VISHWAKARMA UNIVERSITY

SDG 6 REPORT 2024

SUSTAINABLE DEVELOPMENT GOALS

VISHWAKARMA UNIVERSITY
Maximising Human Potential
University Grants Commission (UGC) Approved State Private University

VU SDG Report 2024 is printed using 100% EcoFiber recycled paper

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Maximising Human Potential

About This Report

At Vishwakarma University (VU), our steadfast commitment to sustainable development is profoundly aligned with the United Nations' 2030 Agenda for Sustainable Development. These global goals delineate an aspirational vision for a sustainable future, one that VU has deeply integrated into its institutional framework and curriculum.

Our foundational principle, Unleashing Human Potential, reflects our dedication to cultivating an environment conducive to the holistic development of our students, empowering them with the resilience and confidence required to navigate contemporary challenges.

As part of our sustainability mission, VU has reimagined itself as an Eco-campus, exemplifying innovative and sustainable practices. This report details our continual efforts to minimize our carbon footprint and highlights the impactful partnerships underpinning these achievements. For instance, our Certificate Programme in Sustainability Management, developed collaboratively with Hof University of Applied Sciences, Germany, equips students with advanced competencies in business management and contemporary sustainable practices. Additionally, through a strategic partnership with the Wilo Foundation, we have established the Water Quality Centre of Excellence, aimed at advancing water treatment, purification, and public awareness of clean drinking water.

VU's commitment to sustainability extends beyond environmental stewardship. We have launched a dedicated Center for Sustainability, NEXUS,that undertakes activities aligned with the Sustainable Development Goals (SDGs). Our mission is to cultivate informed, ethical, and skilled individuals who uphold principles of equity, inclusivity, and excellence. By engaging students in practical applications of their knowledge, we bridge the divide between theoretical frameworks and real-world challenges.

Our participatory development model actively involves students and industry stakeholders, ensuring that our academic philosophy equips learners with the competencies essential for addressing the complexities of the modern business landscape. VU's extensive network, encompassing over 45 collaborations with prominent industries and educational institutions—including the Maharashtra State Faculty Development Academy, Queen Mary Technical Institute, Buldhana Urban Cooperative Credit Society, and TATA Technical Limited—facilitates industry projects, live projects, internships, and placements, thus enhancing practical exposure and career prospects for our students.

Furthermore, VU is committed to fostering a well-rounded education and community engagement through initiatives such as the VU-Centre for Communication Development, the Sahyadri Communication Project, and the VU Legal Aid Clinic, all integral components of our VU-iPAR Model. This model emphasizes community involvement, and we encourage student leadership through programs such as the National Service Scheme (NSS) and the Student Council. In alignment with the National Education Policy (NEP) 2020, we offer NEP 2020 courses and have established the VUWCOE – VU Wellness Center of Excellence, supporting holistic development in both academic and wellness dimensions.

In summary, Vishwakarma University's commitment to sustainable development and the SDGs is firmly embedded within our institutional ethos. Through collaborative engagement with diverse stakeholders, we consistently integrate sustainability into our operations, fostering a culture of innovation, research, and learning. VU remains committed to preparing future leaders equipped to drive impactful change, contributing meaningfully to the global vision of sustainable development.

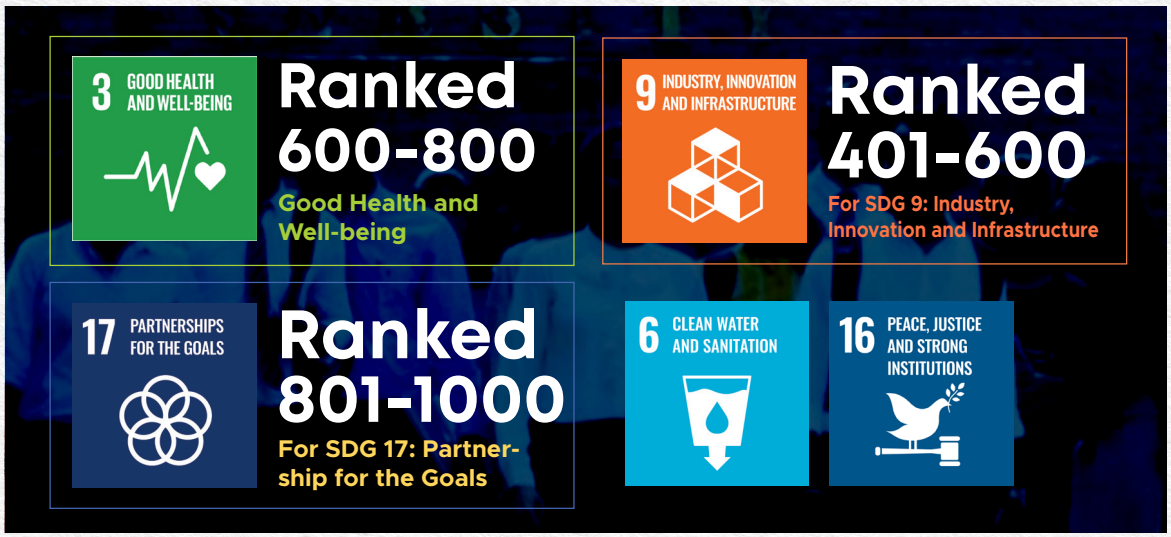
Prof. (Dr) Siddharth Jabade
Vice-Chancellor
Vishwakarma University, Pune, India

VU's Participation in the THE Impact Rankings 2024

Vishwakarma University (VU) also participated last year in Times Higher Education (THE) Impact Rankings 2024, which looks at global universities' commitment and performance in furthering the Sustainable Development Goals (SDGs).

