THE Impact Ranking 2023

University: Al-Mustaqbal University

Country: Iraq

Web Address: https://uomus.edu.iq/en/default.aspx

SDG 7.2: University measures towards affordable and clean energy

7.2.3 Does your university as a body have a process for carbon management and reducing carbon dioxide emissions?

Al-Mustaqabl University (MU) has exhibited a strong commitment towards carbon management and reducing carbon dioxide emissions. The establishment of a University Environmental Policy, reviewed periodically by the Environmental Strategy Committee, reflects a thorough understanding of the environmental impact and the urgency to act responsibly. This policy echoes MU's mission to intertwine excellence in education and research with a sustainable approach to managing its resources and operations.

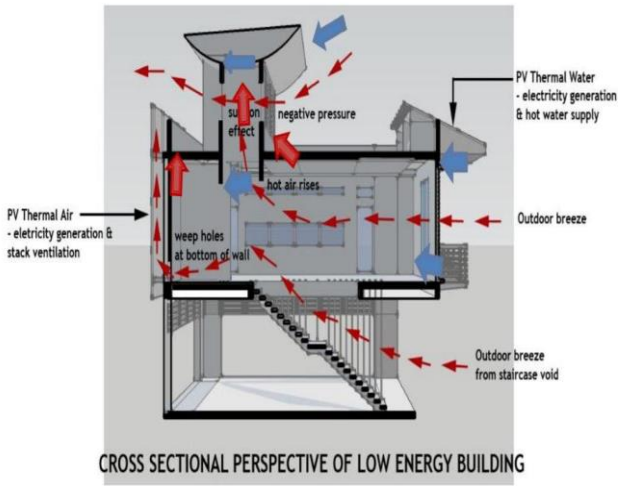
To further advance its carbon management agenda, a myriad of strategies can be employed:

1. Carbon Auditing and Reporting: Regular carbon audits can quantify the university's carbon emissions, promoting transparency and accountability through reporting to both internal and external stakeholders.
2. Energy Efficiency Upgrades: Incorporating energy-efficient technologies such as LED lighting, modern HVAC systems, and insulation improvements can significantly reduce energy consumption.
3. Green Procurement Practices: Prioritizing eco-friendly, energy-efficient, and sustainably sourced products and services through green procurement practices can have a lasting positive impact.
4. Waste Management Improvements: Enhancing waste management by increasing recycling, composting, and reducing single-use plastics helps to minimize the university's waste footprint.
5. Water Conservation Initiatives: Water-saving measures like low-flow fixtures, rainwater harvesting, and water-efficient landscaping can contribute to overall resource conservation.

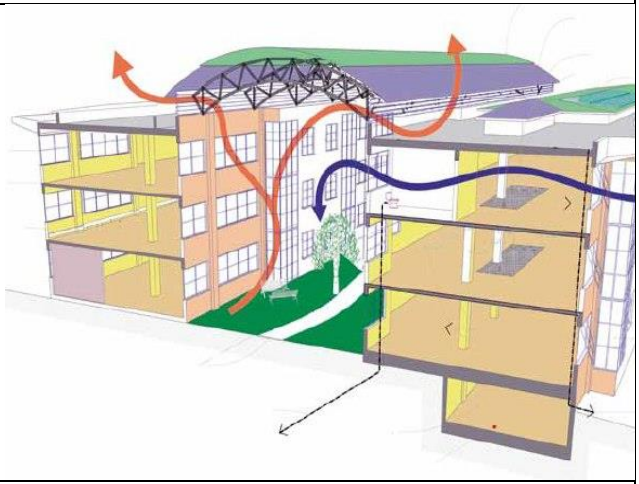
6. Community Engagement and Education: Engaging the university community through educational programs and campaigns fosters environmental awareness and encourages sustainable behaviors.
7. Research and Innovation: Providing a platform for sustainability-focused research and innovation enables students and faculty to contribute to solving environmental challenges.
8. Sustainable Food Systems: Promoting locally sourced, organic, and plant-based food options contributes to sustainable food systems within the university.
9. Active Transportation Incentives: Encouraging walking, cycling, and the use of public transit through infrastructure improvements and incentives can promote a culture of active transportation.
10. Green Building Standards: Adopting green building standards for new constructions and renovations ensures energy efficiency and sustainability in campus facilities.
11. Renewable Energy Installations: Expanding the installation of renewable energy systems like solar panels and wind turbines can provide clean energy for campus operations.
12. Carbon Offsetting and Sequestration: Investing in carbon offset projects and exploring natural carbon sequestration opportunities like tree planting enhances the university's carbon management efforts.
13. Policy Advocacy: Engaging in policy advocacy to support environmental regulations at local, national, and international levels reinforces the university's commitment to environmental sustainability.
14. Collaboration with External Stakeholders: Establishing partnerships with various stakeholders amplifies the impact of the university's sustainability initiatives.
15. On-Campus Initiatives: Implementing on-campus initiatives like green roofs, roof-mounted solar panels, and a Zero Emission Vehicle (ZEV) policy can significantly contribute to reducing the carbon footprint.

