



Official Sustainability Report

Authored by:

Government of the Arab Republic of Egypt
Official Host Country

2022 United Nations Climate Change Conference
COP27

Sharm El-Sheikh | 6th – 18th November 2022

June 2023





Official Sustainability Report, 2022 United Nations Climate Change Conference - June 2023

Published by

Government of the Arab Republic of Egypt, Climate Change Department

Supported by

One Carbon World Ltd.

Sustainability Verification and Report

B3 Kingfisher House, Kingsway, Gateshead, NE11 0JQ, United Kingdom

Email: hello@onecarbonworld.com · Website: www.onecarbonworld.com

Edited by

Benjamin Deyes, One Carbon World Ltd.

Bryony Karsenbarg, One Carbon World Ltd.

Tadeo Julian Vazquez Sanchez, One Carbon World Ltd.

Andrew Bowen, One Carbon World Ltd.

Supported by

Masader Environmental and Energy Services S.A.E

COP 27 Sustainability and Climate Consultant

Edited by

Dr. Abdelhamid Beshara, Masader Environmental and Energy Services S.A.E

Ramez Ragheb, Masader Environmental and Energy Services S.A.E

Supported by

UNFCCC

Date

14 June 2023

Copyright

The content and layout of this report are subject to copyright owned by the Government of the Arab Republic of Egypt.

Disclaimer

All reasonable measures have been taken to ensure the accuracy of this report.

Third Parties

Any disclosure of this report to a third party is subject to this disclaimer. This report does not in any way constitute advice to any third party who is able to access it by any means and excludes, fully lawfully permitted, all liability whatsoever for any loss arising from reliance on the content of this report.





COP27 AT A GLANCE

Location

The 27th Conference of the Parties (COP27) was hosted by Egypt in the city of Sharm El-Sheikh from 6th November to 18th November 2022. The event space was split into two areas; the Blue Zone, to host international negotiations, and the Green Zone, a space dedicated for public engagement, and together they welcomed on average 15,000 visitors each day.

Vision

The primary objective of COPs is to prevent global temperatures surpassing 2 degrees Celsius by the end of the century, and progress towards this target is reviewed each year at the event. This year, COP27 was focused on implementation and delivering climate action through emissions reduction, strengthening adaptation efforts and enabling flows of finance, in particular to the areas that need it most.

Sustainable Measures

To demonstrate leadership and to deliver a sustainable event, several measures were implemented to reduce emissions where possible. This included the procurement of renewable energy through the development of three new solar photovoltaic arrays that collectively generated 15 megawatts. Along with other measures, the Egyptian Presidency also minimised emissions from local transport by providing an electric and natural gas powered bus fleet that could be used free of charge.

Carbon Impact and Neutrality

The total carbon footprint of the activities measured at COP27 totalled 18,591.01 tonnes of carbon dioxide equivalent. Emissions arising from large-scale international events of this size can be limited, but not completely avoided, particularly with attendee air travel being a significant driver of these emissions. Therefore, to deliver a carbon neutral COP27, offsetting residual emissions was required.

<Insert Other Carbon Credit Information Here>





Contents

Foreword	1
1. Introduction	2
1.1 Goals and Vision	3
2. Location	4
2.1 Sharm El-Sheikh	4
2.2 Venues	4
2.3 Blue Zone	4
2.4 Location Attendance	5
3. Sustainability Initiatives	6
4. Guidance and Standardised Approaches	7
4.1 Standard Approaches	7
4.2 Best Practices	8
4.3 Recommendations for Future Events	9
5. Carbon Accounting and Management	10
5.1 Scope and Boundary	10
5.2 Carbon Management Hierarchy	11
5.3 Calculation Methodology	11
5.4 Carbon Footprint	12
5.5 Exclusions	12
6. Sustainable Activities	13
6.1 Electricity	13
6.2 Fuel	14
6.3 Travel	15
6.4 Accommodation	16
6.5 Catering	16
6.6 Water	17
6.7 Waste	17
6.8 Procurement	18
6.9 Staff, Volunteers and Capacity Building	18
6.10 Accessibility	19
6.11 Diversity and inclusion	19
6.12 Community Engagement	19
7. Carbon Neutrality	20
Abbreviations and Units	i
Appendix A	ii



Official Sustainability Report, 2022 United Nations Climate Change Conference - June 2023

Foreword



1. Introduction

The 27th Conference of the Parties (COP27), convened by the United Nations Framework Convention on Climate Change (UNFCCC), was hosted by Egypt, in the coastal city of Sharm El-Sheikh from 6th November to 18th November 2022.