VU took part in the 4 SDGs listed below plus the mandatory SDG 17 and the results were as follows:

Overall Ranking 1001+



6 CLEAN WATER AND SANITATION

Ensure availability and sustainable management of water and sanitation for all

Sustainable Development Goal (SDG) 6: Clean Water and Sanitation Report

Vishwakarma University (VU) is built on the foundations of excellence in academics, innovation, impactful research, and societal outreach. The university strives to shape individuals who not only succeed professionally but also contribute responsibly to the nation, industries, and communities. Guided by the values of equity, inclusivity, ethics, professionalism, and quality, VU emphasizes holistic development and sustainable progress.

With a broad multidisciplinary framework, the university provides programs at the undergraduate, postgraduate, doctoral, diploma, and certificate levels. Its diverse offerings cover fields such as Management and Commerce, Science and Technology, Art and Design, Law, Pharmacy, Humanities and Social Sciences, Architecture, Music, Travel and Tourism, and Interdisciplinary Studies. This wide academic spectrum encourages interdisciplinary and cross-domain learning, allowing students to gain both depth and versatility in their education.

Demonstrating foresight in digital transformation, VU introduced the Vishwakarma Online Learning Platform (VOLP) and VU-Digital (VUD) ahead of the COVID-19 era. These platforms enable flexible, personalized, and technology-driven education, ensuring seamless access to knowledge anywhere, anytime.
The university also maintains strong global and industry linkages through collaborations with reputed institutions, professional bodies, and corporate leaders. Its Centers of Excellence, developed in partnership with SAP, WILO Mather & Platt, Unity Technologies, Integrated Environmental Services (IES), and SUNY Binghamton (USA), focus on:

- Strengthening local capacity for innovation and application.
- Developing solutions with industrial and social significance.
- Promoting adaptive innovation to support the Make in India initiative.
- Involving diverse communities in the innovation ecosystem to ensure inclusive and equitable growth.

Through this unique blend of academic rigor, industry partnerships, and innovative ecosystems, Vishwakarma University prepares students to become future-ready leaders and change-makers.

1. Water Consumption per Person

The University maintains a robust and well-structured system for managing its water resources. Borewells act as the primary water source, supported by a comprehensive purification setup across the campus. To provide safe drinking water, filtration units and Water ATM facilities are strategically installed in all major areas. The Campus Management Team oversees daily operations, keeps detailed records of water usage, and ensures timely maintenance of the water infrastructure. Documentation outlining the maintenance of the campus-wide water distribution network is available, along with the annual maintenance report that includes details on filter servicing, replacement of filter media such as candles and carbon, and the arrangement of additional tanker water whenever necessary.

Volume of Water Used in the University (Inbound Treated/Extracted Water): 171,704 m^3/year (4% increase from 2023)
Campus Population: 4,465 (25% increase from 2023)

Evidence:
Campus Management Committee.

VISHWAKARMA UNIVERSITY
A State Private University under Government of Maharashtra.

Survey No. 2, 3, 4 Laxmi Nagar, Kondhwa Budruk, Pune - 411 048, Maharashtra, India.
Contact : (020) 26950301, 26950302 | Fax : (020) 26950304
Website : www.vupune.ac.in | Email : connect@vupune.ac.in

NO.: VU/VC Office /2022

Date:01/01/2022

Office Order

The undersigned hereby nominates following faculty/ staff members in the campus management committee for smooth functioning of campus management activities of the University w.e.f. 1st Jan:2022, until further orders

Sr. No.	Department	Representative
1	Computer Science	Mr. Abhaya Kumar Pradhan
2	Computer Engineering	Prof. Kavita Kumavat
3	Pharmacy	Prof. Om Bagade
4	Design	Dr. Shraddha Kaje
5	Fashion	Prof. Vaishali Wagh
6	Animation	Prof. Vaishali Wagh
7	Interior Spaces	Prof. Apurva Thosar