These measures, coupled with a well-defined Environmental Policy, position Al-Mustaqabl University as a proactive institution, committed to reducing carbon dioxide emissions and promoting a culture of environmental sustainability.

Green Building Implementation - Overview Green Technologies implemented at the Environmental Campus Birkenfeld (Al-Mustaqbal University, Iraq)



Cross section of the Green Building Implementation - Overview Green Technologies implemented at the Environmental Campus Birkenfeld (Al-Mustaqbal University, Iraq)



The simple design makes it possible for the building to function as a chimney, where warm air is drawn from the ground floor and through the engineering buliding areas, and then escapes under the sides of the vaulted roof, ensuring comfortable temperatures in the classroom and air circulation throughout the building.

Throughout this Plan, carbon is expressed in terms of Carbon Dioxide Equivalent (CO2(e)). The Total Carbon Footprint (CO_2 emission in the last 12 months, in metric tons) can be found from the following :

CO_2 (electricity)

$= \frac{electricity\ usage\ per\ year\ (kWh)}{1000} \times 0{,}84$

$= \frac{331120\ kWh}{1000} \times 0{,}84$

= 278.14 metric tons in (2018/2019)

$= \frac{123134 kWh}{1000} \times 0{,}84$

= 103.43 metric tons in (2019/ 2020)

$= \frac{205350 kWh}{1000} \times 0{,}84$

= 172.5 metric tons in (2020/ 2021)

$= \frac{277{,}916 kWh}{1000} \times 0{,}84$

= 233.45 metric tons in (2021/ 2022)

$= \frac{314{,}422\ \ kWh}{1000} \times 0{,}84$

= 264.81 metric tons in (2022/ 2023)

CO_2 (bus)

$= \frac{number\ of\ shuttle\ bus\ in\ your\ university \times total\ trips\ for\ shuttle\ bus\ service\ each\ day \times approximate\ travel\ distance\ of\ vehicle\ each\ day\ inside\ campus\ only\ (KM) \times 240}{100} \times 0{,}01$

$= \frac{7 \times 6 \times 12 \times 240}{100} \times 0{,}01$

= 12.096 metric tons in (2018/2019)

$= \frac{7 \times 4 \times 12 \times 240}{100} \times 0.01$

= 8.06 metric tons in (2019/ 2020)

$\frac{15 \times 6 \times 5 \times 240}{100} \times 0{,}01$

= 10.8 metric tons in (2020/ 2021)

$\frac{22 \times 10 \times 7 \times 240}{100} \times 0{,}01$

= 36.96 metric tons in (2021/ 2022)

$= \frac{30 \times 15 \times 5 \times 240}{100} \times 0{,}01$

= 54 metric tons in (2022/ 2023)

CO_2 (cars)

$= \frac{\text{number of cars entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0{,}02$

$= \frac{495 \times 2 \times 2 \times 240}{100} \times 0{,}02$

= 95.04 metric tons in (2018/ 2019)

$\frac{200 \times 2 \times 2 \times 240}{100} \times 0{,}02$

= 38.4 metric tons in (2019/ 2020)

$$\frac{150 \times 2 \times 1.5 \times 240}{100} \times 0{,}02$$
= 21.6 metric tons in (2020/ 2021)

$$\frac{175 \times 2 \times 1 \times 240}{100} \times 0{,}02$$
= 16.8 metric tons in (2021/ 2022)

$$= \frac{500 \times 2 \times 0.5 \times 240}{100} \times 0{,}02$$
= 24 metric tons in (2022/ 2023)