The UNFCCC is a treaty that was agreed in 1994 and was signed by 197 Parties, consisting of 196 countries and the EU. The primary objective of the treaty is to stabilize Greenhouse Gas (GHG) concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system.

The Conference of the Parties (COP) is the supreme decision-making body of the Convention. All Parties are represented at the COP, which involves reviewing and promoting the effective implementation of the Convention. Based on a review of national communications and emissions inventories submitted by Parties, the COP also assess the progress that has been made towards achieving the primary objective of the Convention – to stabilize GHG concentrations globally.

COP27 recorded the highest-ever attendance at a COP, welcoming over 46,000 delegates from all over the world, with an average of 15,000 visitors each day. The event space was split into two areas; the Blue Zone, operated by the United Nations (UN) to host international negotiations, and the Green Zone, a space dedicated to public engagement, managed by the Egyptian Government. This report covers the GHG emissions and carbon neutrality objectives of the Blue Zone.

The UNFCCC provide guidance and set out minimum requirements for hosting a COP, including what activity data must be included for reporting. To meet these requirements and follow the highest reporting standards, the Government of the Arab Republic of Egypt implemented the elements of the UNFCCSs “How to COP” handbook¹.

This Official Sustainability Report showcases the work carried out to deliver a carbon-neutral COP27 and reflects on the opportunities to improve the minimum reporting requirements for future events. This report, along with the Official Verification Report, contains all the relevant information to support the Egyptian Government’s commitment and achievement of carbon neutrality, as defined by the UNFCCS “How to COP” handbook.

¹ How-to-COP_2020.pdf (unfccc.int)



1.1 Goals and Vision

The Egyptian Presidency set out a vision for COP27 to be focused on implementation, through reaffirming and urging action across prior agreements, and to focus on protecting people from the immediate impacts of climate change. To deliver this vision, the COP27 action agenda was structured around accelerating global climate action through emissions reduction, scaling-up adaptation efforts, and enabling flows of appropriate finance.

Four key themes were identified to support the vision and goals of COP27:

Mitigation

Parties must unite to limit global warming well-below 2 degrees Celsius (°C) above pre-industrial levels and strive to keep the 1.5°C target in sight. This requires robust and immediate actions and greater ambition from all parties, in particular those who are in a position to do so and those who can and do lead by example.

Adaptation

Progressing global action on adaptation and urging all parties to demonstrate the necessary political will is crucial if we are to capture and measure our progress towards enhancing resilience and supporting the most vulnerable communities.

Finance

Significant progress must be made on the opportunity of climate finance while advancing all other finance-related items on the agenda.

Collaboration

In pursuit of tangible results, the Presidency of COP27 sought to enhance and facilitate agreement in negotiations. The advancement of partnership and collaboration will help deliver a more resilient and sustainable economic model.

A sustainable future requires governments, the private sector, and civil society to work together to transform the way in which we interact with our planet. To alleviate the adverse impacts of climate change, new innovative solutions must be introduced. We must also replicate and rapidly upscale all other climate-friendly solutions towards implementation in developing countries.



2. Location

2.1 Sharm El-Sheikh

Sharm El-Sheikh was selected to host COP27 due to its commitment to a green transformation, and for achieving major strides in the adoption of sustainable accommodation, transportation, energy, waste management and tourism operations.

Sharm El-Sheikh also has a proven track record of hosting events and conferences on an international stage, such as the Conference of the States Parties to the United Nations Convention against Corruption (UNODC) and the Conference of the Parties to the Convention on Biological Diversity (CBD COP14).

Sharm El-Sheikh also has an abundance of unique natural capital and is surrounded by two protected areas, providing endless exploration opportunities. It was envisaged that this setting could inspire attendees and reaffirm the importance of combating climate change and protecting the natural environment.