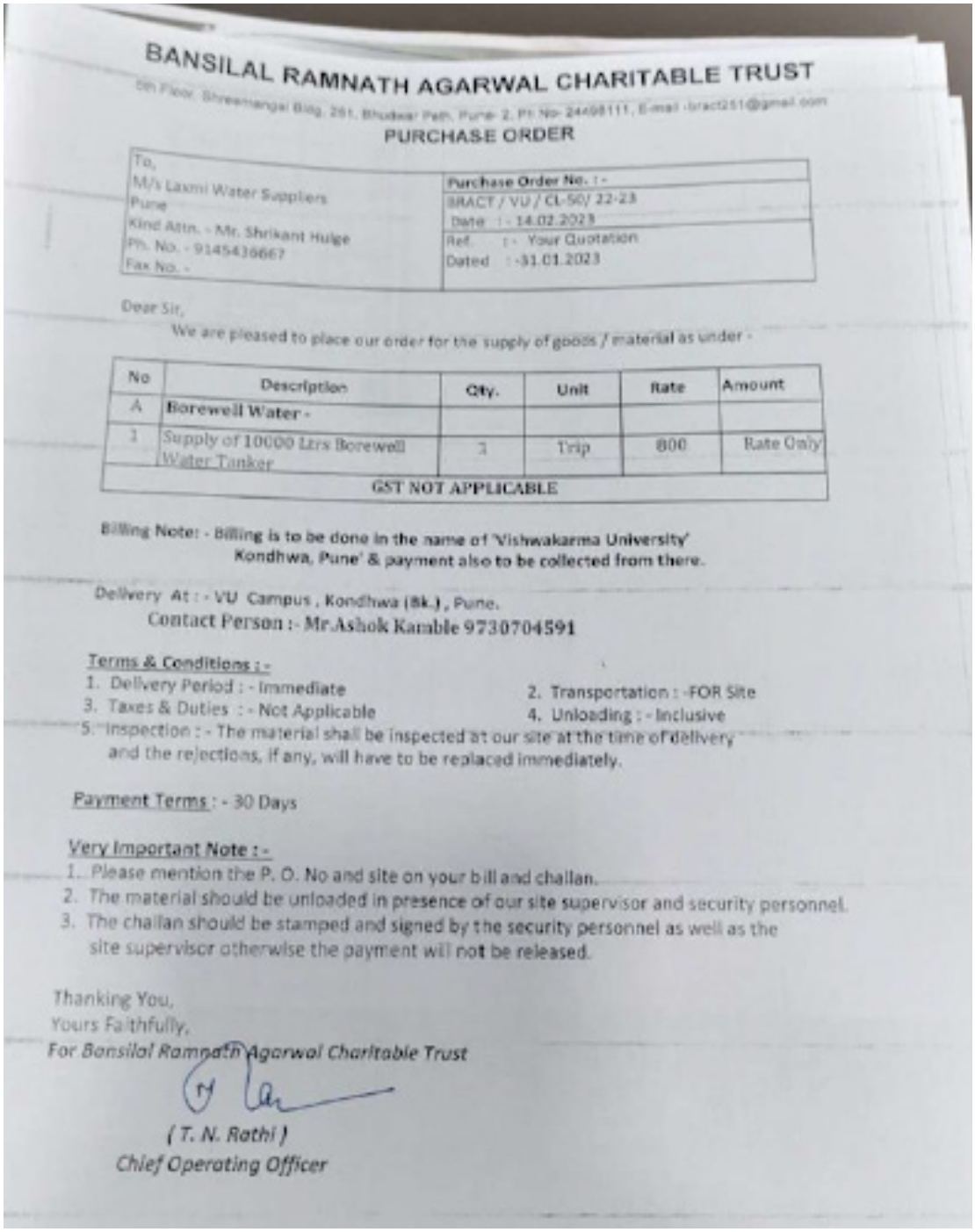
Campus management committee will look after the work as per annexure attached

[Prof. (Dr.) Siddharth Jabade]
Vice Chancellor

CC to.: VP Office, VC Office, Officers of University, All HODs, Accounts, Establishment section.

Link: https://drive.google.com/file/d/1goskapYDysOjYXofscsqnUBPgOhLG8VS/view?usp=drive_link

Purchase Order



BANSILAL RAMNATH AGARWAL CHARITABLE TRUST

5th Floor, Shreemangal Bldg, 261, Bhudwar Path, Pune- 2, Ph No- 24498111, E-mail -bract251@gmail.com

PURCHASE ORDER

To, M/s Laxmi Water Suppliers Pune Kind Attn. - Mr. Shrikant Hulge Ph. No. - 9145436667 Fax No. -	Purchase Order No. : - BRACT / VU / CL-50/ 22-23 Date : - 14.02.2023 Ref. : - Your Quotation Dated : -31.01.2023

Dear Sir,

We are pleased to place our order for the supply of goods / material as under -

No	Description	Qty.	Unit	Rate	Amount
A	Borewell Water -				
1	Supply of 10000 Ltrs Borewell Water Tanker	3	Trip	800	Rate Only
	GST NOT APPLICABLE				

Billing Note: - Billing is to be done in the name of 'Vishwakarma University' Kondhwa, Pune' & payment also to be collected from there.

Delivery At : - VU Campus , Kondhwa (Bk.) , Pune.

Contact Person :- Mr.Ashok Kamble 9730704591

Terms & Conditions : -

1. Delivery Period : - Immediate
2. Transportation : -FOR Site
3. Taxes & Duties : - Not Applicable
4. Unloading : - Inclusive
5. Inspection : - The material shall be inspected at our site at the time of delivery and the rejections, if any, will have to be replaced immediately.

Payment Terms : - 30 Days

Very Important Note : -

1. Please mention the P. O. No and site on your bill and challan.
2. The material should be unloaded in presence of our site supervisor and security personnel.
3. The challan should be stamped and signed by the security personnel as well as the site supervisor otherwise the payment will not be released.

Thanking You,
Yours Faithfully,
For Bansilal Ramnath Agarwal Charitable Trust

(T. N. Rathi)
Chief Operating Officer

Link: https://drive.google.com/file/d/1M4giFSKVCU1vejpa2LWM3JhI9ExjBlWz/view?usp=drive_link

