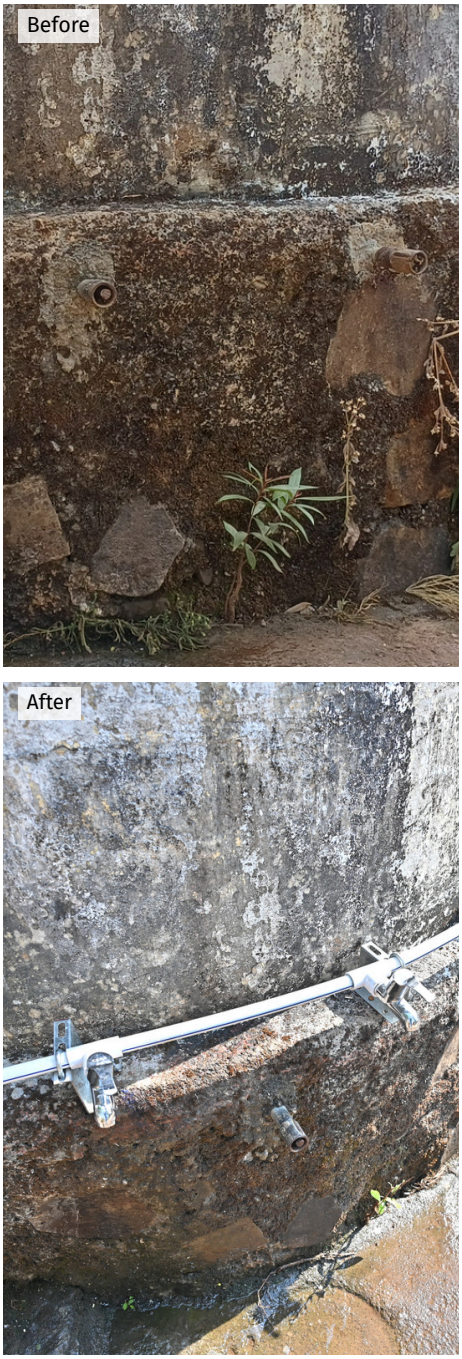
School-wise contributions to annual water savings are as follows:

- **Biradwadi:** 5,43,900 liters/year
- **Deshmukwadi**: 2,31,000 liters/year
- **Torne:** 1,00,800 liters/year
- **Ranmala Kadus:** 2,39,400 liters/year

On average, each school saves approximately **2.78 lakh liters of water annually**, while each individual contributes to saving nearly 2,100 liters of water per year, highlighting both institutional and individual-level impact.

These savings contribute directly to **freshwater conservation**, reduce pressure on local water resources, and support long-term environmental sustainability. From an operational perspective, the system is **cost-effective, easy to retrofit, and requires minimal maintenance.** With an expected lifespan of **15–20 years**, the low-flow tap systems ensure sustained performance. Routine operational practices, including proper usage, periodic inspection, and awareness among users, further enhance system efficiency and prevent water loss. The initiative is **highly scalable and replicable**, making it suitable for adoption across other schools and institutional settings with minimal additional investment.

Beyond environmental benefits, the project promotes behavioral change among students and staff, encouraging responsible water usage and creating awareness that extends to households and communities. Overall, the initiative demonstrates **a sustainable and scalable model for water conservation, combining technical efficiency, operational reliability, and social impact.** It reinforces the value of interventions in driving **measurable resource savings, long-term sustainability, and community-level awareness.**



5. 1 Tree Plantation with Iron Mesh Protection

Tree plantation is a key component of sustainable school development, contributing to environmental conservation, biodiversity enhancement, and climate resilience. **A mature tree can absorb approximately 20 kg of CO_2 annually (FAO, 2020)**, highlighting the importance of tree plantation for climate resilience and environmental sustainability.

In this context, a tree plantation initiative was undertaken across the 4 schools. Plantation of native and climate-resilient species, along with selected naturalized plants, to ensure survival and ecological benefits within the school premises. The activity aimed to create greener campuses while promoting environmental awareness among students.

The plantation activity involved careful selection of planting locations within the school campus to ensure optimal growth conditions and long-term survival of saplings. To safeguard the planted saplings, iron mesh tree guards were installed around each plant. These protective structures serve multiple purposes:

- Protect saplings from physical damage and grazing by animals
- Provide structural support during early growth stages
- Prevent accidental harm by students or external activities
- Ensure higher survival rates of planted trees

Plantation Execution & Maintenance

The initiative involved the plantation of native trees and indoor plants across selected schools, with iron mesh guards installed for each outdoor sapling to ensure protection. Students and school staff actively participated in the plantation activities, fostering a sense of ownership and environmental responsibility. Green Army members in each school were assigned responsibility for ongoing care and monitoring.



To ensure healthy growth and long-term sustainability of the saplings, the following maintenance practices were emphasized:

- Regular watering schedules
- Monitoring plant health and growth
- Protecting tree guards from damage
- Maintaining cleanliness of plantation areas

This integrated approach not only supports the survival of the plants but also encourages students to actively participate in long-term environmental stewardship within their school premises.



Plantation Details

The plantation initiative included a mix of native, climate-resilient, and well-adapted species, selected for their ecological, nutritional, and environmental benefits. These species contribute to biodiversity, provide shade, improve air quality, and support long-term sustainability within the school ecosystem. List of trees & shrubs planted are given below for reference:

A. Trees



1. Manilkara zapota (Chikoo)

- **Type:** Fruit-bearing Tree
- **Growing Height:** 3–5 meters
- **Description:** An evergreen fruit tree that produces sweet, nutritious fruits throughout the year. It provides dense shade, enhances greenery, and contributes to food value within the school campus.



2. Syzygium cumini (Jamun)

- **Type**: Fruit-bearing Tree
- **Growing Height**: 3–5 meters
- **Description:** An evergreen fruit tree that produces sweet, nutritious fruits throughout the year. It provides dense shade, enhances greenery, and contributes to food value within the school campus.

3. Mangifera indica (Mango)



- **Type:** Fruit-bearing Tree
- **Growing Height:** 5–8 meters
- **Description:** A native Indian fruit tree known for seasonal mango production. It offers shade, supports biodiversity, and has high nutritional and economic importance.

4. Mimusops elengi (Bakul)



- **Type**: Ornamental Tree
- **Growing Height**: 8–12 meters
- **Description:** A dense, evergreen tree known for its fragrant flowers and shade. It improves air quality, enhances campus aesthetics, and has medicinal and cultural value.

5. Bauhinia blakeana (Kanchan)



- **Type:** Evergreen / Ornamental Tree
- **Growing Height:** Up to 4 meters
- **Description:** A small ornamental tree with attractive pink flowers. Its manageable size makes it ideal for school spaces, adding visual appeal and greenery.

6. Anthocephalus cadamba (Kadamb)



- **Type:** Shade / Native Tree
- **Growing Height:** 15–25 meters
- **Description:** A fast-growing tree with a large canopy and fragrant flowers. It provides dense shade, improves the microclimate, and supports biodiversity.

7. Lagerstroemia indica (Tamhan)



- **Type:** Ornamental Tree
- **Growing Height:** Up to 15 meters
- **Description:** A medium-sized tree known for its vibrant purple flowers. It enhances the aesthetic appeal of the campus while supporting biodiversity and pollinators.

B. Shrubs



1. Murraya exotica (Kamini)

- **Type**: Shrub
- **Growing Height:** 2–3 meters
- **Description:** A medium-sized plant with fragrant white flowers and dense green foliage. It is widely used for landscaping and helps improve air quality.



2. Jasminum sambac (Mogra)

- **Type:** Flowering Shrub
- **Growing Height:** 1–2 meters
- **Description:** A small shrub producing highly fragrant white flowers. It holds cultural significance and enhances the aesthetic and sensory environment.



3. Hibiscus mutabilis (Jaswand)

- **Type:** Flowering Shrub
- **Growing Height:** 1–1.5 meters
- **Description:** A flowering plant producing vibrant blooms throughout the year. It supports pollinators, adds ornamental value, and holds cultural importance.

Green Cover Impact

The following summary highlights the overall environmental, institutional, and educational impact of the tree plantation initiative across the selected schools.

S.No	Impact Indicator	Description
1	**Total Trees Planted**	A total of **59 native and climate-resilient trees** were planted across the school campuses to enhance biodiversity and ecological balance.
2	**Indoor & Ornamental Plants**	Around **56 indoor and shrub plants** were introduced to improve campus aesthetics and air quality.
3	**School Coverage**	Plantation activities were conducted across **4 Zilla Parishad Schools**, ensuring wider environmental impact.
4	**Carbon Sequestration Potential**	The planted trees are estimated to absorb **1.1 tonnes of CO_2 annually**, contributing to carbon sequestration & supporting climate change mitigation.
5	**Iron Mesh Protection**	Around **59 iron mesh tree guards** were installed to protect saplings and ensure higher survival rates.
6	**Student Engagement**	Active involvement of students through **Green Army teams (5–7 members)**, promoting ownership, responsibility, and long-term maintenance of assigned roles and responsibilities.

















Tree Plantation with Iron Mesh Protection

Deshmukhwadi















Torne













Tree Plantation with Iron Mesh Protection

















Tree Plantation with Iron Mesh Protection

WORKSHOPS & VISIT

1. Awareness & Importance of Water & Energy Conservation

A **1.5-hour interactive awareness session** was conducted for students to highlight the i**mportance of water and energy conservation**. The session began with a discussion on natural resources provided by nature, focusing on the **significance of water and sunlight** in sustaining life on Earth. Students were encouraged to reflect on thought-provoking questions such as **"What if water or sunlight disappeared one day?"** to help them understand the critical role these resources play in everyday life.

The workshop further explained the **need for conserving water and energy**, followed by an introduction to the infrastructure interventions implemented under the project, such as **Rainwater Harvesting Systems and Solar Photovoltaic Panels** in all 4 schools. Students were informed about the purpose, usage, and environmental benefits of these systems within the school premises.

An **on-field demonstration** was conducted to explain the **working of the rainwater harvesting system**, enabling students to understand how rainwater is collected, filtered, and stored.

During the session, **a 7-member "Green Army" student team was formed and dedicated to monitoring the proper usage and maintenance of the installed systems.** The team members were guided to ensure responsible use of the infrastructure, assist junior students, monitor the pipeline valves, and help prevent any damage to the systems.

The session also included an explanation of **solar panel functioning,** where students learned how **solar energy is converted into electricity** and how it contributes to clean and sustainable energy generation. Students were also informed about the **benefits of solar energy along with important do's and don'ts** for safe and responsible usage of the system.









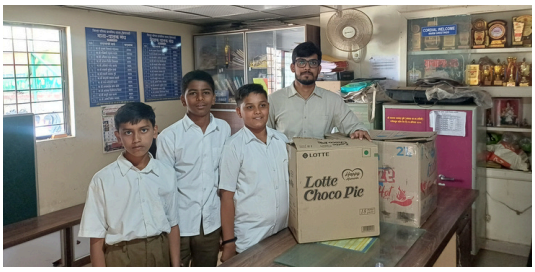
Green Army Team Assigned for Water & Energy Conservation

Through this workshop, students gained practical knowledge about renewable energy, water conservation, and environmental stewardship, encouraging them to actively contribute to maintaining sustainable practices within their school. The session concluded with the **distribution of snacks** for all the students.

Biradwadi







Deshmukhwadi








Water & Energy Conservation Session

































Water & Energy Conservation Session



Sanika Ramdas Ghorpade

Grade 6 , Z.P. School, Deshmukhwadi

“We learned about water conservation. Sir explained to us the importance of saving water and how rainwater harvesting helps in storing rainwater.

He also taught us how this water can be directed into a borewell for future use. This session helped us understand how we can save water and use it wisely.”



Mr. Sachin Kiruji Gawde

Teacher, Z.P. School, Torne

“Through the rainwater harvesting system installed in our school, rainwater is now effectively collected and recharged into the borewell. This has significantly improved water availability for drinking and for maintaining greenery around the school.

Additionally, the solar energy project has addressed the challenge of frequent power cuts in rural areas. With the installation of solar panels, we now have a reliable and sustainable electricity supply, which supports the use of digital learning tools and ensures uninterrupted classroom activities.