These attributes made Sharm El-Sheikh the perfect destination to host an inclusive and sustainable COP.

2.2 Venues

COP27 took place over two zones, the Blue Zone and the Green Zone; the scope of this report covers the Blue Zone and selected Green Zone activities in line with the requirements of the UNFCCC for countries hosting COP events.

2.3 Blue Zone

The Blue Zone was operated under the jurisdiction of the UN and provided a fully accessible space for conducting international negotiations among delegations, ministers and government officials. This space also hosted official side events by UN and observer organisations, world leaders, and delegates (including local and international media).

The facility chosen to host the Blue Zone for COP27 was the Sharm El-Sheikh International Convention Centre (SHICC). The complex is one of the largest and most innovative conference centres in Africa and includes a variety of flexible conference and exhibition halls. The SHICC has total built up area of approximately 35,000² square metres (m²), comprised of conference zones, meeting areas, break-out spaces, catering, and restaurant areas. An extension to SHICC was erected prior to the event and remains as part of the

² International Conference Center of Sharm El-Sheikh - Hassan Allam Holding



space for future use. There were also a small number of temporary spaces assembled specifically for the purpose of the event that have been removed since the closure of COP27.

2.4 Location Attendance

Over 46,000 individuals attended the Blue Zone for a total of 278,000 days, including 20,000 delegates and over 2,000 media.

Each individual attended the event for an average of 6 days. The travel patterns of attendees varied; on average, each attendee stayed 8 days (assuming 1 day on either side of travel and event attendance), while others attended the event for just a few days and then stayed in Sharm El-Sheikh for many more.

The travel patterns of individuals and recommendations of how this activity presents a significant opportunity for future emissions reductions of each future COP event have been explored and are recommended for special focus.

3. Sustainability Initiatives

To ensure the delivery of a sustainable and carbon neutral COP, the Egyptian Presidency referred to the UNFCCC's "How to COP" handbook, which shares recommendations and measures for hosting a sustainable event. Further to this, Egypt actioned an independent carbon audit to inspect opportunities to improve the venue's environmental performance and reduce the overall carbon footprint of the event. This comprised of several site visits and supportive engagement with key stakeholders across activities that contribute to the COP27 event carbon footprint. Subsequently, an assessment was carried out during the event to assess the implementation and success of each initiative and areas where future improvements could be made.

Key sustainability measures implemented:

- Procure and generate renewable electricity
- Provide sustainable accommodation
- Offer sustainable modes of transport
- Implement an effective waste management system
- Enhance resource efficiency
- Create a positive social impact by providing an inclusive and accessible setting.

These measures are aligned with the following UN Sustainable Development Goals:

- Good Health and Well-Being (SDG 3)
- Affordable and Clean Energy (SDG 7)
- Decent Work and Economic Growth (SDG 8)
- Responsible Consumption and Production (SDG 12)
- Climate Action (SDG 13)
- Partnerships for the Goals (SDG 17)

An action plan following an initial Carbon Audit was created to enhance sustainability initiatives for the event, the results of which are summarised within this report.

4. Guidance and Standardised Approaches

Reviewing standard reporting approaches from previous COP events and making note of their best practices has enabled the production of a complete and consistent COP27 Report and will support the development of recommendations to help future hosts plan for events.

4.1 Standard Approaches

Host countries must deliver a carbon neutral COP event, and conform to minimum reporting requirements, which are set out, along with other guidance, by the UNFCCC in the 'How to COP' handbook. These requirements include the reporting of GHG emissions arising from:

Conference Venue

- Purchased electricity and steam consumption;
- On-site fuel consumption (combustion) for power and heating;
- Release into the atmosphere of refrigerants for air-conditioning and cooling;
- Water consumption; and
- Waste generation.

Outside the Conference Venue

- Fuel consumption for dedicated local transport (cargo shipments, buses, shuttles and limousines);
- Per guest electricity/steam/fuel/water consumption and waste generation at the local hotels.

International Travel

- The secretariat supports host countries in the offsetting of travel-related emissions by calculating the emissions of all registered participants' travel to the host city.
- This includes travel of those in neighbouring cities.