2. Water usage and care

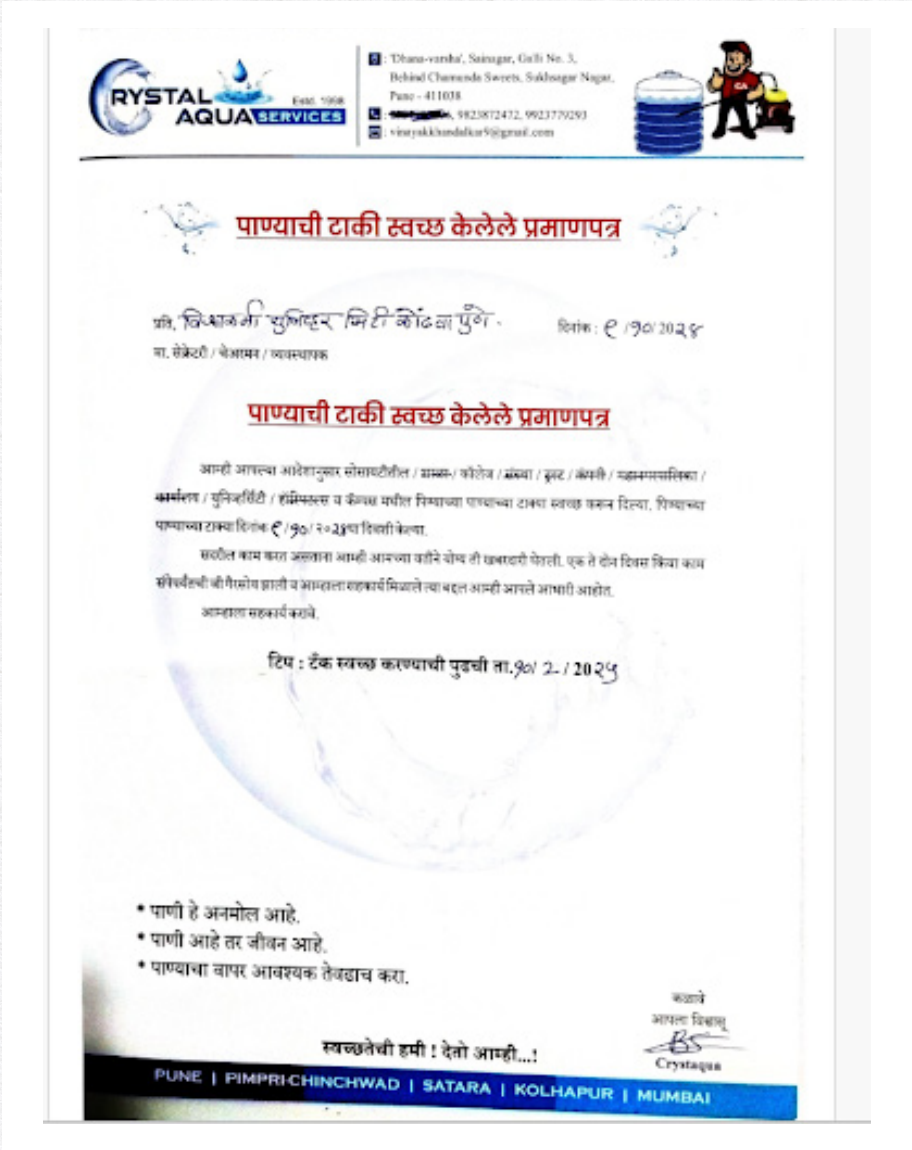
A Vertical Sewage Treatment Plant (VSTP) is a modern approach to wastewater management that optimizes space usage, especially in urban regions with limited land availability. Unlike conventional treatment systems that extend over large horizontal areas, this model arranges the treatment units in a vertical structure. By stacking processes upward, it significantly reduces the ground space required while still managing large volumes of sewage effectively. Such a system is highly beneficial for densely populated cities, multi-storey complexes, and locations where land is costly or difficult to obtain.

Evidence:

Patent URL

https://research.vupune.ac.in/patent
https://research.vupune.ac.in/patent
https://research.vupune.ac.in/patent

Tank Cleaning Certificate



CRYSTAL AQUA SERVICES Estd. 1998

'Dhana-varsha', Sainagar, Gulli No. 3, Behind Chamunda Sweets, Sukhsagar Nagar, Pune - 411038
[redacted], 9823072472, 9923779293
vinayakkhandalkar9@gmail.com

पाण्याची टाकी स्वच्छ केलेले प्रमाणपत्र

प्रति, विश्वकर्मा युनिव्हर्सिटी कोंढवा पुणे.
मा. सेक्रेटरी / चेअरमन / व्यवस्थापक

दिनांक : ९ /१०/ २०२४

पाण्याची टाकी स्वच्छ केलेले प्रमाणपत्र

आम्ही आपल्या आदेशानुसार सोसायटीतील / ~~शाळा~~ / कॉलेज / ~~संस्था~~ / ~~इतर~~ / ~~कंपनी~~ / ~~महानगरपालिका~~ / ~~कार्यालय~~ / युनिवर्सिटी / हॉस्पिटल्स व कॅन्टल मधील खिशाच्या पाण्याच्या टाक्या स्वच्छ करून दिल्या. खिशाच्या पाण्याच्या टाक्या दिनांक ९ /१०/ २०२४ रोजी केल्या.

सर्वांत काम करत असताना आम्ही आपल्या वतीने योग्य ती खबरदारी घेतली. एक ते दोन दिवस किंवा काम सोसायटीची गैरसोय झाली व आपलेला सहकार्य मिळाले त्या बद्दल आम्ही आपले आभारी आहोत.

आम्हाला सहकार्य करावे.

टिप : टँक स्वच्छ करण्याची पुढची ता. १०/ २ - / २०२५

* पाणी हे अनमोल आहे.
* पाणी आहे तर जीवन आहे.
* पाण्याचा वापर आवश्यक तेवढाच करा.

कळावे
आपला विश्वासू
Crystaqua

स्वच्छतेची हमी ! देतो आम्ही...!

PUNE | PIMPRI-CHINCHWAD | SATARA | KOLHAPUR | MUMBAI

Link: https://drive.google.com/file/d/19USbCvRgtuB-ZnS2a2AqEe5s2hiFIHoo/view?usp=drive_link

B. Preventing water system pollution

Processes to prevent polluted water entering the water system, including pollution caused by accidents and incidents at the university. The university has set up a specialized Centre tasked with creating Standard Operating Procedures (SOPs) for laboratories that use water. Under this Centre, a student chapter has been formed where students actively participate in spreading awareness about water conservation and the importance of preventing wastage. Both undergraduate and postgraduate students from Vishwakarma University, along with peers from other institutions, contribute to research and projects focused on designing and innovating methods to reduce water pollution. Additionally, the Campus Infrastructure Management team consistently oversees and ensures that these initiatives and policies are effectively implemented.