Both these initiatives have positively impacted our school and are greatly contributing to improving the quality of education.

We truly appreciate these efforts and look forward to being a part of such impactful initiatives in the future.”



Mr. Niranjan Chitale

Water & Energy Specialist

“During the session, we discussed rainwater, rainwater harvesting, and the sustainable initiatives being implemented. We shared this information with both the students and teachers.

By forming a Green Team, we also explained how everyone should help maintain these initiatives and take care of them in the future.

In these sessions, we provided proper guidance on rainwater management and solar energy and how such practices can be planned and implemented going forward.”

2. Mock Fire Drills & Life-Saving Skills Responses

A **1.5 -hour practical training session on fire safety and life-saving skills** was conducted to create awareness among students about emergency preparedness and appropriate response during fire-related incidents. **The session was conducted in three selected Zilla Parishad schools – Deshmukhwadi, Biradwadi and Ranmala Kadus**. The objective of the session was to equip students with essential knowledge and practical skills that could help them remain calm and take appropriate action during emergencies.

The session began with an introduction to **common causes of fire accidents and the importance of staying alert and composed in emergency situations.** Students were informed about the **national fire emergency helpline number (101)** and were guided on how and when to contact emergency services during fire incidents.

Various real-life fire scenarios were discussed, such as fires occurring in **kitchen areas, wooden materials, and electrical equipment**. Students were taught the appropriate response measures for each situation, including safety precautions and methods to prevent the spread of fire.

A live demonstration on the correct use of fire extinguishers was conducted, allowing students to understand how to safely operate the equipment during emergencies. Additionally, all participating schools were provided with **4 kg fire extinguishers,** ensuring the availability of essential fire safety equipment on school premises.

A Green Army student group consisting of 5–6 members was designated to oversee the fire extinguisher units in the school premises. The members were trained to operate the equipment during emergencies and were encouraged to guide fellow students on basic fire safety practices.







Green Army Team for Fire Safety Preparedness



The session also included an introduction to basic first-aid techniques and CPR, providing students with knowledge on how to assist someone in need of immediate medical help until professional assistance arrives. Through this interactive training session, students gained practical knowledge about **fire safety protocols, emergency response strategies, and life-saving techniques**, empowering them to respond responsibly during unexpected situations and contribute to maintaining a safe school environment.

The session concluded with an opportunity for students to ask questions and clarify their doubts, followed by the **distribution of snacks** to all students, ensuring a comfortable and engaging learning experience for everyone.



















Mock Fire Drills & Life-Saving Skills Responses





























Mock Fire Drills & Life-Saving Skills Responses



Vedant Gurav

Grade 6, Z.P. School, Deshmukhwadi

"We learned about fire safety and emergency response. Sir explained how to use a fire extinguisher and how to put out a fire safely. We also learned that in case of a fire emergency, we should call 101. If someone faints, we should call 108 and provide CPR until the ambulance arrives. This session helped us understand how to act quickly and safely during emergencies."



Mr. Baskar Burase

Head Master, Z.P. School, Torne

"Today, instructors from Tata AutoComp and Sustainability Initiatives (SI) visited our school and provided valuable training on disaster management. They demonstrated essential life-saving skills such as CPR for a person whose breathing has stopped, and also gave students hands-on practice. In addition, they conducted practical sessions on fire safety, including how to effectively use a fire extinguisher in case of emergencies. The session actively involved students, teachers, and staff, making the learning experience simple and practical. As a result, we now feel more confident and better prepared to handle emergency situations.I sincerely express my heartfelt gratitude to all the instructors from both organizations for their valuable guidance and support."



Mr. Pawan Malode

Fire & Emergency Safety Trainer

"During the session, we covered the proper use of fire extinguishers, handling domestic fire situations such as kitchen and cylinder fires, and methods to rescue a person in case of fire. Live demonstrations were conducted for students, along with teachers and parents, to ensure practical understanding. This initiative aims to raise awareness and help prevent fire-related incidents, not only in urban areas but also in rural communities. Such CSR efforts by Tata AutoComp and SI will certainly create a positive and lasting impact. I sincerely thank them for this opportunity, and I am glad I could contribute by sharing my training with students and teachers."

3. Organic Waste Management & Decomposition

A **1.5-hour awareness and training session on Organic Waste Management and Composting** was conducted for students to introduce sustainable waste handling practices within all 4 school premises. The session also included the formation and training of the Green Army team members, who were assigned the responsibility of monitoring and maintaining the installed composting units.

The training began with an introduction to **different types of waste generated in households and schools, including biodegradable and non-biodegradable waste.** Students were explained how organic waste naturally decomposes and were introduced to the **lifecycle of waste decomposition,** helping them understand the environmental benefits of composting.

The session further highlighted the importance of **waste segregation** at the source, both at the household level and within the school. Students were guided on how to separate biodegradable waste such as food leftovers, dry leaves, and paper waste from non-biodegradable materials. A detailed demonstration was then conducted on the **IBC tank-based composting system installed in the schools.** Students were introduced to the structure of the composting tank and the **different layers and materials used in the composting process**, including compost matrix, treated coir, coconut shell, and microbial cultures that accelerate decomposition. The facilitators also explained the role of moisture control and aeration in maintaining healthy composting conditions.

The Green Army members received specific guidance on **how the composting tank processes approximately 4–5 kg of organic waste per day**, along with instructions on the **dos and don'ts of waste loading, regular mixing, and maintaining moisture levels**. They were also trained to conduct **weekly monitoring of the composting** unit to ensure proper functioning of the system.









Green Army Team for Organic Waste Composting System

Students were further informed about the **final output of the composting process**, which produces nutrient-rich compost that can be used for **school plantation activities and gardening**, thereby promoting circular waste management within the campus.



Through this interactive training session, students gained practical knowledge about **waste segregation, composting techniques, and sustainable waste management practices**, encouraging them to take responsibility for maintaining a clean and environmentally responsible school environment. The session concluded with the **distribution of snacks to all students**.





Organic Waste Management & Composting Training Session

Torne















Ranmala Kadus















Organic Waste Management & Composting Training Session



Aarohi Awari

Grade 6, Z.P. School, Torne

"We were taught how to prepare compost. We learned the step-by-step process, where different layers are added such as coconut shells, coconut husk, straw, water, and cow dung.

They also showed us how earthworms are added along with wet waste. In the end, special powder are added to control bad odor and help in proper composting.

This session helped us understand how to manage waste and make useful compost "



Mrs. Jadhav

Teacher, Z.P. School, Biradwadi

"A practical demonstration on wet waste management was conducted for the students. Through this session, students learned how to manage daily wet waste effectively.

A system has been set up to process approximately 5 kg of wet waste per day, along with the required culture for composting. Selected students have also been given responsibility to manage this system.

The children clearly understood the process, including how to use the compost generated.

We sincerely thank all the organizations for this valuable initiative and support."



Mr. Ambadas Mahajan

Session Facilitator

"Tata AutoComp and Sustainability Initiatives (SI) invited us to conduct compost planter awareness sessions in 4 selected schools. The schools chosen were very supportive, and the overall execution of the program was well-organized.

The SI team was highly cooperative and ensured smooth coordination throughout the activity.

I sincerely express my gratitude to Tata AutoComp and SI for giving me this opportunity to contribute to this initiative."

4. Biodiversity, Food Chains & Wildlife Conservation

A 1-hour awareness session on Biodiversity, Food Chains, and Wildlife Conservation was conducted for students to help them understand the importance of protecting nature and living organisms around them. The session was conducted in **2 selected Zilla Parishad schools – Deshmukhwadi and Ranmala Kadus.**

The session began with an introduction to the **components of the natural environment**, explaining the difference between **biotic (living) and abiotic (non-living)** elements that surround us. Students were introduced to the concept of **biodiversity and its significance in maintaining ecological balance and sustaining life on Earth.**

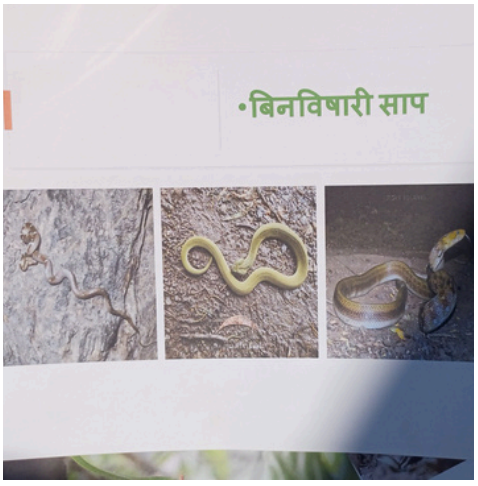
The discussion further highlighted how human activities such as pollution, habitat destruction, and irresponsible waste disposal can harm biodiversity. Students were encouraged to explore ways in which individuals and communities can contribute to **protecting and conserving natural ecosystems.**

The session also explained the concept of **food chains and food webs**, helping students understand how different organisms are interconnected and how the survival of one species often depends on another.

Through simple examples, students learned how these ecological relationships are closely linked to human well-being and environmental stability. Special emphasis was placed on **wildlife conservation**, highlighting that conservation is not limited to large or well-known animals but also includes smaller species such as **reptiles, amphibians, birds, and insects** that play crucial roles in maintaining ecological balance. Students were also informed about **common as well as types of amphibians & reptiles found in their surroundings, such as frogs and toads, lizards** and their important role in controlling insect populations and maintaining ecosystem health.









Glimpse - Interaction with the Instructor

The session aimed to **build emotional empathy and respect for animals and wildlife present in our surroundings.**

Students were also guided on how to safely respond if reptiles or snakes are encountered, particularly in rural environments. Basic information was provided on **common types of snakes, identifying potentially dangerous species, precautions to take in case of a snakebite, and safe practices for coexisting with wildlife without causing harm to animals or people.**

Through this interactive session, students developed a deeper appreciation for biodiversity and learned practical ways to support environmental conservation and responsible coexistence with wildlife. The session concluded with the **distribution of snacks to all students.**





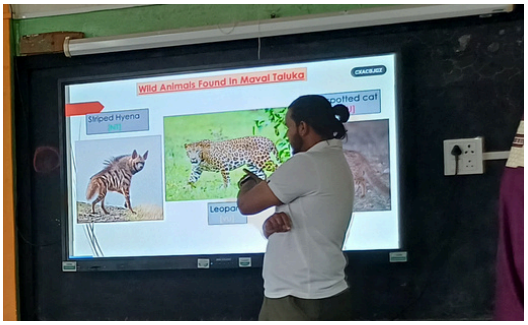
















Biodiversity & Wildlife Conservation Awareness Session















Biodiversity & Wildlife Conservation Awareness Session



Ishwari Sanjay A

Grade 6, Z.P. School, Ranmala Kadus

"Today an informative session on wildlife was held in our school. They taught us about different animals such as snakes, lizards, and frogs, and explained their types in detail. We also learned about venomous, non-venomous, and semi-venomous snakes. This session helped us gain useful knowledge and better understanding about wildlife."



Ms. Snehal Bhor

Teacher, Z.P. School, Deshmukhwadi

"Today, Mayur Sir, Jigar Sir, and their team conducted an engaging and informative session for our students on wildlife, the food chain, and the importance of animals in maintaining ecological balance. Students learned that protecting wildlife is essential for human survival and understood their role in conserving nature. The team also explained safety measures regarding venomous and non-venomous snakes, precautions during encounters, and emergency responses. Important helpline numbers such as 112, 108, and 100 were shared with the students. The session was highly interactive, with enthusiastic participation and thoughtful questions. We sincerely thank the team for this valuable and impactful session."



Dr. Jigar Solanki

Session Facilitator, Wildlife Conservationist

"Tata AutoComp and Sustainability Initiatives (SI) gave us the opportunity to conduct wildlife awareness sessions in Deshmukhwadi and Kadus. Instead of only sharing information, we engaged in interactive discussions with the students, understanding their existing knowledge and addressing their misconceptions. We guided them on how to use this knowledge effectively. The session covered important topics such as reptiles, amphibians, and different types of lizards, helping students better understand and safely interact with wildlife. I believe this knowledge will not only benefit the students in their daily lives but will also extend to their families and communities. I sincerely thank Tata AutoComp and SI for providing this opportunity to conduct these meaningful sessions."