The COP27 carbon footprint conforms to all minimum requirements.

4.2 Best Practices

The scope and clarity of reporting GHG emissions from COP events has developed in recent years, and reviewing these good practices can help COP27 and future COP hosts to produce a complete and consistent reporting mechanism while identifying differences among events and the challenges that were faced.

Emissions Avoidance

Sustainability is deeply rooted in COP events, and this typically includes the disclosure and implementation of a variety of measures to prioritise emission avoidance and reduction over carbon offsetting. This has previously ranged from small-impact measures, such as using low-waste packaging, to high-impact measures, such as procuring renewable energy. Sharing information on these measures demonstrates leadership and helps inform future COPs and other events on what can be done to reduce emissions.

Offsetting

Host countries must deliver a carbon neutral COP, which means offsetting residual emissions is required. Residual emissions from previous COP events are usually offset using Certified Emissions Reductions (CERs) from the Clean Development Mechanism (CDM). Hosts also typically disclose extra information on offsets, such as the type of project, project name, project location and number of units purchased. This provides excellent visibility of the offset strategy and showcases the projects and communities which are directly benefiting from COP events. Offsetting has also been used to enhance global sustainable development through the successful delivery of SDGs applicable to offset projects.

Best Practice at COP26

COP26, hosted by the UK Government, set a new benchmark for sustainability reporting. The COP26 Sustainability Report set out how the event performed against their sustainability Governing Principles, and the Carbon Management Plan disclosed the scope and approach to carbon accounting and the methodology that was applied. Together, these reports demonstrated excellent clarity on the overall carbon impact of the event, the highest impact areas and the measures that were in place to deliver a carbon neutral COP. Great leadership was also demonstrated in their approach to Scope 2 accounting. The event procured a renewable energy tariff for the Blue Zone, which would have yielded emissions close to zero using the market-based approach. However, a location-based approach was retained and resulted in a higher estimate for Scope 2 emissions, but provided extra assurance that all emissions associated with the procurement of energy were included.

Influence on COP27

Where possible, best practices from previous COPs have been incorporated into this COP27 Sustainability Report, with the hope that future COPs also follow suit. Reflecting on and implementing lessons learned from previous COPs will raise the quality and harmonise the ongoing reporting of GHG emissions from global events. Overtime, this will lead to results that are consistently comparable while providing greater detail to inform climate action before, during and after COP events.

4.3 Recommendations for Future Events

To further support the development of a complete and consistent reporting framework, here, we share the lessons learned from Sharm El-Sheikh and recommendations for future hosts.

Minimum Standards

To maintain consistency when reporting on COP events, we believe the minimum standards should be reviewed and raised. This would support comparability among COP events GHG emissions reporting by ensuring the scope and boundary of events are set more consistently. As outlined in Section 4.1, there are a set of minimum reporting requirements; however, we believe these could be reviewed and strengthened by the UNFCCC in pursuit of more robust and comparable reporting.

Potential Considerations include:

- Standard report output template or stricter stipulations on what shall be included.
- Include or explain – i.e., if an activity is not included, provide justification for its exclusion.
- Quantify emissions reductions – to demonstrate action.
- 5-yearly quantifications of all activities and significance assessment.
- Stronger provisions on how energy data shall be collected (e.g., primary activity data).
- Reporting of both location and market-based Scope 2 totals to demonstrate the impacts and opportunities associated with energy procurement.

By raising the minimum reporting requirements, the highest standards for reporting would be maintained, but it would further improve the accountability of host countries and improve the comparability and transparency of reporting among future events.

COP Attendance

The number of attendees has a strong relationship with the overall carbon footprint of COP events, which is demonstrated by air travel being the largest driver of emissions for current and previous COPs. Therefore, minimising travel-related emissions should be a prioritised.

It is understood that directly reducing emissions from attendee travel is challenging, notably due to COP being an international event and organisers having little ability to influence emissions from air travel. However, policy changes could be used as a mechanism to reduce emissions in this area.