Evidence:

https://www.vupune.ac.in/images/IQAC/policies-and-procedures/VU_Water_Reuse_and_Maximisation_Policy.pdf

Annual Maintenance Contract

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ANNUAL MAINTENANCE CONTRACT

To, **Trident Services Private Limited.** Sr.no.116, Hissa No.9/6 & 9/7, Near Hotel Rajmudra, Warje, Pune-411058	**Work Order No. : -** **VU/WO/AMC/2024-25/001** Date – 04.11.2024
Contact Person – Mr. Ashish Mo. No. – 020-66256222/223 Email Id- tridents@tridents.net	Ref.- Your Quotation AMC- OPP-TS-SW-2425-38846 Dated: - 02.10.2024 Final negotiation held on 17.10.2024

Dear Sir,

We are pleased to award you the A.M.C. for the 140Kva D.G.SET as under: -

Site: -140Kva Water Cooled DG Set installed at **Vishwakarma University**, at Kondhwa, Pune -48

No.	Item Description	Qty	Unit	Rate	Amount
01	Non-Comprehensive Annual Maintenance Contract for One No. Water Cooled D.G SET installed at VU Campus **(Cummins Make)** AMC of 140kva Water-cooled D.G. Set **Engine Model No. 6BTAA5.9G1.1** **Engine No. -62570163**	01	Nos	14850/-	14850/-
		Amount: -			14850/-
		Add GST @ 18%			2673/-
		Total Amount			17523/-

Rupees –: Seventeen Thousand Five Hundred Twenty-Three only

Contract Period –: **15.11.2024 to 14.11.2025**

Payment Terms: - 100% Advance Along with Order

Scope Of Work.

- To carry out preventive maintenance of the Diesel Generating set once every two months which includes
- A check - Daily inspection check (to be done by the customer)
- To inspect as per the monthly check sheet.
- B check - This is to be done as a part of an AMC visit when falls are due.
- C Check – To be part of AMC visit when falls are due.

140Kva D.G.SET- AMC- Vishwakarma University, Pune

Page 1 of 2

Link: https://drive.google.com/file/d/17-TasRoJfhO5n60EnD5pTxsTURbdyV-H/view?usp=drive_link

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[Prof. (Dr.) Siddharth Jabade]
Vice Chancellor

CC to.: VP Office, VC Office, Officers of University, All HODs, Accounts, Establishment section.

Link: https://drive.google.com/file/d/1F7omxaHYTToYI2kTQndhAzOKbrwq-4pX/view?usp=drive_link

C. Free drinking water provided

Provide free drinking water for students, staff and visitors (e.g. drinking water fountains).

Vishwakarma University, in partnership with Wilo India, has set up an innovative Water ATM that minimizes waste generation compared to traditional RO systems. The rejected water from the unit is sustainably utilized for irrigation of plants. Furthermore, each floor of the campus is equipped with water purifiers and coolers, maintained by the Campus Infrastructure Management team along with the Water Quality Centre of Excellence. This Water ATM is available free of charge to students, faculty, and visitors.

Evidence: advertisement link of water ATM at VU:

https://maharashtratimes.com/maharashtra/pune-news/water-atm-in-vishwakarma/articleshow/64615380.cms

https://www.vupune.ac.in/existing-centres/water-quality-centre-of-excellence

D. Water-conscious building standards

Apply building standards to minimise water use. The Campus Management team consistently monitors and manages the upkeep of green infrastructure and water harvesting projects.

Evidence: VU website link of policy:

https://www.vupune.ac.in/images/IQAC/policies-and-procedures/VU_Green_Building_and_Well-being_Policy.pdf

3. Water usage and care

The University is actively promoting water conservation and reuse through initiatives and hands-on projects under the Water Quality Centre of Excellence.

A. Water reuse policy

Multiple projects are currently being implemented to support sustainable water management. For instance, the WILO water ATM, extensively used by both students and staff, generates minimal wastewater, which is redirected for irrigating campus greenery. As part of the Eco Campus initiative, regular awareness campaigns are organized to encourage water reuse, while the Campus Management team ensures effective execution of these practices.

Evidence: VU website link of policy::

https://www.vupune.ac.in/images/IQAC/policies-and-procedures/VU_Water_Reuse_and_Maximisation_Policy.pdf

B. Water reuse measurement

Measure the reuse of water across the university?

The WILO water ATM, commonly used by students and staff, dispenses a small quantity of water, which is then used for irrigating the plants. As part of the Eco Campus initiative, regular awareness programs are conducted to promote water reuse, and the Campus Management team ensures this process is managed effectively.

Evidence: https://www.vupune.ac.in/department-of-wash

4. Water in the community

A. Water management educational opportunities

Provide educational opportunities for local communities to learn about good water management

The World Water Day event at Vishwakarma University was to raise awareness about the critical importance of water conservation and sustainability. Through a series of engaging activities and competitions, the event aimed to inspire parcipants to think innovatively about water conservation strategies and to foster a sense of responsibility towards the preservation of this vital resource. By bringing together students, faculty, and staff, the event sought to cultivate a community-driven approach to addressing water-related challenges and promoting smart peace initiatives centered around water conservation.