5. Pimpri Chinchwad Science Park Visit

A Science Park visit was organized for students from selected Zilla Parishad schools to promote experiential learning and scientific curiosity. The visit aimed to expose students to interactive science models, innovative technologies, and practical demonstrations that simplify complex scientific concepts.

As part of this initiative, an educational exposure visit was conducted for **students along with their parents and teachers to the Pimpri Chinchwad Science Park.** This enabled participants to explore scientific exhibits and engage in hands-on learning experiences.

The study visit was conducted under the Green School Project to enhance environmental awareness and strengthen students' understanding of science through real-life exhibits. Such exposure encourages students to connect classroom learning with practical applications and fosters interest in STEM education.

Permission for the visit was formally obtained from the respective schools and authorities, and students participated under the supervision of teachers and coordinators. Transportation (bus facility) was arranged and coordinated by Sustainability Initiatives (SI) in collaboration with the respective schools to ensure safe and smooth travel for students, parents, and staff. Additionally, a well-organized lunch was arranged for all participants during the visit to ensure their comfort and a pleasant learning experience. All 4 schools submitted consent letters and participation details for the study tour.



Zilla Parishad School	Number of Participants			
	Students	School Staff	Parents	TATA Volunteers
Biradwadi	160	7	-	10
Deshmukhwadi	83	7	-	
Torne	46	4	14	
Ranmala Kadus	93	7	-	
Total	**431**			

Table 12 : Science Park Visit Summary

A. Science Park

The Science Park offered students a combination of indoor and outdoor learning environments, allowing them to explore scientific concepts through observation, experimentation, and interaction.



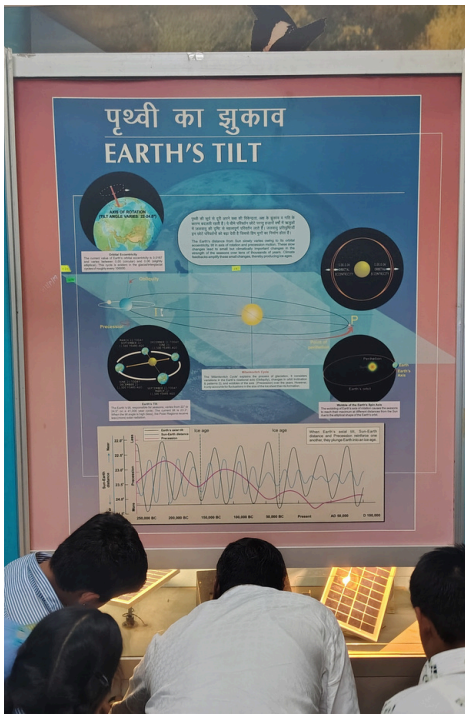
- **Indoor Science Centre – Pimpri Chinchwad Vidhyan Kendra**

The indoor science centre, known as Pimpri Chinchwad Vidhyan Kendra, consists of two floors including the ground floor and houses a wide range of science exhibits designed to explain various scientific principles in a simple and engaging way.



The indoor galleries contain interactive displays related to topics such as physics, motion, mechanics, energy, optics, sound, and environmental science. These exhibits encourage students to experiment and learn through observation, helping them understand how scientific laws and principles work in everyday life.

The centre provides a stimulating learning environment where students can explore scientific ideas through hands-on experimentation rather than passive observation, making complex scientific concepts easier to understand and remember.





- **Outdoor Science Park**

The outdoor section of the science centre extends the learning experience into an open and natural environment.



a. Open Air Science Expo

Beyond the indoor galleries lies a large outdoor Science Park spread across approximately 3.5 acres, which also includes a small ecological park. The open-air science exhibits are designed to demonstrate scientific principles related to energy, motion, sound, balance, and mechanical systems.



Students were able to interact with various installations that demonstrated how physical forces and natural phenomena operate. Learning in such an outdoor environment makes scientific concepts more engaging, interactive, and memorable, as students are able to experiment and observe the outcomes directly



b. Dinosaur Park

One of the most exciting sections of the park for students was the Dinosaur Park, which presents life-size models of dinosaurs from different prehistoric eras. The park recreates the natural environment of the Mesozoic period, showcasing various dinosaur species along with plant life that existed during that time.



Each dinosaur exhibit is supported with educational information describing their size, body structure, diet, habitat, and life span. Through these displays, students were introduced to the concept of prehistoric life, evolution, and biodiversity, helping them understand how life on Earth has evolved over millions of years.



B . 3D Educational Show

As part of the visit, students attended a 30-minute 3D educational film, where they were provided with special 3D glasses to enhance the visual experience. The animated film focused on climate change and its impact on biodiversity, ecosystems, flora, and fauna across the planet.

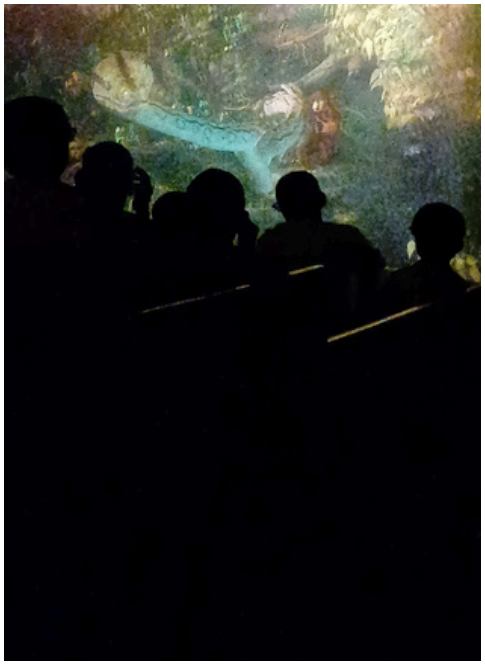
Through visually engaging animations and storytelling, the film explained how rising temperatures, deforestation, pollution, and other human activities are affecting the natural balance of ecosystems. The immersive nature of the 3D presentation helped students better understand the urgency of environmental conservation and the need for sustainable practices.

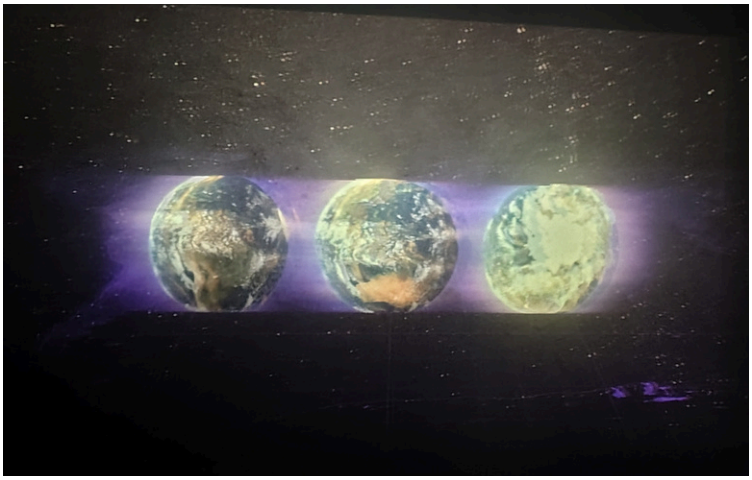
This experience played an important role in strengthening students' awareness of environmental protection and climate responsibility.











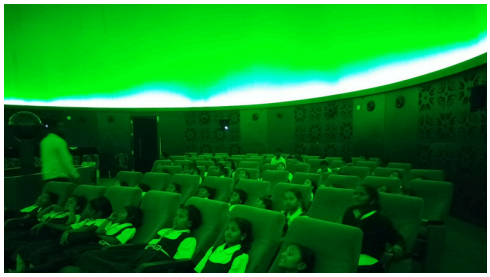
C . Planetarium Show

The visit also included a 45-minute planetarium show conducted in Marathi, where students experienced a simulated journey through space inside a dome-shaped theatre. The planetarium used advanced digital projection technology to recreate a realistic night sky and cosmic environment.

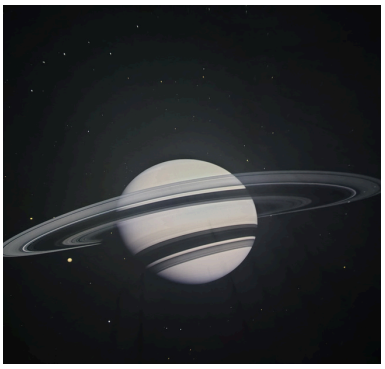
During the show, students learned about various aspects of astronomy and space science, including the solar system, planets, stars, constellations, galaxies, and the movement of celestial bodies. The show also explained how Earth rotates and revolves around the Sun and how these movements influence day, night, and seasonal changes.

The planetarium experience helped students visualize astronomical phenomena that are otherwise difficult to observe directly. By presenting scientific information in an engaging and immersive format, the show helped cultivate curiosity about space exploration, astronomy, and the vast universe beyond our planet.







































Educational Exposure Visit to Pimpri Chinchwad Science Park

















Educational Exposure Visit to Pimpri Chinchwad Science Park



Meharin Hussain Sheikh

Grade 3, Z.P. School, Ranmala Kadus

"Because of TATA AutoComp and SI, we were able to visit the Pimpri-Chinchwad Science Park. There we saw different parts of vehicles, engines, and various science experiments. We also saw the solar system, the Milky Way, and planets like Mercury, Jupiter, and Venus. We watched a 3D show and learned about different living beings in the sea. We had a lot of fun during the visit. We were served Pavbhaji and Gulabjamun for lunch which I really enjoyed."



Vignesh Ramdas Gaikwad

Grade 7, Z.P. School, Deshmukhwadi

"We got the opportunity to learn about the Tarangan (planetarium) and various science projects. The entire visit was very well planned, and everything from the food to the bus transportation was organized properly."



Swarali Rajendra Pawar

Grade 5, Z.P. School, Biradwadi

"I had the opportunity to visit the Science Park at Pimpri Chinchwad. It was a very enriching experience where we explored various exhibits, including car models and 3D visual displays.I extremely loved the planenterium show. The visit was highly engaging and helped us learn many new things in an interactive way. We truly appreciate this opportunity and will always remember this experience."



Soham Nandu Devade

Grade 5, Z.P. School, Torne

"Today we visited the Pimpri-Chinchwad Science Park. We came here by bus arranged for us and had a lot of fun on the way. After coming here, we saw stars and the moon and felt as if we had reached space. We had Pav Bhaji for lunch here and we liked the food very much."



Ms. Snehal Bhor

Teacher, Z.P. School, Deshmukhwadi

“The visit to the Pimpri Chinchwad Science Park was a wonderful learning experience for our students. Through interactive science experiments, exposure to the manufacturing parts of Tata vehicles, and a fascinating 3D view of the solar system, students gained valuable scientific knowledge beyond the classroom. Such initiatives help spark curiosity and provide the right direction for their future learning. I sincerely thank Tata Autocomp and Sustainability Initiatives for giving our students this meaningful opportunity.”



Parents & Community Memeber

Z.P. School, Torne

"The visit to Pimpri Chinchwad Science Park was a very enriching and joyful experience for our students. The experience felt amazing, almost like being in the sky. It was a wonderful opportunity to explore and learn new things beyond the classroom through interactive exhibits and real-life science demonstrations. Such exposure helps spark curiosity and encourages students to learn more about science and technology. The students were very happy and excited to experience these activities. As parents and community members, we sincerely appreciate this initiative and are grateful for the opportunity provided to our school and students."



Mr. Aniket Garad (Volunteer) & Mr. Mayuresh (CSR Intern)

TATA AutoComp Systems

“The Pimpri Chinchwad Science Park is an excellent initiative that helps create awareness about science among students. It provides a valuable platform for students to explore scientific concepts in an engaging and interactive way, encouraging curiosity and learning beyond the classroom. It is wonderful to see TATA AutoComp and Sustainability Initiatives working together to provide such meaningful exposure to students. There is a lot for students to learn here, and initiatives like these play an important role in inspiring young minds and promoting interest in science.”

GREEN CALENDAR & GREEN ARMY

As part of the Green School Project, a specially designed **Green Calendar** was developed and shared with the participating Zilla Parishad schools. The calendar highlights i**mportant environmental and ecological days throughout the yea**r, encouraging schools to celebrate and observe these occasions through meaningful activities.

