AZERBAIJAN TOURISM AND MANAGEMENT UNIVERSITY

CARBON EMISSION

Report

2024

based on 2023 data



CARBON EMISSION
REPORT 2024

Overview

Carbon emissions refer to the release of carbon dioxide (CO2) into the atmosphere. These emissions arise primarily from the burning of fossil fuels such as coal, oil and gas, which are used for energy and transportation. In the context of tourism, carbon emissions are of great importance due to the environmental impacts associated with travel and hospitality services. In particular, the sector is responsible for a significant portion of global CO2 emissions resulting from airline operations, vehicle transportation and energy use in hotels and other accommodation. As the world becomes more aware of climate change, understanding the sources and impacts of carbon emissions is becoming increasingly crucial.

Azerbaijan Tourism and Management University (ATMU) is always support and UN SDG programs. One of the main goals is to protect the environment. GHG protocol has been established comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions.

For the ATMU, focusing on impacts on the tourism sector is not only in line with global environmental goals, but also prepares future tourism managers to adopt and implement sustainable practices.







ATMU is interested in reducing non-renewable products and implementing new technology. The Greenhouse Gas Protocol 2024 report provides standards, guidelines, tools and training for business and government to measure and manage greenhouse gas emissions based on 2023 data.

The Global Mission Against Carbon Emissions

The global mission to reduce carbon emissions is underscored by various international agreements and initiatives, such as the Paris Agreement, which commits countries to limit global warming to well below 2 degrees Celsius above pre-industrial levels. In the context of tourism, this mission is particularly challenging and critical due to the industry's extensive carbon footprint.

Tourism-related activities, from air travel to hotel heating and cooling, are intensive carbon emitters. To address this, international bodies such as the United Nations World Tourism Organization (UNWTO) have been at the forefront, promoting policies that encourage sustainable tourism. These policies not only aim to reduce emissions but also seek to raise awareness among travelers and businesses about their carbon footprints.

Azerbaijan, with its growing tourism sector, is part of this global effort. The country has embraced various sustainability initiatives, aiming to integrate low-carbon

practices in tourism development. This includes promoting eco-friendly accommodations and improving the energy efficiency of tourism facilities. Such efforts are vital for reducing the overall impact of tourism on the environment and aligning with international standards for emission reductions.

Objectives for Reducing Carbon Emissions

The objectives for reducing carbon emissions are designed to align with broader global efforts while addressing the unique challenges posed. These objectives focus on several key areas:

1. Sustainable Options: Promoting the use of public transport, biking, and walking over personal and rented vehicles and to adopt more fuel-efficient technologies and alternative fuels.

2. Energy Efficiency in Accommodations: Implementing energy-saving measures include the use of energy-efficient appliances, better insulation, and renewable energy sources like solar panels in accommodations.

3. Carbon Offset Programs: Encouraging all of people to participate in carbon offsetting. This can involve investing in renewable energy projects, forestry efforts, or other environmental initiatives that compensate for the carbon emitted.

4. Education and Awareness: Increasing awareness among university and businesses about the impacts of their travel choices on carbon emissions. This includes integrating environmental education into the curriculum of tourism and management studies, such as at Azerbaijan Tourism and Management University.

5. Local and Cultural Sustainability: Encouraging people to support local economies and cultures, which often involves less travel and lower emissions, as well as preserving the authenticity and sustainability of local communities.

These objectives not only help in reducing the carbon footprint of ATMU but also enhance the overall sustainability of the industry. By implementing these goals, stakeholders in the education sector can contribute significantly to the global fight against climate change, ensuring that tourism remains viable and vibrant for future generations.

Scope 1

ATMU is committed to sustainability and environmental stewardship, especially crucial in the tourism sector, which is inherently linked to environmental impact. Recognizing this, ATMU has set ambitious goals to reduce its carbon footprint and encourage sustainable practices throughout its operations and educational programs.

Scope 1 is the ATMU's direct impact on the atmosphere. ATMU has five vehicles for staff service. Every car function five days a week. eleven months in a year.