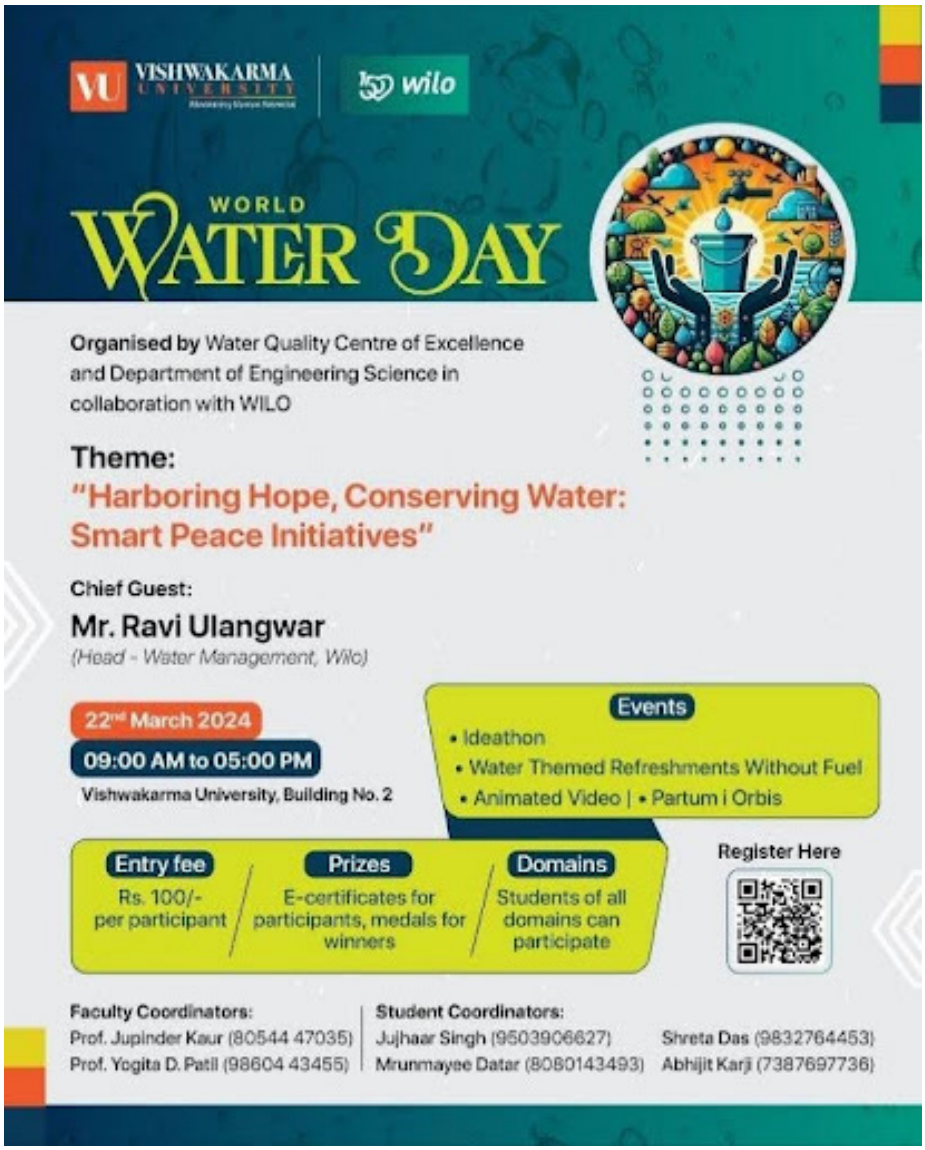
Evidence: World Water Day

Announcement on social media

The Water Quality Centre of Excellence and the Department of Engineering Science, in collaboration with WILO, are celebrating World Water Day on March 22nd, 2024. Join us in raising awareness and spreading the importance of water.

https://www.vupune.ac.in/event/world-water-day-24

Flyer:



Link: https://drive.google.com/file/d/1j_bBUhV2vUi7vwpVD7z3wPVUg5JkS8Kd/view?usp=drive_link

Evidence:
https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-worldwaterday-celebration-activity-7175720519336378368-6Nku?utm_source=share&utm_medium=member_desktop

Event Details:
Date: March 22, 2024
Venue: Vishwakarma University, Building No. 02, Pune

Session Attendees:
All students and faculty members of Vishwakarma University, Pune.

About the Event:
The Water Quality Centre of Excellence and the Department of Engineering Science, in collaboration with WILO, are celebrating World Water Day on March 22nd, 2024. Event aimed for raising awareness and spreading the importance of water. Different competitions were organised like Ideathon, Water themed refreshment without fuel, Animated videos etc

Objective:
- To create awareness on the importance of water conservation and its role in sustainable living.
- To highlight the link between equitable water access, peace, and community well-being.
- To encourage adoption of smart and eco-friendly water management practices.
- To engage students and community members as active participants in water conservation initiatives.
- To align the celebration with SDG 6 (Clean Water & Sanitation) and SDG 16 (Peace, Justice & Strong Institutions).

Outcomes:
The World Water Day celebrated successfully with great efforts, World Water Day seeks to inspire greater appreciation for water, encourage responsible use, and foster global cooperation in protecting this vital resource for future generations.
Photos of events:

Social Media Link for event:
https://www.instagram.com/p/Cq2UplAOL3e/?igshid=YmMyMTA2M2Y=
https://www.facebook.com/100065188080428/posts/pfbid0JcaMFCquMbWdkLUnV3D6NAbuVpYxYXyL4uavxxfrw6UtLGnDqwawqGowvSfacHf5l/?app=fbl

Summary of event:
In conclusion, the World Water Day event at Vishwakarma University was a resounding success, uniting students, faculty, and staff in raising awareness about water sustainability. From Mr. Ravi Ulangwar's enlightening session to engaging competitions, parcipants demonstrated a deep commitment to addressing water challenges.