The Green Calendar serves as a **practical guide for teachers and students**, helping them integrate environmental learning into their regular school activities. It suggests simple yet impactful initiatives such as wildlife quizzes, biodiversity hunts, community clean-ups, recycling challenges, and creative awareness activities aligned with globally recognized environmental days.

The calendar was formally **handed over to the schools with instructions to follow and celebrate the mentioned days**, enabling students to participate actively in environmental stewardship. These activities are designed to nurture curiosity about nature, promote sustainable habits, and strengthen students' understanding of biodiversity, conservation, and responsible environmental practices.

By following the Green Calendar, students are encouraged to become part of the **"Green Army"**, fostering environmental responsibility and building a culture of sustainability within the school community.









Green Calendar Distribution to Schools

Role & Responsibilities of the Green Army in Schools

The **Green Army,** comprising motivated students guided by teachers, plays a crucial role in implementing and sustaining sustainability initiatives within schools. Each school forms a team of **15–20 students** responsible for monitoring and managing key environmental systems such as **Rainwater Harvesting (RWH), Solar PV installations, Fire Safety Equipment, Organic Waste Composting Units, and Tree Plantation activities.** The team is further divided into sub-groups with defined roles to ensure effective functioning, regular monitoring, and long-term maintenance.



🌧️ Rainwater Harvesting (RWH) & Solar Systems

- Assist in cleaning rooftops, gutters, and filtration systems
- Ensure proper usage of RWH and solar installations
- Monitor for leakages, blockages, or faults and report issues
- Promote water and energy conservation practices
- Guide students on the importance and functioning of these systems



♻️ Composting & Waste Management

- Ensure daily segregation and collection of organic waste
- Deposit biodegradable waste into composting units
- Support composting activities like mixing, spraying, and monitoring
- Maintain proper moisture and aeration levels
- Utilize compost for gardening activities
- Promote waste reduction and segregation practices among students



🔥 Fire Safety Management

- Ensure fire safety equipment is visible, accessible, and functional
- Conduct basic checks and report any issues
- Assist teachers during emergency situations and mock drills
- Spread awareness about fire safety measures and emergency number (101)
- Guide students on safety protocols and emergency behavior



🌱 Tree Plantation & Green Cover

- Ensure regular watering and care of plants and saplings
- Apply manure and nutrients for healthy growth
- Protect plants from damage and discourage plucking
- Maintain plantation areas and guards
- Manage indoor plants by adjusting placement when needed
- Encourage participation in plantation and environmental care

TATA AUTOCOMP

sustainability initiatives



Green Calendar



Day	Month	On Occasion of	Activity for Green Army	Details of the Activity
5	January	Birds Day	**Helping Birds: Provide Water at Home and School**	Encourage students to put out water for birds at their homes and at school throughout the entire summer.
2	February	World Wetland Day	**The Importance of Wetlands: Trees, Animals, and Stories**	Let the teacher explain the importance of wetlands, highlighting the trees and animals that are commonly found in these areas. The teacher should share stories to help students better understand the unique ecosystem of wetlands.
3	March	World Wildlife Day	**Wildlife Quiz**	Hold a fun wildlife quiz with questions about animals and their habitats / food chain.
22	April	Earth Day	**Community Clean Up**	Organize a community clean-up to collect litter from the local area or schoolyard, teaching kids about the importance of keeping the environment clean.
22	May	World Biodiversity Day	**Biodiversity Scavenger Hunt**	Organize a scavenger hunt where students search for different types of plants, insects, and animals in the school yard or a nearby park. Students can make a checklist of biodiversity items to find and learn how each contributes to the ecosystem.
5	June	World Environment Day	**Reduce, Reuse, Recycle Challenge**	Challenge students to come up with ideas for reducing waste in their daily lives. Have them create posters or presentations about reducing plastic use, reusing items, and recycling. Older students can develop a project showing the impact of pollution on local ecosystems.
29	July	International Tiger Day	**Tiger: Food, Habitat, and Threats**	Gather information about tigers, focusing on their food, habitat, and the threats they face. Organize this information into groups and prepare to present it in front of the class within 3 minutes.
12	Aug	World Elephant Day	**Elephant Facts & Art**	Share interesting facts about elephants with the students. Younger kids can color elephant pictures or create elephant-shaped art, while older students can research elephants' behavior and write a short essay about that.
Last Sunday	Sept	World Rivers Day	**River Pollution Awareness Poster**	Discuss the importance of rivers for the environment and humans, and the impact of pollution. Students can create posters showing the positive and negative effects of pollution on rivers. Older students can research local rivers and present their findings on how pollution is affecting them.
1	Nov	World Ecology Day	**Best from Waste**	Create a collage using newspapers. Topics : Birds, insects, trees, reptiles, amphibians.
5	Dec	World Soil Day	**Sing a Song**	Form a group, reverberate a song which is related to the soil and its importance. Students can write their own song / poem as well.





GREEN ARMY TEAM

RWH & Solar System Maintenance

Zilla Parishad Shala	S.No.	Biradwadi	Deshmukhwadi	Torne	Ranamala Kadus
Name of the Students	1	Vibhavari Pawar	Aditi Rahul Navale	Swaranjali Dewade	Anushka Argade
	2	Pallavi Gupt	Sanika Gurav	Rutuja Raut	Sakshi Raykar
	3	Pratiksha Randive	Vignesh Giwkad	Sarthak Dewade	Arnav Kohinkar
	4	Prajwal Kamble	Tamanye Pombhale	Darshan Raut	Swaraj Shinde
	5	Prem Mohite	Yash Deshmukh	Prajwal Wable	Shrinay Gopale
	6	Adiraj Retavade			Rugved Nehere

Composting & Waste Management

Zilla Parishad Shala	S.No.	Biradwadi	Deshmukhwadi	Torne	Ranamala Kadus
Name of the Students	1	Nandani Ujalambe	Pranali Deshmukh	Arohi Aware	Prerna Karle
	2	Shivani Zade	Rutuja Deshmukh	Aaradhya Aware	Pankaja Bhujbal
	3	Sarika Pandit	Simra Navale	Swaranjali Devade	Swara Udhane
	4	Namrata Shaunkle	Samarth Bhegade	Rutuja Raut	Janhavi Sukale
	5	Dinesh Chaudhari	Ayush Pombhale	Sarthak Aware	Lokesh Shinde
	6	Satayam Prasad	Vedant Dhanteras	Sarthak Devads	Arnav Daundkar
	7	Aryan Munde	Swayam Ovhal	Shubham Devade	Ayush Daundkar

Fire Safety Unit

Zilla Parishad Shala	S.No.	Biradwadi	Deshmukhwadi	Torne	Ranamala Kadus
Name of the Students	1	Aradhya Phadke	Shreya Awale	-	Jahnvi Sukale
	2	Durva Darekar	Madhavi Navale		Shaurya Shinde
	3	Shivtej Kaldoke	Sainath Kedare		Swaraj Daundkar
	4	Shivansh Tiwari	Vedant Guro		Saksham Dhaybar
	5	Rajveer Ingale	Manav Pangare		Arnav Daundkar
	6	Siddhant Lokhande			
	7	Prashant Bhadre			

Plantation Maintenance

Zilla Parishad Shala	S.No.	Biradwadi	Deshmukhwadi	Torne	Ranamala Kadus
Name of the Students	1	Mansvi Lokhande	Shruti Deshmukh	Siddhi Dewade	Ishwari Gaikwad
	2	Aarvi Labde	Monika Aawale	Aaradhya Raut	Gauri Bankar
	3	Nandini Vishwakarma	Nandini Aawale	Amruta Kangle	Aaradhya Daundkar
	4	Amrita Chauhan	Rishabh Navale	Dhairya Awari	Shrutika Dhaybar
	5	Prajwal Kamble	Swaraj Deshmukh	Eshwar Jadhav	Lokesh Shinde
	6	Rajveer Shireshvar	Swaraj Jadhav	Soham Dewade	Sangra Sapre
	7	Priyaratna Paikrao		Shubham Dewade	Mayur Gawade
	8	Rishabh Sahani			

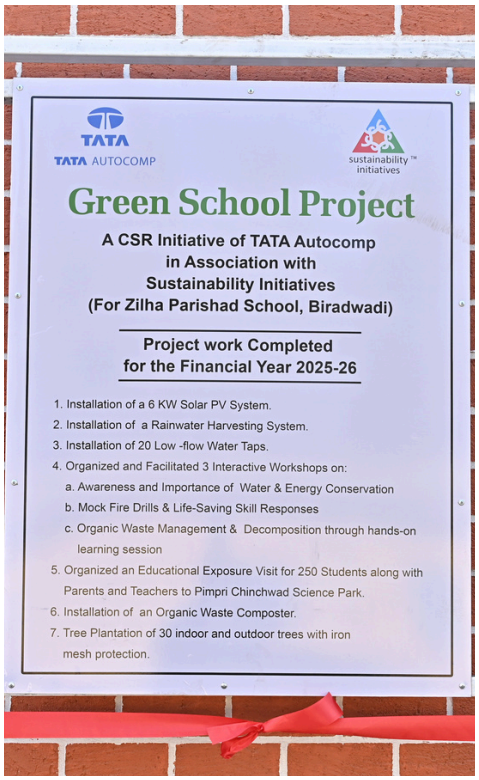
Green Team Army Formed in Schools

NOTE: The Green Army teams show a balanced gender participation, with slightly higher representation of boys, while maintaining strong inclusion of girl students across all sustainability activities.

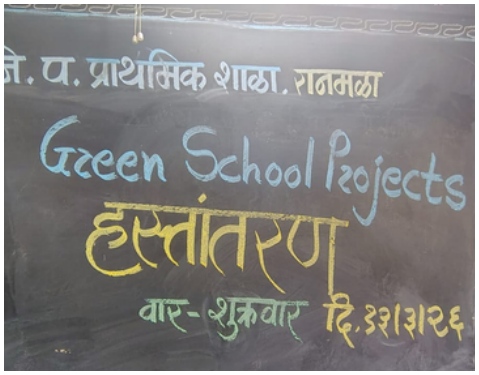
PROJECT COMPLETION & HANDOVER

As part of the successful implementation of the Green School Project, **project completion and handover ceremonies were conducted across all selected schools on their respective dates.** The completion & handover covered the systems installed in the respective schools, including **Rainwater Harvesting Systems, Solar Panels, Organic Waste Composters, and School Board installations.** The events marked the formal handover and operationalization of these sustainability interventions. A **School Project Display Board was installed at each school, highlighting all interventions, workshops, and activities implemented under the Green School Project** to enhance visibility, awareness, and long-term recall among students and visitors.The ceremonies were attended by Tata volunteers, school authorities, local representatives, and the Sustainability Initiatives (SI) team, who collectively facilitated the program. The events served as a platform to **recognize the collaborative efforts** of all stakeholders involved in the project implementation. During the ceremony, a formal walkthrough of the installed systems was conducted to demonstrate their functionality and intended usage. Students and teachers were encouraged to actively engage with the systems and understand their role in ensuring long-term sustainability.

At the conclusion of the program, feedback was collected from school authorities and students to assess the effectiveness of the interventions, identify areas of improvement, and understand the overall impact of the project. This feedback will support **future enhancements and scalability of similar initiatives**. Finally, a **Project Completion Letter was formally submitted by each school to Sustainability Initiatives (SI) for official acknowledgment, documentation, and record purposes,** marking the successful closure of the project phase.







Date: तप १ ओ ४१ सेवा !!! स्थापना : १९५५

जिल्हा परिषद प्राथमिक शाळा, बिरदवडी

केंद्र : आंबेठाण, बीट : खरपुडी, ता. खेड, जि. पुणे.

U-Dise No. 27250813501

जावक क्र. ७२९ दिनांक : ९२/०३/२०२६

प्रति,
ट्रस्टी,
सस्टेनेबिलिटी इनिशिएटिव्हस व Tata Autocomp Systems Private Limited, पुणे

विषय – आपल्या शाळेमध्ये CSR प्रकल्पांतर्गत उपक्रम राबविल्याबद्दल.