CO_2 (motorcycle)

$$= \frac{\text{number of motorcycle entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0{,}01$$
$$= \frac{45 \times 2 \times 2 \times 240}{100} \times 0{,}01$$
= 4.752 metric tons in (2019)

$$= \frac{50 \times 2 \times 2 \times 240}{100} \times 0{,}01$$
= 4.8 metric tons in (2019/ 2020)

$$= \frac{100 \times 2 \times 1 \times 240}{100} \times 0{,}01$$
= 4.8 metric tons in (2020/ 2021)

$$= \frac{200 \times 2 \times 1 \times 240}{100} \times 0{,}01$$
= 9.6 metric tons in (2021/ 2022)

$$= \frac{250 \times 2 \times 0.5 \times 240}{100} \times 0{,}01$$
= 6 metric tons in (2022/ 2023)

CO_2 (total) in (2018/ 2019)
= 278.14+12.096+95.04+4.752
= 390.028 metric tons
Carbon footprint in 2018/2019 = 437.116 metric tons

CO_2 (total) in (2019/ 2020)
= 103.34 + 2 +38.4 + 4.8 = 148.54 metric tons
Carbon footprint in 2019/2020 = 148.54 metric tons

Carbon footprint in 2020/2021 = 210 metric tons

CO_2 (total) in (2020/ 2021)

= 172.8 + 10.8+21.6+ 4.8 = 210 metric tons

CO_2 (total) in (2021/ 2022)
= 233.45+ 36.96+16.8+ 9.6 = 299.81 metric tons
Carbon footprint in 2021/2022 = 299.81 metric tons

CO_2 (total) in (2022/ 2023)
= 264.11 + 54 + 24 + 6 = 348 metric tons
Carbon footprint in 2022/2023 = 348 metric tons

Total Carbon Footprint

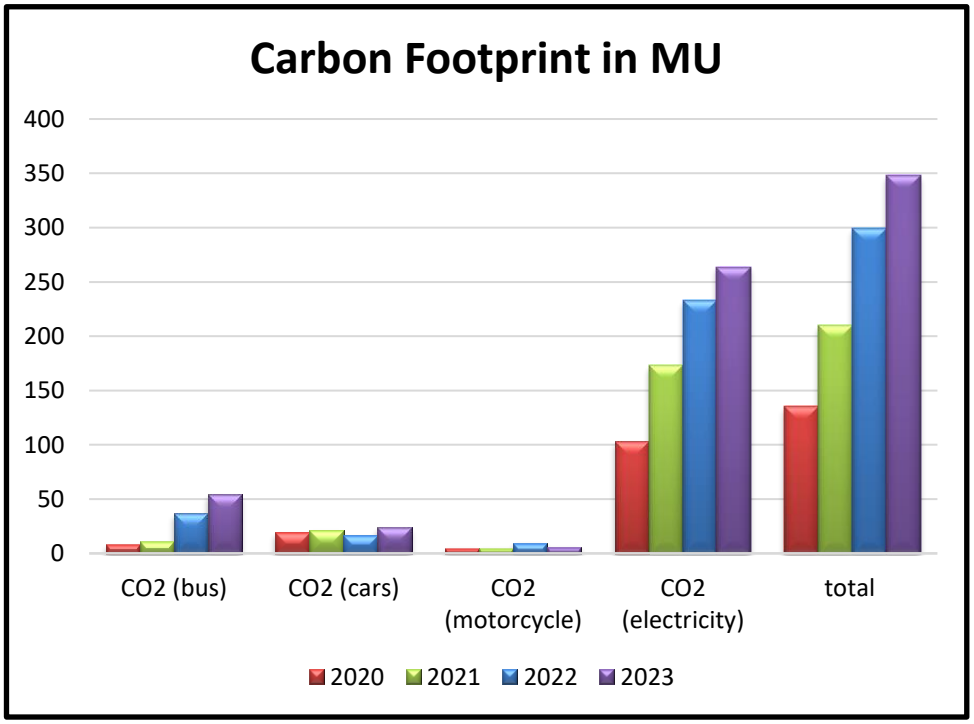


Figure 1 the CO2 Emissions

الرسم أعلاه غير صحيح ويتطلب تغيير البارات بشكل تنازلي وليس تصاعدي

Additional evidence link:
https://www.uomus.edu.iq/assetsv2/img/Sustensibilty/Goals/Report.pdf