Event Photos:

Link:
https://drive.google.com/file/d/1XmQH3lOetqrmKaA5Nu6qPV8BJDZX3KfI/view?usp=drive_link

Link:
https://drive.google.com/file/d/1R57HvDwikg1VRPQD6bchiDeIk1k-NT8N/view?usp=drive_link

B. Promoting conscious water usage

Actively promote conscious water usage on campus and in the wider community

Evidence:
https://www.vupune.ac.in/centres-of-excellence/center-for-sustainability-nexus

C. Off-campus water conservation support
Support water conservation off campus
Field Visit Report

The Department of Economics, in association with the Nature and Environment Wing, organized a field visit for students to explore innovative sustainability solutions. Students visited a Poly Fuel Plant converting plastic waste into fuel, a Biogas Plant producing renewable energy, solar panel installations promoting sustainable energy, and a sewage treatment plant focusing on water recycling and conservation.

The visit to Abhiruchi Power Plant, led by the Economics Department and accompanied by the Environmental Wing of VU, was an insightful and enriching experience for students. Guided by Mr. Yashodhan Bhide, the owner and manager of the facility, students gained a deeper understanding of sustainable energy generation and waste management. Witnessing these systems firsthand helped them appreciate the real-world impact of sustainability efforts. More than just an observational visit, the experience encouraged students to critically analyze the practicality, challenges, and benefits of renewable energy and environmental conservation. The visit also introduced them to the economic aspects of sustainability, aligning with their academic pursuits.

Evidence:

1. Report on the Conduction of SDG-based Environment and Climate Education Session

Report on the Conduction of SDG-based Environment and Climate Education Session

The **SDG-based Environment and Climate Education Session** was successfully organized by the **VU Center of Sustainability Nexus (CSN)** in collaboration with the **Department of Computer Engineering on 4th September 2024,** from **11:00 AM to 1:00 PM** at **Classroom 2001 A, Second Building, Faculty of Science and Technology.** The session was coordinated by **Dr. Kavita Kumavat** and **Prof. Suhas Chavan**, under the guidance of Convener Dr. Jaymala Kumawat.

The primary aim of the session was to raise awareness about climate change, educate participants on its causes and consequences, promote sustainable practices, and emphasize the interlinkages between various **Sustainable Development Goals (SDGs) — particularly SDG 4 (Quality Education), SDG 6 (Clean Water and Sanitation), SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action), and SDG 15 (Life on Land).**

Mrs. Bharati S. Chavan, Senior Environment Manager at Enviroresources, Mumbai, and **Mr. Vikrant Kulkarni,** Owner of Mohor Superfoods and General Manager at UltraTech Environment Consultancy, Pune, were invited as speakers. They shared valuable insights on environmental management, sustainable industrial practices, and the integration of sustainability into agriculture and consultancy sectors.

The event witnessed enthusiastic participation from **B.Tech Computer Engineering students,** who actively engaged in discussions on climate challenges and sustainable solutions. The session concluded with **a vote of thanks by Dr. Kavita Kumavat,** appreciating the speakers and attendees for their contribution to the success of the program.

Event Photos:

Link: https://drive.google.com/file/d/1FNGWnvPTEM_6FZOhwT11jaPjxSjA8faw/view?usp=drive_link

Link:
https://drive.google.com/file/d/1EBC2tD2UuUj9JHHpYg1b7U6DAQQdH5Ei/view?usp=drive_link

B. Promoting conscious water usage

Actively promote conscious water usage on campus and in the wider community

Evidence:

https://www.vupune.ac.in/centres-of-excellence/center-for-sustainability-nexus

2. Off-campus Water Conservation Support

Field visits and industrial exposure for students to sustainability projects:

i. Poly Fuel Plant (plastic to fuel).
ii. Biogas Plant (renewable energy).
iii. Sewage Treatment Plant (water recycling).

Evidence: Field Visit Report, Abhiruchi Power Plant Visit Report.

REPORT ON ABHIRUCHI POWER PLANT VISIT

The visit to Abhiruchi Power Plant, led by the Economics Department and accompanied by the Environmental Wing of VU, was an insightful and enriching experience for students. Guided by Mr. Yashodhan Bhide, the owner and manager of the facility, students gained a deeper understanding of sustainable energy generation and waste management. Witnessing these systems firsthand helped them appreciate the real-world impact of sustainability efforts. More than just an observational visit, the experience encouraged students to critically analyze the practicality, challenges, and benefits of renewable energy and environmental conservation. The visit also introduced them to the economic aspects of sustainability, aligning with their academic pursuits.

Solar Plant, Water Recycling Plant, and Electricity Generation Solar Plant

Students were introduced to the role of solar energy in reducing reliance on non-renewable resources. The facility generates 25% of its required power through solar panels, showcasing the benefits of renewable energy adoption. A key takeaway was the 25% cap on solar energy usage, allowing surplus electricity to be distributed to farmers free of charge. This community-driven approach particularly resonated with students, as it demonstrated the balance between environmental responsibility and social welfare. Engaging discussions emerged about the economic feasibility of solar energy expansion and potential government incentives.