महोदय,

वरील विषयास अनुसरून कळविण्यात येते की, Tata Autocomp Systems Private Limited यांच्या CSR निधीतून तसेच सस्टेनेबिलिटी इनिशिएटिव्हस या संस्थेच्या माध्यमातून चालू आर्थिक वर्षात आमच्या शाळेमध्ये खालीलप्रमाणे विविध पर्यावरणपूरक व सामाजिक उपक्रम राबविण्यात आले आहेत.

आमच्या शाळेमध्ये खालील उपक्रम पूर्ण करण्यात आले आहेत –

१. ६ KW क्षमतेची सोलर सिस्टीम बसविण्यात आली आहे.
२. रेन वॉटर हार्वेस्टिंगसाठी १ पिट सर्व आवश्यक पाइपलाइनसह उभारण्यात आले आहे.
३. विद्यार्थ्यांसाठी व पालकांसाठी सामाजिक व पर्यावरणीय विषयांवर एकूण ३ कार्यशाळा आयोजित करण्यात आल्या असून सहभागींसाठी अल्पोपहाराचीही व्यवस्था करण्यात आली होती.
४. सर्व विद्यार्थ्यांसाठी पिंपरी-चिंचवड येथील Pimpri Chinchwad Science Park येथे शैक्षणिक भेट आयोजित करण्यात आली. यासाठी प्रवेश शुल्क, जेवण व बसची व्यवस्था करण्यात आली होती.
५. शाळेच्या परिसरात ३० इनडोअर व आउटडोअर वृक्षांची लागवड संरक्षण जाळीसह करण्यात आली.
६. ओल्या कचऱ्याचे विघटन करणारे एक मशीन शाळेसाठी बसविण्यात आले आहे.
७. शाळेतील २० पाण्याच्या तोट्या बदलून लो-फ्लो प्रकाराच्या तोट्या बसविण्यात आल्या आहेत.
८. वरील सर्व उपक्रमांच्या देखभालीसाठी विद्यार्थ्यांची "ग्रीन आर्मी" टीम तयार करून त्यांना संबंधित जबाबदाऱ्या देण्यात आल्या आहेत.
९. वर्षभर विविध पर्यावरणीय उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर देण्यात आले आहे.

Date: March 12, 2026

वरील सर्व उपक्रम आमच्या शाळेसाठी CSR निधीतून करण्यात आले आहेत. या पत्राद्वारे कळविण्यात येते की, वरील सर्व उपक्रम पूर्ण झाले असून पुढील काळात या सर्व प्रकल्पांची देखभाल व संबंधित साहित्याची जबाबदारी आमच्या शाळेने स्वीकारलेली आहे.

आपण राबविलेल्या या उपक्रमांचा आमच्या शाळेला व विद्यार्थ्यांना निश्चितच भविष्यात मोठा फायदा होईल. त्याबद्दल आम्ही आपले मनःपूर्वक आभारी आहोत.

धन्यवाद.

आपला विश्वासू,
मुख्याध्यापक
जिल्हा परिषद प्राथमिक शाळा, बिरदवडी

मुख्याध्यापक
जिल्हा परिषद प्राथमिक शाळा-बिरदवडी
ता. खेड, जि. पुणे. 410501.
UDISE No. 27250813501

Biradwadi

जिल्हा परिषद पुणे

जिल्हा परिषद प्राथमिक शाळा वहागांव – देशमुखवाडी

केंद्र.शिवे, बिट.पाईट, ता.खेड, जि.पुणे, ४१० ५०१

UDISE : 27250812201

जावक क्र. : दिनांक :

प्रति,
मा. ट्रस्टी, सस्टेनेबिलिटी इनिशिएटिव्हस व Tata Autocomp Systems Ltd पुणे.

विषय :- आमच्या जि.प.प्राथ.शाळा वहागांव-देशमुखवाडी येथील CSR प्रकल्पांतर्गत उपक्रम राबविल्याबद्दल.

महोदय,
वरील विषयांस अनुसरून कळविण्यात येते की, Tata Autocomp Pvt Ltd यांच्या CSR निधीतून तसेच सस्टेनेबिलिटी इनिशिएटिव्हस या संस्थेच्या माध्यमातून चालू आर्थिक वर्षात आमच्या शाळेमध्ये खालीलप्रमाणे विविध पर्यावरणपूरक व सामाजिक उपक्रम राबविण्यात आले आहेत.

१) शाळेत परिसरात ३० इनडोअर व आउटडोअर वृक्षांची लागवड संरक्षण जाळीसह करण्यात आली.
२) ओल्या कचऱ्याचे विघटन करणारे एक मशीन शाळेसाठी बसविण्यात आले आहे.
३) शाळेतील २० पाण्याच्या तोट्या बदलून लो-फ्लो प्रकाराच्या तोट्या बसविण्यात आल्या आहेत.
४) वरील सर्व उपक्रमांच्या देखभालीसाठी विद्यार्थ्यांची ग्रीन आर्मी टीम तयार करून त्यांना संबंधित जबाबदाऱ्या देण्यात आल्या आहेत.
५) वर्षभर विविध पर्यावरणीय उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर देण्यात आले आहे.
६) आमच्या शाळेसाठी CSR निधीतून करण्यात आले आहेत. या पत्राद्वारे कळविण्यात येते की, वरील सर्व उपक्रम पूर्ण झाले असून पुढील काळात या सर्व प्रकल्पांची देखभाल व संबंधित साहित्याची जबाबदारी आमच्या शाळेने स्वीकारलेली आहे.

आपण राबविलेल्या या उपक्रमांचा आमच्या शाळेला व विद्यार्थ्यांना निश्चितच भविष्यात मोठा फायदा होईल. त्याबद्दल आम्ही आपले मनःपूर्वक आभारी आहोत.

धन्यवाद !

मुख्याध्यापक

Deshmukhwadi

तप ! ज्ञान!! सेवा!!! स्थापना : 1956

जिल्हा परिषद प्राथमिक शाळा

* तोरणे बु।। *

केंद्र : पाळू, बीट : पाईट, ता. खेड, जि. पुणे

U-Dise No. 27250809701

जावक क्र. जा.क्र.33 दि.03/03/2026

दिनांक 03/03/२०२६

प्रति,

ट्रस्टी,

सस्टेनेबिलिटी इनिशिएटिव्हस व Tata Autocomp Systems Private Limited, पुणे

विषय – आपल्या शाळेमध्ये CSR प्रकल्पांतर्गत उपक्रम राबविल्याबद्दल.

महोदय,

वरील विषयास अनुसरून कळविण्यात येते की, Tata Autocomp Systems Private Limited यांच्या CSR निधीतून तसेच सस्टेनेबिलिटी इनिशिएटिव्हस या संस्थेच्या माध्यमातून चालू आर्थिक वर्षात आमच्या शाळेमध्ये खालीलप्रमाणे विविध पर्यावरणपूरक व सामाजिक उपक्रम राबविण्यात आले आहेत.

आमच्या शाळेमध्ये खालील उपक्रम पूर्ण करण्यात आले आहेत –

१. ३ KW क्षमतेची सोलर सिस्टीम बसविण्यात आली आहे.

२. रेन वॉटर हार्वेस्टिंगसाठी १ पिट सर्व आवश्यक पाइपलाइनसह उभारण्यात आले आहे.

३. विद्यार्थ्यांसाठी व पालकांसाठी सामाजिक व पर्यावरणीय विषयांवर एकूण ३ कार्यशाळा आयोजित करण्यात आल्या असून सहभागींसाठी अल्पोपहाराचीही व्यवस्था करण्यात आली होती.

४. सर्व विद्यार्थ्यांसाठी पिंपरी-चिंचवड येथील Pimpri Chinchwad Science Park येथे शैक्षणिक भेट आयोजित करण्यात आली. यासाठी प्रवेश शुल्क, जेवण व बसची व्यवस्था करण्यात आली होती.

५. शाळेच्या परिसरात २५ इनडोअर व आउटडोअर वृक्षांची लागवड संरक्षण जाळीसह करण्यात आली.

६. ओल्या कचऱ्याचे विघटन करणारे एक मशीन शाळेसाठी बसविण्यात आले आहे.

७. शाळेतील ५ पाण्याच्या तोट्या बदलून लो-फ्लो प्रकारच्या तोट्या बसविण्यात आल्या आहेत.

तप ! ज्ञान!! सेवा!!! स्थापना : 1956

जिल्हा परिषद प्राथमिक शाळा

* तोरणे बु।। *

केंद्र : पाळू, बीट : पाईट, ता. खेड, जि. पुणे

U-Dise No. 27250809701

जावक क्र. दिनांक 03/03/२०२६

८. वरील सर्व उपक्रमांच्या देखभालीसाठी विद्यार्थ्यांची "ग्रीन आर्मी" टीम तयार करून त्यांना संबंधित जबाबदाऱ्या देण्यात आल्या आहेत.

९. वर्षभर विविध पर्यावरणीय उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर देण्यात आले आहे.

वरील सर्व उपक्रम आमच्या शाळेसाठी CSR निधीतून करण्यात आले आहेत. या पत्राद्वारे कळविण्यात येते की, वरील सर्व उपक्रम पूर्ण झाले असून पुढील काळात या सर्व प्रकल्पांची देखभाल व संबंधित साहित्याची जबाबदारी आमच्या शाळेने स्वीकारलेली आहे.

मुख्याध्यापक
जि.प.प्राथ.शाळा-तोरणे बु।।
केंद्र-पाळू,ता.खेड,जि.पुणे.

मुख्याध्यापक
जि.प.प्राथ.शाळा-तोरणे बु।।
केंद्र-पाळू,ता.खेड

Torne

Date: March 13, 2026

तप ! ज्ञान!! सेवा!!! स्थापना : 1956

जिल्हा परिषद प्राथमिक शाळा

* तोरणे बु।। *

केंद्र : पाळू, बीट : पाईट, ता. खेड, जि. पुणे

U-Dise No. 27250809701

जावक क्र. दिनांक 03/03/२०२६

प्रति,

ट्रस्टी,

सस्टेनेबिलिटी इनिशिएटिव्हस व Tata Autocomp Systems Private Limited, पुणे

विषय – आपल्या शाळेमध्ये CSR प्रकल्पांतर्गत उपक्रम राबविल्याबद्दल.

महोदय,

वरील विषयास अनुसरून कळविण्यात येते की, Tata Autocomp Systems Private Limited यांच्या CSR निधीतून तसेच सस्टेनेबिलिटी इनिशिएटिव्हस या संस्थेच्या माध्यमातून चालू आर्थिक वर्षात आमच्या शाळेमध्ये खालीलप्रमाणे विविध पर्यावरणपूरक व सामाजिक उपक्रम राबविण्यात आले आहेत.

आमच्या शाळेमध्ये खालील उपक्रम पूर्ण करण्यात आले आहेत –

१. शाळेच्या परिसरात ३० इनडोअर व आउटडोअर वृक्षांची लागवड संरक्षण जाळीसह करण्यात आली.

२. रेन वॉटर हार्वेस्टिंगसाठी १ पिट सर्व आवश्यक पाइपलाइनसह उभारण्यात आले आहे.

३. विद्यार्थ्यांसाठी व पालकांसाठी सामाजिक व पर्यावरणीय विषयांवर एकूण ४ कार्यशाळा आयोजित करण्यात आल्या असून सहभागींसाठी अल्पोपहाराचीही व्यवस्था करण्यात आली होती.

४. सर्व विद्यार्थ्यांसाठी पिंपरी-चिंचवड येथील Pimpri Chinchwad Science Park येथे शैक्षणिक भेट आयोजित करण्यात आली. यासाठी प्रवेश शुल्क, जेवण व बसची व्यवस्था करण्यात आली होती.

५. वर्षभर विविध पर्यावरणीय उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर देण्यात आले आहे.

६. ओल्या कचऱ्याचे विघटन करणारे एक मशीन शाळेसाठी बसविण्यात आले आहे.

७. शाळेतील २० पाण्याच्या तोट्या बदलून लो-फ्लो प्रकारच्या तोट्या बसविण्यात आल्या आहेत.

८. वरील सर्व उपक्रमांच्या देखभालीसाठी विद्यार्थ्यांची "ग्रीन आर्मी" टीम तयार करून त्यांना संबंधित जबाबदाऱ्या देण्यात आल्या आहेत.