№	Company	Model	Year	Engine capacity (sm^3)	engine oil consumption (liter)	Type of engine
1	Toyota	Camry	2019	2494	5	non hybrid
2	Toyota	Camry	2012	3500	6	non hybrid
3	Toyota	Corolla	2023	1798	4	Hybrid
4	Hyundai	Sonata	2007	2400	5	non hybrid
5	Volkswagen	Caravelle	2013	2000	7	non hybrid
Total				12192	27	

Scope 2

Electric energy controls by Azerbaijani governmental company “AzerIshiq” and ATMU buys form this company. ATMU uses 84987 kwh/year, equal to 39943.89 CO2 e(kg).

Constants

Engine oil emissions factor = 2.68 kgCO2 (per liter)
Electricity emissions factor = 0.475 kgCO2 (per kWh)

Data provided.

Engine oil consumption liters = 27 liters
Electricity consumption kwh = 84987 kWh/year

Calculating emissions

Scope 1 emissions = engine oil consumption liters * engine oil emissions factor / 1000

Convert kg to tons.

Scope 2 emissions = electricity consumption kwh * electricity emissions factor / 1000

Convert kg to tons.

Total emissions tCO2e = scope 1 emissions + scope 2 emissions

Total Scope 1 and 2 emissions in tCO2e

Scope 1 emissions = 27 liters x 2.68 kgCO2 per liter / 1000 = 0.07236 tCO2e

Scope 2 emissions = 84987 kWh/year x 0.475 kgCO2 per kWh = 40.368824999999994 tCO2e

Total emissions tCO2e = 0.07236 tCO2e + 40.368824999999994 tCO2e = 40.441185 tCO2e

Scope 3

The winter season starts for heating from 15 of November to 15 of April. ATMU uses gas for heating of two educational buildings which locating below mention. In this schedule shows address, capacity of buildings and C02 (m3) per month and for 5 months. ATMU has plan to implement green energy.

N		Address	Capacity (m^2)	Using of CO_2 (m^3) per month	For 5 months
1	Main educational building	822/23 str. Koroghlu Rahimov	3600	21000	105000
2	Second educational building	17 str. Cafar Khandan	5500	14000	70000

Constants

Co2 density kg per m3 = 1.977 kg/m3

Calculations

Convert m3 to kg and then to tons.

total co2 usage 5 months building1 tons. = (total co2 usage 5 months building1 m3 * co2 density kg per m3) / 1000

total co2 usage 5 months building2 tons. = (total co2 usage 5 months building2 m3 * co2 density kg per m3) / 1000

total scope 3 emissions = total co2 usage 5 months building1 tons + total co2 usage 5 months building2 tons

total co2 usage 5 months building1 tons = 1.977 x 21000 = 207.585

total co2 usage 5 months building2 tons = 1.977 x 14000 = 138.39

total scope 3 emissions = 207.585 + 138.39 = 345.975

Education	• ATMU integrates sustainability into its curriculum by offering courses and workshops focused on sustainable tourism. Students learn about the environmental impacts of tourism and are taught how to plan, manage, and operate tourism businesses in an environmentally friendly manner. This education is pivotal, as graduates become ambassadors of sustainability in the tourism industry.
Engagement	• Beyond internal changes, ATMU engages with the local community and the broader tourism industry to promote sustainability. • Collaborating with local businesses and government agencies to develop sustainable tourism practices across Azerbaijan. • Conducting seminars and public lectures to raise awareness about the importance of reducing carbon emissions in the tourism sector.

Conclusion

ATMU's commitment to reducing its carbon footprint reflects its dedication to promoting sustainable practices within the tourism and hospitality industries. By achieving these goals, ATMU not only contributes to the global fight against climate change but also sets a benchmark for environmental responsibility in higher education.

To ensure progress towards its carbon emission goals, ATMU has established a monitoring system that regularly assesses its carbon footprint. The university also plans to publish an annual sustainability report, detailing its environmental performance and future objectives.

For next year will be provide

Financial Report

Carbon Footprint Data Report

Other links

Contact details

For feedback, partnerships, or further information, please feel free to contact us

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