Water Recycling Plant

Water conservation was another eye-opening aspect of the visit. Students observed how overflowed water is systematically collected and filtered through a recycling system, ensuring minimal wastage. This system not only reduces the plant's water footprint but also serves as an example of efficient water management for large-scale operations. Many students were intrigued by the potential applications of such systems in urban settings and industrial facilities, emphasizing their broader impact on sustainability.

Link: https://drive.google.com/file/d/16OsZB7_1UOHI_0NqzTptWYmReQIBAse5/view?usp=drive_link

Biogas Production (Energy Generation)

The biogas facility captivated students, showcasing how cow dung and kitchen waste are converted into biogas, equivalent to one LPG cylinder (15 kg) per day. The biogas is primarily used for cooking meals for school children, reinforcing the concept of a circular economy. Students engaged in discussions about the seasonal variations in biogas production, particularly the slowdown in fermentation during winter. Understanding the 5-6 lakh installation cost of a biogas unit (excluding manpower) gave students insight into the financial considerations of renewable energy investments. The real-world application of waste-to-energy technology helped them bridge theoretical knowledge with practical implementation.

Waste Management and Recycling Plastic-to-Fuel Conversion Process

One of the most debated topics among students was the plastic-to-fuel conversion process. The plant processes 25 kg of plastic per batch, with a recovery rate of 20%, producing only 5 liters of polyfuel. Given the low output and high operational costs, selling polyfuel was deemed economically unviable, and instead, segregated waste is sold at 15 per kg. Polyfuel is given to laborers for personal consumption, and by-products such as gas and ash are repurposed. Students reflected on the economic challenges of waste-to-energy conversion and discussed potential technological advancements to improve efficiency and profitability.

Recycling Process

The plant's waste segregation and recycling initiatives impressed students. They learned about the systematic processing of 25 kg of raw bottles and plastics daily, which increases to 50 kg on weekends. However, the realization that only 9% of total waste is recycled sparked discussions on the need for improved recycling infrastructure and policies. The plant donates all recyclable waste to NGOs in Pune, reinforcing the importance of social responsibility in waste management. Additionally, students learned about the lack of subsidies for commercial recycling operations and the 5% property tax incentive offered to households that participate in waste segregation. Seeing these
policies in action helped them understand the intersection of economics, governance, and environmental sustainability.

Organic Waste and Composting System

The visit also highlighted organic waste management through composting. Students observed the compost pits, where organic waste such as leaves and vegetable scraps decompose over 4-5 months to create natural fertilizer. Excluding large branches and woody waste from the composting process helped them understand the nuances of composting efficiency. Many students expressed interest in initiating similar composting projects in their schools and communities, recognizing its potential to reduce landfill waste and promote soil health.

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Student Experience and Key Takeaways

The visit to Abhiruchi Power Plant was more than an academic exercise—it was an eye-opening journey into the practical world of sustainability. The interactive nature of the tour, facilitated by Mr. Yashodhan Bhide, allowed students to ask questions, analyze challenges, and discuss real-world implications of renewable energy and waste management. Seeing the integration of solar energy, biogas, recycling, and water conservation deepened their appreciation for the complexity of sustainability efforts.

One of the most impactful realizations was the economic feasibility of various sustainable practices. While students were inspired by the efficiency of solar and biogas systems, they also acknowledged the financial and technical challenges of plastic-to-fuel conversion. This led to critical discussions about innovation, investment, and policy-making in the sustainability sector. The visit also encouraged students to reflect on their own environmental footprint and consider small-scale initiatives they could implement in their daily lives.

Beyond the technical knowledge, the visit reinforced a sense of responsibility among students. It also provided additional context on broader environmental efforts, and students left with a heightened awareness of the need for collective action in tackling sustainability challenges. The engagement and curiosity sparked by this visit will likely influence their academic projects, career interests, and personal contributions toward sustainability.

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The visit to Abhiruchi Power Plant, guided by Mr. Yashodhan Bhide and organized by the Economics Department with the presence of the Environmental Wing of VU, was a transformative learning experience for students. By observing real-world applications of solar energy, water recycling, biogas production, and waste management, students gained a holistic understanding of sustainability beyond textbooks. The discussions on economic feasibility, policy incentives, and technological advancements made the experience intellectually stimulating and relevant to their academic curriculum.

More importantly, the visit left students with a sense of purpose and inspiration. The practical exposure to sustainability challenges and solutions empowered them to think critically about how they can contribute to a greener future. Whether through individual actions, academic research, or future career choices, the lessons from this visit will undoubtedly influence their perspectives on environmental responsibility. The Abhiruchi Power Plant visit was not just a learning opportunity—it was a call to action for students to engage with sustainability on a deeper level and drive meaningful change in their communities.

Link: https://drive.google.com/file/d/1aei_XLTnS7cxu1Blo46Wr6ABjMBOZT-X/view?usp=drive_link

4. Conclusion

Vishwakarma University has integrated sustainable water management practices into both campus operations and community outreach. The institution has combined **technological innovation (patented wastewater solutions), policy frameworks** (reuse, green building), and **student engagement** (field visits, awareness drives) to support SDG 6.

Through continuous monitoring, collaboration, and innovation, VU is ensuring responsible water use, wastewater treatment, and contribution to community water sustainability goals.

Common Link for all Images: https://drive.google.com/drive/folders/167lu1o2Mf8qFH7IrFzOvYX_ZVm4W2mMe?usp=drive_link

Vishwakarma University, Pune
Survey No. 2, 3, 4 Laxmi Nagar,
Kondhwa (Bk.) Pune - 411048. Maharashtra, India

Contact Us : +91 90670 022 23 / 24 / 25 / 26
www.vupune.ac.in

Email : admissions@vupune.ac.in | connect@vupune.ac.in