The UN distributed 23,000 passes for delegates to attend COP27, but many stayed fewer than five days in Sharm El-Sheikh. We recognise that short-stay trips are necessary in many instances, however, where possible, encouraging longer but less frequent visits could help reduce travel related emissions, particularly from air travel. This could be achieved by reducing the number of passes distributed but increasing the number of attendance days per pass. This is a low-cost high-impact measure that would also minimise the reliance on offsetting to deliver a carbon neutral COP.



5. Carbon Accounting and Management

5.1 Scope and Boundary

The boundary for the COP27 carbon footprint was guided by the reporting requirements of the UN 'How to COP – A Handbook for Hosting United Nations Climate Change Conferences' and the Greenhouse Gas Protocol Corporate Standard, which aligns with international standards ISO 14064 and PAS 2060.

The Greenhouse Gas Protocol provides two distinct approaches for consolidating emissions: Equity Share or Control, with COP27 conforming to the latter.

- Equity share approach consists of accounting for GHG emissions from an entity's operations, according to its equity share in the operation. It reflects the rights an organisation has to the risks and rewards of an operation.
- Control consists of an organisation accounting for all GHG emissions from operations it has control over. Control is defined by either:
 - Operational Control: where an organisation has full authority to introduce and implement its own policies.
 - Financial Control: where an organisation retains the majority of the risks and rewards of its operation and can dictate the operating and financial policies.

Given the purpose of COP27 and the ambition to fully understand its impacts, a broad approach was taken for setting the boundary.

- 1) The scope of the COP27 carbon footprint report meets all minimum requirements set out in section 4.1³.
- 2) The boundary included some emission sources that the Egyptian Government had no or limited control over, including emissions arising from participant international travel, hotel accommodation, Green Zone waste management and Green Zone visitor use of UN provided local transportation. These were included to understand the far-reaching climate impacts of the event and help strengthen the credibility of the resulting carbon footprint.
- 3) Furthermore, the COP26 carbon footprint report was reflected on by way of expected materiality assessment of all significant COP-related activities; these activities with a 'known' material impact on the overall reported emissions for COP27 were also included within the boundary.

³ How-to-COP_2020.pdf (unfccc.int)

5.2 Carbon Management Hierarchy

A carbon management hierarchy of avoid, reduce, replace, and offset was used to guide the preparation and delivery of COP27. This ensured that carbon avoidance and reduction were prioritised, with offsetting only considered for residual (unavoidable) emissions.

5.3 Calculation Methodology

The most common approach for calculating GHG emissions is through the application of documented and approved GHG emissions conversion factors. These factors are calculated ratios that relate GHG emissions to a proxy measure of activity at an emissions source. The activity data or amount of 'resources' used are multiplied by the relevant emission factors to calculate total GHG equivalent (CO_{2e}) emissions.

$$GHG\ emissions = activity\ data \times emission\ conversion\ factor$$

There are seven main GHGs that contribute to climate change, as covered by the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). Different activities emit different gases, and an organisation should report on the Kyoto Protocol GHG gases produced by its activities.

Carbon dioxide equivalent (CO_{2e}) is the universal unit of measurement to indicate the global warming potential (GWP) of GHGs, expressed in terms of the GWP of one unit of CO₂. The GWPs used in the calculation of CO_{2e} are based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4) over a 100-year period (this is a requirement for inventory/national reporting purposes).

Full details of the calculation methodology can be found in the accompanying COP27 Carbon Footprint Verification Report⁴.

⁴ OCW Verification Report - COP27

5.4 Carbon Footprint

The total carbon footprint of the activities measured for COP27 are expressed in tonnes of carbon dioxide equivalent (tCO₂e) and are calculated at 62,695 tCO₂e.

Table 1. Total GHG emissions recorded for previous COP events

COP	Total GHG emissions (tCO ₂ e)	Total GHG emissions per delegate (tCO ₂ e)
COP15	72,374	2.16
COP23	49,996	2.26
COP24	59,020	2.54
COP25	51,101	2.21
COP26	131,556	3.42
COP27	62,695	1.34

Please note, the level of comparability among COP events is not practical due to the varying scope and activities included for each event. This is the key basis for our recommendation included in Section 4.3.

5.5 Exclusions

All minimum requirements set out by the UNFCCC were included in the scope and boundary of COP27's carbon footprint. However, with respect to transparency, it is also important to disclose what emission sources were not included.