Date: March 13, 2026

वरील सर्व उपक्रम आमच्या शाळेसाठी CSR निधीतून करण्यात आले आहेत. या पत्राद्वारे कळविण्यात येते की, वरील सर्व उपक्रम पूर्ण झाले असून पुढील काळात या सर्व प्रकल्पांची देखभाल व संबंधित साहित्याची जबाबदारी आमच्या शाळेने स्वीकारलेली आहे.

आपण राबवलेल्या या उपक्रमांचा आमच्या शाळेला व विद्यार्थ्यांना निश्चितच भविष्यात मोठा फायदा होईल. त्याबद्दल आम्ही आपले मनःपूर्वक आभारी आहोत.

धन्यवाद.

आपला विश्वासू,

मुख्याध्यापक
जि. प. प्राथ. शाळा रानमळा
केंद्र- दौंदे, बीट- कडूस,
ता. खेड, जि. पुणे.

जिल्हा परिषद प्राथमिक शाळा, रानमळा कडूस .

Ranmala Kadus



Durva Sandeep Darekar

Grade 7, Z.P. School, Biradwadi

"In our school, Tata AutoComp and SI organizations installed solar panels, helping us save electricity and generate our own power. We also benefited from rainwater harvesting and learned how rainwater is collected and stored. Wet waste was converted into compost, and the organizations gifted us 30 indoor and outdoor plants, which we nourish using the compost. As a member of the Green Army team, I take care of the plants by watering them, protecting them from excess heat, and encouraging others not to pluck leaves because plants are our future. We were also taught fire safety measures and basic first aid for someone feeling dizzy until medical help arrives. Additionally, we visited the Science Park in Pimpri Chinchwad, where we explored car and tire parts, watched a 3D show, and visited the planetarium to learn about planets. The planetarium was my favorite experience."



Ms. Aparna Nitin Jagtap

Teacher, Z.P. School, Biradwadi

'Tata AutoComp and Sustainability Initiatives (SI) have implemented several impactful programs in our school that have greatly benefited students and improved the learning environment. A solar energy system was installed, providing clean and reliable electricity, along with a rainwater harvesting system to encourage water conservation. Awareness sessions on rainwater conservation, self-awareness, fire safety, and first aid were conducted, where students also gained hands-on experience using fire extinguishers. A composting unit was introduced to teach students how to convert waste into useful compost, and a terrace garden with indoor and outdoor plants was developed through active student participation. A "Green Army" team was formed to maintain these initiatives responsibly. Additionally, around 250 students visited a Science Park, where they explored interactive exhibits and enjoyed 3D learning experiences.

Overall, these initiatives enhanced students' practical knowledge, environmental awareness, and overall development. We sincerely thank Tata AutoComp and SI for their continuous support and valuable contribution."



Samarth Anil Begde

Grade 6, Z.P. School, Deshmukhwadi

“In our school, Tata AutoComp and Sustainability Initiatives (SI) conducted informative workshops on fire safety, rainwater harvesting, wildlife awareness, composting, and tree plantation. We also gained valuable knowledge through a visit to the Science Park. All the sessions were enjoyable and interactive, and we had a wonderful experience. I sincerely thank Tata AutoComp and SI for these meaningful and educational initiatives.”



Mr. Dattatray Anil Deshmukh

Sarpanch of Deshmukhwadi

“At Zilla Parishad Primary School, Vahagaon Deshmukhwadi, impactful initiatives were implemented through the CSR efforts of Tata AutoComp and Sustainability Initiatives (SI). A rainwater harvesting system was established, and students were taken on a science exposure trip to Pimpri Chinchwad to enhance their scientific learning. The school also received indoor and outdoor plants, creating a greener environment. A waste management system, including wet and dry waste segregation and vermicomposting, was introduced to promote sustainability. Today, these projects are being handed over to our school. On behalf of the villagers and school community, I sincerely thank Tata AutoComp and SI for their valuable support.”



Mr. Bandu Bhongale

Headmaster, Z.P. School, Deshmukhwadi

Several impactful programs were implemented with the support of Tata AutoComp and Sustainability Initiatives (SI). These included rainwater harvesting, wet waste composting, tree plantation, and low-flow water conservation systems in the school. Students received training in CPR, fire safety, emergency response, and wildlife awareness. A visit to the Science Park provided hands-on learning in science and astronomy, encouraging curiosity and practical understanding. Overall, these initiatives greatly enhanced students’ knowledge, safety awareness, and environmental responsibility. On behalf of the school, we sincerely thank Tata AutoComp and SI for their valuable support and continued contribution toward sustainable development and education.



Gauri Shailesh Bankar

Grade 7, Z.P. School, Ranmala Kadus

"Tata AutoComp and Sustainability Initiatives (SI) have implemented several valuable programs in our school, including fire safety, rainwater harvesting, wildlife awareness, and vermicompost production. Informative sessions on different types of snakes helped students gain important knowledge about wildlife and safety. A well-organized trip to the Science Park in Pimpri Chinchwad gave students an enjoyable and educational experience. The companies also provided free bus transportation and meals, making the visit memorable for everyone. On behalf of Ranmala School, I sincerely thank Tata AutoComp and SI for their continuous support and meaningful initiatives for our school and students."





Ms. Madhura Khatri & Mr. Sanjay Jadhav

Volunteers, TATA Group

""The project's sustainability focus is highly commendable. The 'Green School' theme and rainwater harvesting initiative are especially impactful, promoting environmental awareness, water conservation, and long-term resource efficiency within the school." - **says Ms. Madhura Khatri**

"The most impactful aspect of this initiative is empowering children from the local community with responsibility and awareness about composting, ESG, and solar energy. Initiatives like the Green Effect, rainwater harvesting, and tap replacement may seem small, but they create meaningful environmental impact. Replacing 20 taps alone has significantly reduced water wastage, leading to considerable water savings and encouraging sustainable practices among students and the community". - **says Mr. Sanjay Jadhav**



Swaranjali

Grade 7, Z.P. School, Torne

"Various installation has been done in our school like rainwater harvester, solar panels and vermicompost.
On March 6, 2026, we visited Science Park in Pimpri Chinchwad. I really liked the planetarium show there. Because of it, we understood all about the planets and stars. They also planted trees in our school. ."



Aradhya Jitendra Phadke

Grade 7, Z.P. School, Biradwadi

"The Tata AutoComp and SI organizations visited us. They taught us about rainwater harvesting like how to store rainwater and working of solar panels, which allow us to use electrical energy when there's a power outage. They showed us how to make compost with a practical demonstration. They also formed a Green Army team for us. We are provided with 30 indoor and outdoor plants. They organized a visit to the Science Park in Pimpri-Chinchwad. We enjoyed ourselves a lot there, saw many things, watched a 3D show, and learned about the planets. We were taught how to use fire extinguishers and we even tried it out ourselves. They taught us how to use a first-aid kit. I'm a part of the Green Army team, and they taught us how to take care of trees. "



Mr. Nilesh Lohar & Mr. Vaman Ghumte

Volunteers, TATA Group

"The Green School Project has been implemented here at Z.P. Shalas. It is very important that it remains sustainable. It have utilized the '3R' approach - Waste management, Reuse, and Recycle and it is essential to maintain the project which has been initiated & must be well-maintained." - says **Mr. Vaman Ghumte**

" I have come here as a volunteer. The projects here are very impressive." - says **Mr. Nilesh Lohar**



School Management Committee

Z.P. School, Deshmukhwadi

"Through the support of Tata AutoComp and Sustainability Initiatives (SI), several valuable activities such as composting, plantation drives & educational exposure visits were introduced in our school. I accompanied students on a visit to the Science Park, where they explored Tata project models, enjoyed a 3D experience, and visited the planetarium. The session on planets, especially Saturn, was highly engaging and informative for the children. These initiatives have enhanced students' learning, curiosity, and interest in science. On behalf of the School Management Committee, I sincerely thank Tata AutoComp and SI for their continuous support & meaningful contributions to our school."



Mr. Salim Gulab Sheikh

Teacher, Z.P. Shala, Ranmala Kadus

"Over the past year, Tata AutoComp and Sustainability Initiatives (SI), under the Green School Project, implemented several valuable initiatives in our school. A rainwater harvesting system was introduced to collect and recharge water into a borewell, improving groundwater levels and water availability. Water conservation was further strengthened through slow-flow systems that reduce unnecessary wastage. A waste management system was also established, where organic waste is converted into compost and used for maintaining school greenery. Educational visits and indoor-outdoor learning activities enhanced students' scientific understanding. Workshops on wildlife awareness, snakes, forest animals, fire safety, and emergency preparedness provided important practical knowledge. I sincerely thank Tata AutoComp and SI for their continuous support and contribution."



Mr. Amol Umbarje

Senior Cordinator, Sustainability Initiatives (SI)

Under the CSR initiatives of Tata AutoComp and Sustainability Initiatives (SI), the Green School Project has been implemented across several schools in the Chakan region. The project introduced sustainable interventions such as solar energy systems, rainwater harvesting, indoor and outdoor plantation, waste management systems, and low-flow taps to reduce water wastage.

To encourage environmental awareness, various workshops and sessions were conducted on sustainability and responsible practices. These activities helped students gain practical knowledge and actively participate in environmental conservation efforts.

Through our experience, we have observed that schools are highly receptive to such initiatives, and community participation further strengthens their impact. We sincerely thank Tata AutoComp CSR, SI, school principals, teachers, and students for their valuable support and involvement in making the Green School Project successful and impactful.

ALIGNMENT WITH SDG's

The Green School Project contributes to several United Nations Sustainable Development Goals (SDGs) by promoting environmental sustainability, strengthening resource efficiency, and fostering climate-conscious behavior among students and communities in the Chakan region. Through integrated interventions such as solar energy systems, rainwater harvesting, waste management, and environmental education, the project addresses key ecological challenges while transforming schools into sustainable learning ecosystems.

- SDG 6: Clean Water and Sanitation

The project promotes sustainable water management through the installation of rainwater harvesting systems and low-flow taps. These interventions enhance groundwater recharge, reduce water wastage, and improve overall water-use efficiency within school campuses.

- SDG 7: Affordable and Clean Energy

The installation of off-grid solar photovoltaic systems supports the transition to renewable energy by reducing dependence on conventional grid electricity. It also ensures reliable power supply while promoting awareness of clean energy among students.

- SDG 13: Climate Action

The initiative contributes to climate change mitigation by reducing carbon emissions through solar energy adoption and sustainable waste management practices. It also builds awareness and climate-resilient behavior among students and communities.

- SDG 12: Responsible Consumption and Production

Through decentralized composting systems, the project encourages waste segregation and converts organic waste into useful compost. This reduces landfill dependency and promotes circular resource use within the school ecosystem.



CHALLENGES & KEY LEARNINGS

A. Challenges



The implementation of the Green School Project across multiple Zilla Parishad schools involved a diverse set of on-ground challenges, primarily due to variations in infrastructure, environmental conditions, and behavioural aspects.

- **Site Variability:** Differences in rooftops, space, and existing infrastructure required customized planning for systems like rainwater harvesting, solar panels, and composting units. Rocky soil and uneven terrain also impacted groundwater recharge efficiency.
- **Behavioural Adaptation:** Limited initial awareness about waste segregation, composting, and system maintenance required continuous training, demonstrations, and follow-ups.
- **Maintenance & Ownership:** Sustaining systems (cleaning filters, waste handling, plant care, solar usage) needed active participation and long-term ownership from schools and students.
- **Stakeholder Coordination:** Managing schedules and aligning efforts among school authorities, teachers, local bodies, volunteers, and the implementation team required careful planning.



B. Key Learnings

The project provided valuable insights into implementing sustainability initiatives effectively within school ecosystems.

- **Student Ownership Matters:** Formation of Green Army teams ensured active student participation, bridging the gap between infrastructure and its effective usage.
- **Learning by Doing:** Hands-on demonstrations (rainwater harvesting, composting, solar systems) proved more impactful than theoretical teaching.
- **Simple Solutions Work Best:** User-friendly, low-maintenance systems saw higher adoption and long-term sustainability.
- **Continuous Engagement is Key:** Regular follow-ups and interactions were essential to reinforce practices and ensure lasting impact.
- **Integration into Daily Routine:** Embedding activities like waste segregation and plant care into everyday school habits improved effectiveness.
- **Holistic Approach Required:** Infrastructure must be supported with awareness, education, and community involvement for meaningful outcomes.





