



Palestine Ahliya University

Emissions Report Summary (GHG) Key Findings and Strategic Roadmap 2024

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Outline

Palestine Ahliya University adheres to the Greenhouse Gas Protocol, the most widely recognized global standard for greenhouse gas accounting, to quantify its carbon emissions. This alignment ensures consistency and reliability in their environmental reporting processes. The university also collaborates with various organizations, including the United Nations Department, to validate and enhance its reporting standards. This commitment reflects the university's dedication to transparent and accurate environmental reporting, in line with international best practices.

This report presents a thorough analysis of:

- **Scope 1 Emissions:** Direct emissions originating from our campus operations, including fuel combustion from our fleet and stationary sources, and the progress made in reducing these emissions.
- **Scope 2 Emissions:** Significant reductions in indirect emissions from electricity consumption achieved through a successful transition to renewable energy sources.
- **Scope 3 Emissions:** An in-depth examination of emissions associated with transportation-related activities.

Through meticulous documentation of our methodologies, data sources, and strategic enhancements across all emission scopes, we strive to maintain a transparent and responsible approach towards our sustainability goals. This comprehensive documentation reinforces our unwavering commitment to achieving a net-zero target by **2030 or sooner**.

Summary

Palestine Ahliya University is pleased to unveil its 2023 Carbon Emissions Report, showcasing our ongoing commitment to sustainability and environmental responsibility. As a leading educational institution, we recognize the importance of monitoring, quantifying, and minimizing our environmental impact. This report highlights our progress towards achieving net-zero emissions, a significant milestone in our sustainability journey.

At Palestine Ahliya University, the PAU Sustainability Center is a dedicated hub for integrating sustainability into every facet of our institution. Our mission is to ensure that our strategic goals

align with achieving ambitious sustainability targets by 2030 or sooner. The Center focuses on three key areas:

1. **Academic Excellence:** Empowering our academic staff with the knowledge and tools to integrate sustainability into their teaching and research, while also amplifying the regional and international visibility of our sustainability research.
2. **Operational Efficiency:** Embedding sustainable practices into our administrative processes, from energy management to waste reduction, to create an eco-friendlier campus.
3. **Student Engagement:** Fostering a culture of sustainability among our students through experiential learning opportunities, workshops, and training programs, empowering them to become future sustainability leaders.

The Center's commitment to action is evident in the numerous workshops and training courses it organizes to raise awareness and drive active participation in sustainability projects across Palestine.

Renewable Energy Project (2018-2030)

PAU is steadily progressing towards its goal of 100% renewable energy usage by 2030 through a carefully planned and executed multi-phase approach. This ambitious transition began with the phased installation of a solar energy system, with each stage expanding capacity and production.

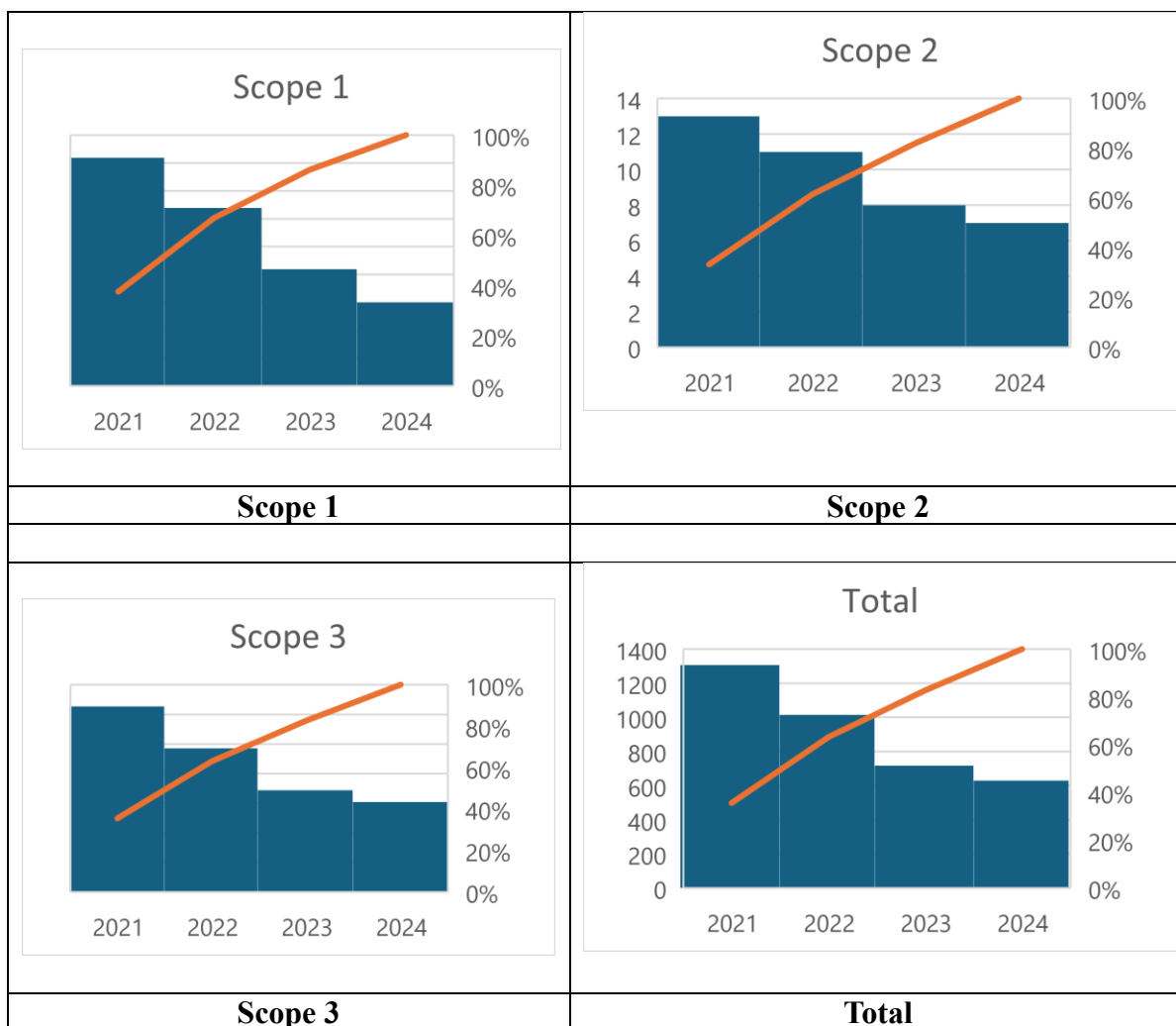
The initial phase, launched in 2018, established a **130 kW** grid-connected solar energy system, paving the way for future expansions. This was followed in 2021 by a significant second phase, adding **140 kW** of capacity and substantially boosting the university's renewable energy generation. Building on this success, a third phase with a capacity of **160 kW** is set to launch in 2025, further accelerating PAU's transition to renewable energy.