As defined by the UNFCCC 'How to COP' handbook, measuring emissions from the Green Zone is optional, however to ensure best practice, emissions resulting from some Green Zone activities (waste and local transportation) were still captured for COP27 GHG reporting. The Green Zone was measured for COP26 and was accountable for less than 3% of the total residual emissions.

Temporary structures at COP27 were constructed using pre-used materials. Post COP, these structures were dismantled, and the materials were repurposed. Therefore, only the emissions associated with assembling the temporary structures would be within scope, and these were assumed to be de-minimis. On this basis, temporary structures were excluded from the COP27 carbon footprint.

All unofficial events were excluded from the scope and boundary of the carbon assessment.

6. Sustainable Activities

6.1 Electricity

Carbon Management

Several measures were actioned to reduce the electricity consumption of the Blue Zone. A main goal of the Egyptian Presidency was to reduce COP27s reliance on the electricity grid, by generating and consuming renewable energy. To deliver this, three 5 megawatt (MW) solar photovoltaic (PV) systems were installed along Sharm El Sheikh's circular road, in addition to a pre-existing 5 MW solar PV system. In total, these systems delivered 1,069.88 (megawatt hours) MWh of renewable energy specifically for COP27.

Table 2. Installed solar PV capacity and energy generation for COP27

Project	Capacity (MWp)	Generation (MWh)
Sharm Convention Centre	0.935	40.70
Sharm El Sheikh Airport	0.280	13.10
Hassan Allam	5.00	240.11
Intro	5.00	308.75
Infinity	5.00	273.00
Intro Taw	5.00	194.22
Total	20.00	1069.88

The Heating, Ventilation, and Air Conditioning (HVAC) system was set to the minimum recommended cooling temperature of 24°C to minimize the workload of the system and reduce power consumption. This was justified by weather conditions in November, allowing for such operating conditions without compromising performance and comfort. To further enhance resource efficiency, 2,400 LED bulbs were installed in the congress centre, and a further 720 LED bulbs were installed in prefabricated buildings.

Purchased electricity for the Blue Zone, covering the four main halls, totalled 2,043.63 MWh for the duration of COP, and was supplied via the electricity grid.

Table 3. Grid electricity consumed by the Blue Zone and associated emissions

Location	Total consumption (MWh)	Emissions (tCO _{2e})
Old conference hall	671.09	307.82
New conference hall	422.50	193.80
Blue Zone (Hassan Allam)	487.50	223.61
Extension of Blue Zone	462.54	212.17
Total	2,043.63	937.40

Avoided Emissions

Renewable energy generated by Solar PV systems for COP27 but installed outside of the Conference Venue resulted in avoided emissions of approximately 491 tCO_{2e} over the duration of COP27.

6.2 Fuel

Carbon Management

Diesel generators were deployed at COP27 to provide backup power; however, they were only used as a TV and media purposes, and thus the use of the generators was eliminated to almost zero. This was made possible by the Ministry of Electricity refurbishing and strengthening electrical connections to COP venues. This minimised situations where emergency power generation via the backup diesel generators would have been required.

6.3 Travel

Carbon Management

To encourage the use of public transport in Sharm El-Sheikh, the Ministry of Transport provided 260 buses for use by attendees, free of charge. This included 140 electrical buses and 120 natural gas buses. Seven routes were carefully selected to cover the city of Sharm El-Sheikh, which covered a total distance of approximately 236 kilometres (km). These routes operated from 06:00 to 00:00 daily, with 5-minute intervals between buses, maximising convenience and therefore uptake by event attendees. Additionally, 770 taxis were converted from conventional diesel or petrol-powered engines to natural gas. The government also provided 250 bicycles and scooters available to rent, with over 3,000 registered users. Electric vehicle charging ports were also installed around the city, including dedicated charging stations for the electric bus fleet.

Table 4. Use of international and local transport for COP27 and associated emissions

Type	Total consumption	Emissions (tCO ₂ e)
Local Travel - Natural gas buses (m ³)	280,800.00	570.46
Local Travel - Electric buses (MWh)	1,163.27	533.59
Local Travel - UN Buses (km)	26,020.00	172.00
Local Travel - Other (km)	93,830.00	16.03
International Travel - Flights	-	44,103.80
Total	-	45,395.88

Avoided emissions

The use of an electrical bus fleet saved approximately 170 tCO₂e over the duration of COP27.