WAY FORWARD

The Green School Project has successfully demonstrated that integrated sustainability interventions when combined with awareness, capacity building, and active participation can create meaningful environmental and educational impact at the school level. Through initiatives such as rainwater harvesting, solar PV systems, composting units, low-flow taps, and tree plantation, the project effectively addressed key challenges related to water, energy, and waste while fostering environmental consciousness among students. A key strength of the project lies in its focus on behavioural change and student ownership. Workshops, exposure visits, and the formation of Green Army teams enabled hands-on learning and ensured that systems are actively used, monitored, and maintained. This integration of infrastructure with education has helped create resource-efficient school environments and instilled long-term sustainable habits.

The project also highlights strong potential for scalability and replication across **8–10 additional schools,** particularly in semi-rural and rural regions. Its structured yet flexible model comprising baseline assessment, customized interventions, capacity building, student engagement, and continuous monitoring can be effectively adapted while considering site-specific needs. Strengthening institutional ownership, integrating sustainability into school curricula, and enhancing community participation will further support long-term success. The project's success was driven by strong collaboration among the CSR partner, school authorities, local stakeholders, and the implementation team, ensuring smooth execution and meaningful outcomes. With strategic expansion and continued engagement, the initiative can scale into a sustainable model for school development, driving impactful environmental change.



Media Spotlight On
Green School Initiative

नवराष्ट्र
Pune | 04 April 2026 | Page 2

लोकार्पण ● सस्टेनेबिलिटी इनिशिएटिव्हज व टाटा ऑटोकॉम्पच्या पुढाकाराने प्रोजेक्ट राबविणार

जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्प



शालेय विद्यार्थी 'ग्रीन आर्मी'ची स्थापना

पुणे, शहर प्रतिनिधी. पुणे जिल्ह्यातील खेड तालुक्यातील चार जिल्हा परिषद शाळांमध्ये पर्यावरणपूरक उपक्रम राबविण्याच्या 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण करण्यात आले. टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेडच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्हजच्या माध्यमातून हा प्रकल्प राबविण्यात आला आहे.

खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच शाळा परिसरात वृक्षारोपण करण्यात आले आहे. पाणी संवर्धनासाठी लो-फ्लो वॉटर टॅप्स बसविण्यात आले असून विद्यार्थ्यांसाठी वर्षभर पर्यावरणपूरक उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर देण्यात आले आहे.

शाळांतील मुख्याध्यापक व शिक्षकांनी या उपक्रमामुळे विद्यार्थ्यांमध्ये पर्यावरणाबाबत जागरूकता वाढेल आणि उपलब्ध सुविधांचा योग्य वापर केला जाईल, असा विश्वास व्यक्त केला. तसेच चारही गावांतील ग्रामस्थ व पालकांनी टाटा ऑटोकॉम्प सिस्टिम्स आणि सस्टेनाबिलिटी इनिशिएटिव्हज यांच्या उपक्रमाचे कौतुक करत आभार मानले. तर या प्रकल्पाचे समन्वयक म्हणून प्रियांका बुरंगे, सुमित कापसे आणि शालीन पालेकर यांनी महत्त्वपूर्ण भूमिका बजावली.

> "पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते. शासकीय शाळांना हरित शाळांमध्ये रूपांतरित करण्याच्या उद्देशाने या प्रकल्पाची सुरुवात झाली. टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीच्या सहकार्याने आतापर्यंत ८ शाळांमध्ये ग्रीन स्कूल प्रकल्प यशस्वीपणे राबविण्यात आले आहेत."
> -अपूर्वा कुलकर्णी सस्टेनाबिलिटी इनिशिएटिव्हज

> "या प्रकल्पामुळे शाळांमध्ये नैसर्गिक ऊर्जेचा वापर वाढेल, पाणी जमिनीत मुरल्यामुळे भूजल पातळी वाढण्यास मदत होईल, तसेच ली-फ्लो टॅपमुळे पाण्याची मोठ्या प्रमाणात बचत होईल, दुसरीकडे झाडांमुळे शाळा परिसर अधिक हरित होऊन विद्यार्थ्यांना स्वच्छ व पर्यावरणपूरक वातावरण मिळेल."
> -अमोल उंबरजे,

महाराष्ट्र टाइम्स

जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्प

ग्रामीण भागात पर्यावरणपूरक उपक्रमांना चालना

पुणे : ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्यासाठी खेड तालुक्यातील चार जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण करण्यात आले. या माध्यमातून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जाबचत आणि शाश्वत जीवनशैलीबाबत जागरूकता निर्माण करण्यावर भर देण्यात आला आहे.

'सस्टेनॅबिलिटी इनिशिएटिव्हज' यांच्या माध्यमातून; तर टाटा ऑटोकॉम्प सिस्टीम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीतून हा उपक्रम राबविण्यात आला. बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प कार्यान्वित करण्यात आला आहे. या प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यापासून खत निर्मिती यंत्र बसविण्यात आले आहे; तसेच वृक्षारोपण करून परिसर हरित करण्यात आला आहे. पाणी संवर्धनासाठी लो-फ्लो टॅप्स बसविण्यात आले असून, वर्षभर विविध पर्यावरणपूरक उपक्रम राबविण्यासाठी 'ग्रीन कॅलेंडर'ही शाळांना देण्यात आले आहे.

विद्यार्थ्यांमध्ये सहभाग वाढावा यासाठी 'ग्रीन आर्मी'ची स्थापना करण्यात आली असून, शाळांतील हरित उपक्रमांची अंमलबजावणी आणि देखभाल विद्यार्थी करणार आहेत. सायन्स पार्क भेटींसह कार्यशाळांचे आयोजन करण्यात आले. 'सस्टेनॅबिलिटी इनिशिएटिव्हज'च्या अपूर्वा कुलकर्णी म्हणाल्या, 'सरकारी शाळांना हरित शाळांमध्ये रूपांतरित करण्याच्या उद्देशाने हा प्रकल्प सुरू करण्यात आला आहे. टाटा ऑटोकॉम्पच्या सहकार्याने आतापर्यंत आठ शाळांमध्ये हा उपक्रम राबवण्यात आला आहे.'

अमोल उंबरजे म्हणाले, 'या प्रकल्पामुळे नैसर्गिक ऊर्जेचा वापर वाढणार असून, पाणी संवर्धनास मदत होणार आहे. वृक्षारोपणामुळे शाळांचा परिसर अधिक हिरवागार होईल.' या प्रकल्पाच्या यशस्वी अंमलबजावणीसाठी प्रियांका बुरंगे, सुमीत कापसे आणि शालीन पालेकर यांनी समन्वय सांभाळला.

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रुपये ● सोमवार ६ एप्रिल २०२६, पुणे C (पुणे/अहिल्यानगर/सोलापूर आवृत्ती) Issue-94 ● P:

जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्प



पुणे : पुणे जिल्ह्याच्या ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट यांच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्हज यांच्या माध्यमातून चार जिल्हा परिषद शाळांमध्ये ग्रीन स्कूल प्रकल्पाचे लोकार्पण नुकतेच झाले. सस्टेनाबिलिटी इनिशिएटिव्हजच्या अपूर्वा कुलकर्णी, अमोल उंबरजे यावेळी उपस्थित होते.

खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे. शाळांतील मुख्याध्यापक व शिक्षकांनी या उपक्रमामुळे विद्यार्थ्यांमध्ये पर्यावरणाबाबत जागरूकता वाढेल आणि उपलब्ध सुविधांचा योग्य वापर केला जाईल, असा विश्वास व्यक्त केला.

या प्रकल्पाचे समन्वयक म्हणून प्रियांका बुरंगे, सुमित कापसे आणि शालीन पालेकर यांनी महत्त्वपूर्ण भूमिका बजावली.

पुण्य नगरी

जि. प. शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण



पुणे : प्रतिनिधी

जिल्ह्याच्या ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्हज यांच्या माध्यमातून चार जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण नुकतेच झाले.

खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे. या प्रकल्पाच्या माध्यमातून शाळांमध्ये पर्यावरणपूरक पायाभूत सुविधा निर्माण करून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जा बचत आणि शाश्वत जीवनशैली याबाबत जागरूकता निर्माण करण्याचा प्रयत्न करण्यात आला आहे.

या ग्रीन स्कूल प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच इनडोअर व आउटडोअर वृक्षारोपण करण्यात आले आहे. पाणी संवर्धनासाठी शाळांमध्ये लो-फ्लो वॉटर टॅप्स बसविण्यात आले आहेत.

विद्यार्थ्यांमध्ये वर्षभर पर्यावरणपूरक उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर शाळांना देण्यात आले आहे. शाळेतील सर्व हरित उपक्रमांची देखभाल व अंमलबजावणी करण्यासाठी विद्यार्थ्यांची 'ग्रीन आर्मी' तयार आहे. विद्यार्थ्यांना विज्ञान व पर्यावरण विषयाची आवड निर्माण व्हावी यासाठी सायन्स पार्क भेट, तसेच पर्यावरण संवर्धन, अग्निसुरक्षा आणि जैवविविधता ओळख या विषयांवर मार्गदर्शन व कार्यशाळा आयोजित करण्यात आल्या.

याबाबत माहिती देताना सस्टेनाबिलिटी इनिशिएटिव्हजच्या अपूर्वा कुलकर्णी म्हणाल्या, पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते.

शासकीय शाळांना हरित शाळांमध्ये रूपांतरित करण्याच्या उद्देशाने या प्रकल्पाची सुरुवात झाली. टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीच्या सहकार्याने आतापर्यंत ८ शाळांमध्ये ग्रीन स्कूल प्रकल्प यशस्वीपणे राबविण्यात आले आहेत.

प्रजा जागरुक
काळाची गरज
पुणे, शनिवार, २८ मार्च २०२६

सस्टेनेबिलिटी इनिशिएटिव्हज व टाटा ऑटोकॉम्पच्या पुढाकाराने चार जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण

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सस्टेनेबिलिटी इनिशिएटिव्ह्ज व टाटा ऑटोकॉम्पच्या पुढाकाराने

चार जि.प.शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण

पुणे (दै. संध्या) :



पुणे जिल्ह्याच्या ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्ह्ज यांच्या माध्यमातून चार जिल्हा परिषद शाळांमध्ये ग्रीन स्कूल प्रकल्पाचे लोकार्पण नुकतेच झाले. खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे. या प्रकल्पाच्या माध्यमातून शाळांमध्ये पर्यावरणपूरक पायाभूत सुविधा निर्माण करून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जा बचत आणि शाश्वत जीवनशैली याबाबत जागरूकता निर्माण करण्याचा प्रयत्न करण्यात आला आहे.

या ग्रीन स्कूल प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच इनडोअर व आउटडोअर वृक्षारोपण करण्यात आले आहे. पाणी संवर्धनासाठी शाळांमध्ये लो-फ्लो वॉटर टॅप्स बसविण्यात आले आहेत. विद्यार्थ्यांमध्ये वर्षभर पर्यावरणपूरक देखभाल व अंमलबजावणी करण्यासाठी विद्यार्थ्यांची 'ग्रीन आर्मी' तयार आहे. विद्यार्थ्यांना विज्ञान व पर्यावरण विषयाची आवड निर्माण व्हावी यासाठी सायन्स पार्क भेट, तसेच पर्यावरण संवर्धन, अग्निसुरक्षा आणि जैवविविधता ओळख या विषयांवर मार्गदर्शन व कार्यशाळा आयोजित करण्यात आल्या. सस्टेनाबिलिटी इनिशिएटिव्ह्जच्या अपूर्वा कुलकर्णी म्हणाल्या, "पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते. शासकीय शाळांना हरित शाळांमध्ये रूपांतरित करण्याच्या उद्देशाने या प्रकल्पाची सुरुवात झाली. टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीच्या सहकार्याने आतापर्यंत ८ शाळांमध्ये ग्रीन स्कूल प्रकल्प यशस्वीपणे राबविण्यात आले आहेत."