Currently, the combined output from the existing solar energy phases fulfills **66%** of the university's electricity demand. To achieve the target of 100% renewable energy by 2027, a third phase is in the pipeline, adding **160 kW** of solar capacity. This expansion is crucial not only for meeting current energy needs but also for accommodating the anticipated increase in electricity consumption due to ongoing campus development projects.

CO₂ Emissions Performance

The consistent annual reduction in emissions across all scopes demonstrates the university's unwavering commitment to increasing renewable energy use and minimizing reliance on non-renewable sources. This proactive approach not only aligns with global environmental standards but also significantly reduces the university's operational impact on the environment. Furthermore, it positions the university as a sustainability leader within the academic community. It's worth noting that due to the restrictions imposed by the occupation, the university community's mobility is limited, resulting in relatively low Scope 3 emissions.

Scope	2021	2022	2023	2024
Scope 1	41	32	21	15
Scope 2	13	11	8	7
Scope 3	1254	972	689	609
Total	1308	1015	718	631



Strategic Improvement Roadmap

Scope 1

PAU has implemented several key initiatives to reduce Scope 1 emissions:

- Energy-Efficient Equipment:** Replaced older, less efficient boilers and heating systems with high-efficiency models to reduce energy consumption and emissions.
- Refrigerant Management:** Established a comprehensive program to minimize fugitive emissions from refrigerants through regular inspections, maintenance, and system upgrades.

3. **Fleet Electrification:** Transitioned the entire university fleet to electric vehicles (EVs) and installed charging stations across campus to support this initiative.

These actions demonstrate PAU's commitment to reducing its carbon footprint and achieving its net-zero emissions goal by addressing emissions from stationary combustion, refrigerants, and mobile combustion sources.

- **Scope 2**

PAU's significant progress in utilizing renewable energy, reaching 66% by 2023, is a major step towards its 2030 goal of 100% renewable energy use. This transition has already led to a 50% reduction in Scope 2 emissions from purchased electricity between 2021 and 2023. The university's success is further amplified by its dedicated renewable energy company, which not only serves the campus but also contributes to the local community's sustainability efforts.

To achieve full renewable energy reliance, PAU is expanding on-site solar installations with energy storage systems and implementing a comprehensive energy management system to optimize consumption. These initiatives demonstrate PAU's commitment to environmental stewardship and set a leading example for other institutions.

- **Scope 3**

PAU has successfully reduced Scope 3 emissions from transportation by nearly 30% between 2021 and 2023. This achievement is attributed to the university's proactive initiatives promoting sustainable transportation through workshops, educational programs, and incentivizing carpooling and public transport use. Additionally, ongoing studies explore integrating greener vehicles into the university's fleet.

Despite these successes, PAU continues to seek further reductions in Scope 3 emissions through:

- **Sustainable Procurement:** Prioritizing products and services with lower carbon footprints and engaging suppliers on emission reduction targets.
- **Telecommuting and Remote Operations:** Expanding remote work and learning options, investing in robust IT infrastructure, and incentivizing sustainable transportation for on-site activities.

These measures, combined with the limited mobility imposed by the occupation (resulting in relatively low Scope 3 emissions), demonstrate PAU's strong commitment to reducing its overall environmental impact.

Challenges and Future Outlook

While PAU has made significant progress in reducing its carbon emissions, several challenges remain on the path to achieving net-zero emissions by 2030:

- **Financial Constraints:** Implementing and maintaining sustainable practices often require significant financial investment. Securing funding for ongoing and future projects can be a challenge, particularly in a region facing economic and political instability.
- **Regulatory Environment:** Evolving regulations and standards for greenhouse gas accounting and reporting can pose challenges for universities, requiring ongoing adaptation and compliance.
- **Technological Limitations:** Some sustainable technologies might still be under development or too costly for widespread implementation. Identifying and adopting suitable technologies can be a continuous process.
- **Behavioral Change:** Encouraging behavioral change among staff and students, such as adopting sustainable transportation habits, can be a complex process that requires sustained engagement and communication.
- **Geopolitical Factors:** The ongoing occupation and its associated restrictions can create unique challenges for infrastructure development and resource access, impacting the university's sustainability efforts.

Despite these challenges, PAU remains committed to overcoming them through continued investment in renewable energy, energy efficiency, sustainable procurement, and community engagement. The university is actively exploring innovative solutions and partnerships to accelerate its progress toward net-zero emissions and build a more sustainable future for all. This addition provides a balanced perspective on the university's sustainability journey, acknowledging the complexities involved while reaffirming its commitment to achieving its ambitious goals.