Offset emissions

For International Travel – Flights, a total of 605,730 carbon credits have been purchased and retired. For further information about carbon neutrality activities, please refer to Section 7 Carbon Neutrality.

6.4 Accommodation

Carbon Management

To provide sustainable accommodation, hotels in Sharm El-Sheikh collectively installed 15 MWp of Solar PV prior to the event. Additionally, 132 hotels implemented an Environmental Management System and/or obtained Environmental Certification (including ISO 14001, Green Star, Travel Life, Green Globe and Earth Check), with 64 of these in the final stage of obtaining certificates.

Table 5. Total nights stayed in accommodation by COP27 attendees and associated emissions

Activity	No. of hotel nights	Emissions (tCO ₂ e)
Hotel Stays	371,199	15,961.43

Avoided emissions

The installation of solar PV plants at hotels for COP27 resulted in the avoidance of approximately 445.56 tCO₂e.

6.5 Catering

Carbon Management

Ensuring that everyone attending large events has access to all meal options can be a challenge; the industry standard for calculating meal quantities for an event is a 3-5% attendance guarantee overrun. Early in the registration process, COP27 attendees were asked to inform the venue of meals that were not required due to arrival or departure times or other on-site plans. To reduce food loss, quantities for each meal type were also informed by actual demands during the first days of the conference.

Even with these measures in place, having some food waste was inevitable. By working alongside venue and catering partners, COP27 provided leftover meals to Food Banks every day. Any remaining food waste was segregated, collected, and transported separately, and a final treatment was prioritised via composting, energy recovery, and as a final option direct landfilling.

The total carbon emissions arising from catering at COP27 were estimated at 390.14 tCO₂e. Calculating emissions resulting from food consumption provides motivation to rationalize consumption and reduce food losses, in addition to increasing the demand for meals with a lower carbon footprint.

Table 6. Number of attendees at COP27 and associated catering emissions

Activity	No. of attendees	Emissions (tCO ₂ e)
Catering	46,915	390.14

6.6 Water

Carbon Management

To minimise water consumption, WATER CHOICE smart water savers were installed at all water faucets. Recycled wastewater was used for toilet flushing and for irrigation in all green areas of Sharm El Sheikh International Airport. The water flow for the venue’s toilets was also reduced by 40%. To encourage the use of refillable water bottles, water dispensers were installed throughout the venue and glass bottles were distributed to all attendees. Any other bottled water was provided in recycled packaging.

Table 7. Water consumption at COP27 and associated emissions

Type	Total water consumption (m ³)	Water supply emissions (tCO ₂ e)	Wastewater emissions (tCO ₂ e)
Toilet (male)	2,505	0.89	1.62
Toilet (female)	2,505	0.89	1.62
Public lavatory faucet	793	0.28	0.51
Total	5,803	2.05	3.74

6.7 Waste

Carbon Management

An integrated waste management system was designed and implemented for the city of Sharm El-Sheikh and its airport; this included segregation, storage, handling, transportation and treatment/recycling and disposal of waste.

COP27 generated around 15 to 20 tonnes of waste per day, including cardboard, paper, tissues, glass, organic and general waste. This was managed by an Integrated Waste Management System that aimed for a virtual zero-waste to-landfill target. Catering staff also received training on the efficient segregation of organic waste. These measures enabled 100 tonnes of organic waste to be collected for composting and use for animal feed.

Table 8. Waste types, disposal methods and waste volume at COP27, and associated emissions

Waste type	Disposal method	Average Daily Quantity (tonnes)	Emissions (tCO ₂ e)
Plastic cups and plates	Recycled	0.40	0.11
Takeaway bags and paper plates	Used as an alternative fuel for cement factories	1.30	0.36
Glass	Recycled	6.00	1.66
Cardboard	Recycled	4.00	1.11
Organic Waste	Converted to organic fertilizer and partly used as food for sheep	8.00	0.93
Total		19.70	4.16

6.8 Procurement

Carbon Management

Suppliers of purchased goods and materials were carefully selected based on their environmental credentials. Efforts were made to minimize plastic consumption as much as possible, such as reducing the use of plastic straws and cups. Water dispensers were also installed around the venues to avoid the procurement of single-use water bottles. These measures resulted in plastics accounting for only 2% of the total waste generated during the event.