या प्रकल्पामुळे शाळांमध्ये नैसर्गिक ऊर्जेचा वापर वाढेल, पावसाचे पाणी जमिनीत मुरल्यामुळे भूजल पातळी वाढण्यास मदत होईल, तसेच लो-फ्लो टॅप्समुळे पाण्याची मोठ्या प्रमाणात बचत होईल. वृक्षारोपणामुळे शाळा परिसर अधिक हरित होऊन विद्यार्थ्यांना स्वच्छ व पर्यावरणपूरक वातावरण मिळेल, असे अमोल उंबरजे यांनी सांगितले.

शाळांतील मुख्याध्यापक व शिक्षकांनी या उपक्रमामुळे विद्यार्थ्यांमध्ये पर्यावरणाबाबत जागरूकता वाढेल आणि उपलब्ध सुविधांचा योग्य वापर केला जाईल, असा विश्वास व्यक्त केला. तसेच चारही गावांतील ग्रामस्थ व पालकांनी टाटा ऑटोकॉम्प सिस्टिम्स आणि सस्टेनाबिलिटी इनिशिएटिव्ह्ज यांच्या उपक्रमाचे कौतुक करत आभार मानले.

या प्रकल्पाचे समन्वयक म्हणून प्रियांका बुरंगे, सुमित कापसे आणि शालीन पालेकर यांनी महत्त्वपूर्ण भूमिका बजावली.

दैनिक आरंभपर्व | आरंभ एका नव्या पर्वाचा | 28 Mar 2026 - Page 2

चार जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण



पुणे (दै. आरंभ पर्व)

पुणे जिल्ह्याच्या ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्ह्ज यांच्या माध्यमातून चार जिल्हा परिषद शाळांमध्ये ग्रीन स्कूल प्रकल्पाचे लोकार्पण नुकतेच झाले. खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे. या प्रकल्पाच्या माध्यमातून शाळांमध्ये पर्यावरणपूरक पायाभूत सुविधा निर्माण करून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जा बचत आणि शाश्वत जीवनशैली याबाबत जागरूकता निर्माण करण्याचा प्रयत्न करण्यात आला आहे. या ग्रीन स्कूल प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच इनडोअर व आउटडोअर वृक्षारोपण करण्यात आले आहे. पाणी संवर्धनासाठी शाळांमध्ये लो-फ्लो वॉटर टॅप्स बसविण्यात आले आहेत. विद्यार्थ्यांमध्ये वर्षभर पर्यावरणपूरक उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर शाळांना देण्यात आले आहे. शाळेतील सर्व हरित उपक्रमांची देखभाल व अंमलबजावणी करण्यासाठी विद्यार्थ्यांची 'ग्रीन आर्मी' तयार आहे. विद्यार्थ्यांना विज्ञान व पर्यावरण विषयाची आवड निर्माण व्हावी यासाठी सायन्स पार्क भेट, तसेच पर्यावरण संवर्धन, अग्निसुरक्षा आणि जैवविविधता ओळख या विषयांवर मार्गदर्शन व कार्यशाळा आयोजित करण्यात आल्या.

सस्टेनाबिलिटी इनिशिएटिव्ह्जच्या अपूर्वा कुलकर्णी म्हणाल्या, "पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते. शासकीय शाळांना हरित शाळांमध्ये रूपांतरित करण्याच्या उद्देशाने या प्रकल्पाची सुरुवात झाली.

दैनिक दायित्व | DAINIK DAYITVA | रविवार २९ मार्च २०२६

सस्टेनेबिलिटी इनिशिएटिव्ह्ज व टाटा ऑटोकॉम्पच्या पुढाकाराने चार जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण



पुणे : पुणे जिल्ह्याच्या ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्ह्ज यांच्या माध्यमातून चार जिल्हा परिषद शाळांमध्ये ग्रीन स्कूल प्रकल्पाचे लोकार्पण नुकतेच झाले. खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे.

या प्रकल्पाच्या माध्यमातून शाळांमध्ये पर्यावरणपूरक पायाभूत सुविधा निर्माण करून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जा बचत आणि शाश्वत जीवनशैली याबाबत जागरूकता निर्माण करण्याचा प्रयत्न करण्यात आला आहे. या ग्रीन स्कूल प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच इनडोअर व आउटडोअर वृक्षारोपण करण्यात आले आहे.

पाणी संवर्धनासाठी शाळांमध्ये लो-फ्लो वॉटर टॅप्स बसविण्यात आले आहेत. विद्यार्थ्यांमध्ये वर्षभर पर्यावरणपूरक उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर शाळांना देण्यात आले आहे. शाळेतील सर्व हरित उपक्रमांची देखभाल व अंमलबजावणी करण्यासाठी विद्यार्थ्यांची 'ग्रीन आर्मी' तयार आहे. विद्यार्थ्यांना विज्ञान व पर्यावरण विषयाची आवड निर्माण व्हावी यासाठी सायन्स पार्क भेट, तसेच पर्यावरण संवर्धन, अग्निसुरक्षा आणि जैवविविधता ओळख या विषयांवर मार्गदर्शन व कार्यशाळा आयोजित करण्यात आल्या.

सस्टेनाबिलिटी इनिशिएटिव्ह्जच्या अपूर्वा कुलकर्णी म्हणाल्या, पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते सीएसआर निधीच्या सहकार्याने आतापर्यंत ८ शाळांमध्ये ग्रीन स्कूल प्रकल्प यशस्वीपणे राबविण्यात आले आहेत. या प्रकल्पाचे समन्वयक म्हणून प्रियांका बुरंगे, सुमित कापसे आणि शालीन पालेकर यांनी महत्त्वपूर्ण भूमिका बजावली.

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चार जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण

पुणे : पुणे जिल्ह्याच्या ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्ह्ज यांच्या माध्यमातून चार जिल्हा परिषद शाळांमध्ये ग्रीन स्कूल प्रकल्पाचे लोकार्पण नुकतेच झाले. खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे.

या प्रकल्पाच्या माध्यमातून शाळांमध्ये पर्यावरणपूरक पायाभूत सुविधा निर्माण करून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जा बचत आणि शाश्वत जीवनशैली याबाबत जागरूकता निर्माण करण्याचा प्रयत्न करण्यात आला आहे. या ग्रीन स्कूल प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच इनडोअर व आउटडोअर वृक्षारोपण करण्यात आले आहे.

पाणी संवर्धनासाठी शाळांमध्ये लो-फ्लो वॉटर टॅप्स बसविण्यात आले आहेत. विद्यार्थ्यांमध्ये वर्षभर पर्यावरणपूरक उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर शाळांना देण्यात आले आहे. शाळेतील सर्व हरित उपक्रमांची देखभाल व अंमलबजावणी करण्यासाठी विद्यार्थ्यांची 'ग्रीन आर्मी' तयार आहे. विद्यार्थ्यांना विज्ञान व पर्यावरण विषयाची आवड निर्माण व्हावी यासाठी सायन्स पार्क भेट, तसेच पर्यावरण संवर्धन, अग्निसुरक्षा आणि जैवविविधता ओळख या विषयांवर मार्गदर्शन व कार्यशाळा आयोजित करण्यात आल्या.

सस्टेनाबिलिटी इनिशिएटिव्ह्जच्या अपूर्वा कुलकर्णी म्हणाल्या, पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते सीएसआर निधीच्या सहकार्याने आतापर्यंत ८ शाळांमध्ये ग्रीन स्कूल प्रकल्प यशस्वीपणे राबविण्यात आले आहेत. या प्रकल्पाचे समन्वयक म्हणून प्रियांका बुरंगे, सुमित कापसे आणि शालीन पालेकर यांनी महत्त्वपूर्ण भूमिका बजावली.

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जिल्हा परिषद शाळांचा हरित रूपांतरणाकडे प्रवास; पुण्यात 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण



पुणे : ग्रामीण भागातील शाळांना पर्यावरणपूरक बनविण्याच्या उद्देशाने टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेडच्या CSR निधीतून आणि सस्टेनाबिलिटी इनिशिएटिव्ह्जच्या सहकार्याने पुणे जिल्ह्यातील ४ जिल्हा परिषद शाळांमध्ये 'ग्रीन स्कूल' प्रकल्पाचे लोकार्पण उत्साहात पार पडले. खेड तालुक्यातील बिरदवाडी, देशमुखवाडी, तोरणे आणि रानमळा (कडूस) येथील जिल्हा परिषद शाळांमध्ये हा प्रकल्प राबविण्यात आला आहे. या प्रकल्पाच्या माध्यमातून शाळांमध्ये पर्यावरणपूरक पायाभूत सुविधा निर्माण करून विद्यार्थ्यांमध्ये पर्यावरण संरक्षण, ऊर्जा बचत आणि शाश्वत जीवनशैली याबाबत जागरूकता निर्माण करण्याचा प्रयत्न करण्यात आला आहे.

या ग्रीन स्कूल प्रकल्पांतर्गत शाळांमध्ये सोलर ऊर्जा प्रणाली, रेन वॉटर हार्वेस्टिंग व्यवस्था, ओल्या कचऱ्यासाठी खत निर्मिती यंत्र, तसेच इनडोअर व आउटडोअर वृक्षारोपण करण्यात आले आहे. पाणी संवर्धनासाठी शाळांमध्ये लो-फ्लो वॉटर टॅप्स बसविण्यात आले आहेत. विद्यार्थ्यांमध्ये वर्षभर पर्यावरणपूरक उपक्रम राबविण्यासाठी ग्रीन कॅलेंडर शाळांना देण्यात आले आहे. शाळेतील सर्व हरित उपक्रमांची देखभाल व अंमलबजावणी करण्यासाठी विद्यार्थ्यांची 'ग्रीन आर्मी' तयार आहे. विद्यार्थ्यांना विज्ञान व पर्यावरण विषयाची आवड निर्माण व्हावी यासाठी सायन्स पार्क भेट, तसेच पर्यावरण संवर्धन, अग्निसुरक्षा आणि जैवविविधता ओळख या विषयांवर मार्गदर्शन व कार्यशाळा आयोजित करण्यात आल्या.

सस्टेनाबिलिटी इनिशिएटिव्ह्जच्या अपूर्वा कुलकर्णी म्हणाल्या, "पर्यावरणपूरक उपक्रम राबविण्यात आमची संस्था नेहमीच पुढाकार घेत असते. शासकीय शाळांना हरित शाळांमध्ये रूपांतरित करण्याच्या उद्देशाने या प्रकल्पाची सुरुवात झाली. टाटा ऑटोकॉम्प सिस्टिम्स प्रायव्हेट लिमिटेड यांच्या सीएसआर निधीच्या सहकार्याने आतापर्यंत ८ शाळांमध्ये ग्रीन स्कूल प्रकल्प यशस्वीपणे राबविण्यात आले आहेत."

या प्रकल्पामुळे शाळांमध्ये नैसर्गिक ऊर्जेचा वापर वाढेल, पावसाचे पाणी जमिनीत मुरल्यामुळे भूजल पातळी वाढण्यास मदत होईल, तसेच लो-फ्लो टॅप्समुळे पाण्याची मोठ्या प्रमाणात बचत होईल. वृक्षारोपणामुळे शाळा परिसर अधिक हरित होऊन विद्यार्थ्यांना स्वच्छ व पर्यावरणपूरक वातावरण मिळेल, असे अमोल उंबरजे यांनी सांगितले.

शाळांतील मुख्याध्यापक व शिक्षकांनी या उपक्रमामुळे विद्यार्थ्यांमध्ये पर्यावरणाबाबत जागरूकता वाढेल आणि उपलब्ध सुविधांचा योग्य वापर केला जाईल, असा विश्वास व्यक्त केला. तसेच चारही गावांतील ग्रामस्थ व पालकांनी टाटा ऑटोकॉम्प सिस्टिम्स आणि सस्टेनाबिलिटी इनिशिएटिव्ह्ज यांच्या उपक्रमाचे कौतुक करत आभार मानले.

या प्रकल्पाचे समन्वयक म्हणून प्रियांका बुरंगे, सुमित कापसे आणि शालीन पालेकर यांनी महत्त्वपूर्ण भूमिका बजावली.



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