

NEWS RELEASE

UP achieves an impressive reduction in carbon footprint



The University of Pretoria's Hatfield Campus – a living laboratory for sustainability.

PRETORIA - With a footprint of over one million square metres of floor space, 1200 hectares of land, and a student population of over 55 000, the University of Pretoria's (UP) carbon footprint calculation of each of its activities, procurements and operations is a major undertaking.

The recently released [2024 Carbon Footprint Report](#) has calculated it all through meticulous data collection, analysis and interpretation, as part of UP's carbon management strategy, which aims to reduce carbon dioxide (CO₂) emissions and environmental impact.

"The total emissions recorded for all the campuses for 2024 were 74 868 tCO₂e. This is a total decrease of 10 490.23 tCO₂e compared to the 85 358 tCO₂e reported for 2023," says sustainability specialist Ilze Ueckermann from UP's [Department of Facilities Management](#), who authored the report.

While some loadshedding respite in 2024 contributed to the decrease, the total 2024 emissions are an impressive reduction as it is the first year that Scope 1 (direct emissions), Scope 2 (indirect emissions from purchased electricity) and Scope 3 (all other indirect emissions across the value chain) were included. In previous years only Scope 1 and 2 were calculated.

Scope 3 reveals the environmental impact of the University's overall activities and assets, providing a comprehensive picture of its contributions to CO2 emissions, aligning the University's reporting with financial reporting boundaries.

This includes everything from the carbon emissions of UP's energy use, waste disposal, construction, development and maintenance, transportation of goods and services, the mode of transport employees and students use to travel to and from campuses, business flights and car rentals, all the way to the carbon footprint of the stationery, food, water, coffee and the cup or bottle in which beverages are sold.

"UP is committed to minimising our carbon footprint as a cornerstone of working towards aligning our activities with the Paris Climate Agreement and the 2050 Net Zero goals, by creating a sustainable campus that reduces our environmental footprint and serves as a living laboratory for sustainable practices," Ueckermann explains.

"Our strategy includes transitioning to renewable energy sources, improving energy efficiency in buildings, and incorporating sustainability into the University's overall daily operations. This simultaneously contributes to the global effort to mitigate climate change and protect the environment, and at the same time it safeguards the University's long-term operational viability."

While it is not yet law for universities to publish their carbon emissions, UP believes in being proactive. The carbon emissions report is also included in [UP's annual Sustainability Report](#), which includes its achievements in addressing the United Nations' [Sustainable Development Goals](#) (SDGs).

The Sustainability Report is submitted to the [Times Higher Education \(THE\) Impact Rankings](#), which scores universities worldwide on their contributions towards achieving real-world sustainable impact in addressing the major challenges facing society and environment. Reducing the carbon footprint is a critical part of this.

To achieve an accurate total emissions figure, UP uses a world-class carbon footprint calculator – and Ueckermann ensures that data from every sector of the university is entered. The Department of Facilities Management has also introduced a cutting-edge Smart Campus automation and reporting system to streamline operational efficiency and accuracy.

"The system integrates Internet of Things (IoT) sensors, data analytics, and real-time monitoring across campus facilities to continuously track energy use, water consumption, waste management and carbon emissions," Ueckermann explains. "By centralising data, the system allows for precise, data-driven decision-making and enables the university to identify inefficiencies and optimise resource use more effectively. The emissions data and sustainability metrics are also readily available for compliance reporting and public transparency."

UP's first Carbon Footprint Report was released in 2017, and the University has produced one annually.

Ueckermann says adding Scope 3 in 2024 occasioned a steep learning curve.

Scope 3 includes 12 categories, such as:

- Purchased Goods and Services: Emissions from the production and transportation of goods and services purchased by the University, including office supplies, equipment, and professional services.
- Capital Goods: Emissions from producing and transporting long-term assets such as building materials, equipment, and infrastructure.
- Business Travel: Emissions from travel by employees for business purposes, such as flights, car rentals, or

train travel.

- **Employee Commuting:** Emissions from the daily commute of employees to and from campus. This includes various transportation methods like personal vehicles, public transit, and cycling, depending on the commuting behaviour of employees.
- **Upstream Transportation and Distribution:** Emissions from the transportation and distribution of goods purchased by the University, including emissions from third-party transportation providers used to deliver purchased items.
- **Waste Generated in Operations:** Emissions generated by the disposal and treatment of waste generated from the University's operations, including recycling, composting, incineration, and landfill disposal.

"Going forward, we have identified several areas for improvement, such as substantially increasing our purchasing of goods from local suppliers, stopping single-use plastic wherever possible, and minimising the waste we generate," Ueckermann explains.

"I would like to see far more water refill spots where students can re-fill their flasks instead of purchasing bottled water, and to have UP-branded coffee mugs that students use to purchase coffee instead of using single-use disposable cups.

"Another strategy is to increase our rainwater harvesting and indigenous, sustainable gardens, such as on our Future Africa campus – where we grow food, and where the landscaping is designed to retain water."

These are just a few examples in the report that underscore the significant advances UP has made in reducing its carbon footprint. They also highlight the challenges in mitigating emissions and the opportunities for meaningful change and improvement.

"UP is constantly growing and adding to its faculties and facilities, which adds to our carbon footprint, but our aim is to continuously improve our total score for Scope 1, 2 and 3, year on year," Ueckermann concludes.

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Media enquiries can be directed to Mr Sashlin Girraj - Public Relations & Events Manager

Email: sashlin.girraj@up.ac.za | Cell: +27(0)72 447 3784

ABOUT THE UNIVERSITY OF PRETORIA

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa. Spread over seven campuses, it has nine faculties and a business school, the [Gordon Institute of Business Science](#) (GIBS). It is the only university in the country with a [Faculty of Veterinary Science](#), which is ranked the best in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 56 000 students and offering about 1 100 study programmes. It has the most academic staff with PhDs (70%), NRF-rated researchers (613).

The [2025 Times Higher Education \(THE\) Impact Rankings](#) placed UP 7th globally for Sustainable Development Goal (SDG) 17: Partnerships for the Goals, recognising the University's leadership in building impactful global

collaborations. UP also ranked 41st in the world and 1st in Africa and South Africa for SDG 16: Peace, Justice and Strong Institutions, and maintained its position as the second-highest ranked university overall in both Africa and South Africa.

The 2025 Times Higher Education subject rankings placed UP first in South Africa in the fields of [Accounting](#) and [Finance](#); [Architecture](#); [Electrical and Electronic Engineering](#); Law; Sport Science; and Veterinary Science. UP's Faculty of Law has been ranked as the top law school in Africa for a remarkable eighth consecutive year.

In the [2025 QS World University Subject Rankings](#), UP is ranked in the top 100 in the world in Mineral & Mining Engineering (41), Veterinary Science (51–60), and Development Studies (51–100). Six UP subjects are ranked No. 1 in South Africa: Mechanical Engineering, Veterinary Science, Mathematics, Accounting & Finance, Business & Management Studies, and Economics & Econometrics.

For more information, please go to www.up.ac.za