6.9 Staff, Volunteers and Capacity Building

The well-being and development of local support staff and volunteers were of utmost importance at COP27. They were provided with regular support during their time volunteering and received personal and professional mentoring for self-development. This was in addition to emotional intelligence, SDGs and climate change training courses.

Further to this, 55 hotel staff and 20 restaurant workers received training courses on “Biodiversity, resource management systems, financial and environmental impact”. Additionally, 22 restaurant workers received a training course on “Food safety and sustainable development”.

6.10 Accessibility

COP27 was made accessible to all by implementing a range of measures:

- Golf carts and bicycles provided for mobility inside the Green Zone.
- Wheelchairs were provided at the entrance gates.
- Exhibited an accessibility desk by the entrance that provided support and guidance for any accessibility queries.
- Mobility pathways for special mobility requirements (e.g., wheelchairs).
- Installed ramps at the entrance, inside pavilions, and up to stages in event halls.

6.11 Diversity and inclusion

COP27 was a diverse and inclusive COP, made possible by the following measures:

- Ensured all 133 side events were geographically and culturally inclusive. This included discussing issues from around the world and having all side events translated into three different languages.
- The Green Zone showcased the works of women and local communities, including Dayarna, the National Council of Women, and Torathna (our Heritage).
- Civil society pavilions included more than 30 local initiatives showcasing their work.
- Fashion Hub inclusive of fashion designers and artists.
- Toilet signs are written in braille.

6.12 Community Engagement

Community engagement is an important aspect of COP because it creates a platform to raise awareness of the world's environmental challenges while enabling people to network and learn about different cultures.

To encourage community engagement, the following were implemented:

- All side event agendas and messages were displayed every day for all to see.
- A combination of public spaces and food and beverage areas that offered affordable products, provided great spaces for visitors to network and enjoy.
- The local community culture and food were also integrated into the event, which provided visitors with an immersive experience.
- A wide range of arts and different cultures were displayed throughout the venues.
- Activities for all age groups were provided.



7. Carbon Neutrality

COP27 was a large-scale event, that welcomed over 46,000 participants to the Blue Zone alone. Emissions arising from international events of this size can be managed and limited, but not completely avoided, and therefore to deliver a carbon neutral COP27, offsetting residual emissions was necessary.

Carbon neutrality refers to achieving net zero carbon dioxide emissions by balancing emissions with carbon removals (i.e., carbon offsetting). This is important because it allows global balancing of emissions while emissions reduction strategies are being implemented.

To avoid the worst effects of climate change, we need to take responsibility for our impact and act now to limit global temperature increases to 1.5 °C, or well below 2 °C above pre-industrial levels. As set out in the Paris Agreement, offsetting plays an important role in rapidly deploying environmental solutions where it is economically most viable. This helps to bridge the gap between now and the time our societies will be able to phase out GHG emitting technologies.

In that respect, the Paris Agreement aims to accelerate the transformative change needed to reach carbon neutrality, ensuring that countries around the world will be increasing their ambition and action over the second half of the twenty-first century, while also supporting the achievement of Sustainable Development Goals.

For International Travel – Flights, a total of 605,730 carbon credits have been purchased and retired.



Abbreviations and Units

Abbreviations

CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
COP	Conference of the Parties
EU	European Union
GHG	Greenhouse Gas
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
PV	Photovoltaic
SDG	Sustainable Development Goals
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

Units

°C	Degrees Celsius
%	Percent
h	Hour
kg	Kilogram
km	Kilometre
m ²	Square metre
m ³	Cubic metre
MW	Megawatt
p	Peak
t	Tonnes



Official Sustainability Report, 2022 United Nations Climate Change Conference - June 2023

Appendix A

<Option to include details about Carbon Offsetting Projects here>



WITH THANKS TO



United Nations
Framework Convention on
Climate Change

