Environmental Sustainability Report

The Third United Nations Environment Assembly

A Carbon Neutral and Green Event

Sustainable UN Facility (SUN)

Economy division

United Nations Environment Programme

Nairobi, Kenya

January 2018

Table of Contents

Acronyms

CERs	Certified Emission Reduction Credits
EMS	Environmental Management System
GHG	Green House Gas
ICAO	International Civil Aviation Organization
SUN	Sustainable United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNFCU	United Nations Federal Credit Union
UNON	United Nations Office at Nairobi

Executive Summary

On the occasion of the Third United Nations Environment Assembly, whose overarching theme was "Towards a Pollution-Free Planet", the UN Environment Programme decided to lead by example and show how environmental sustainability can be integrated into large events and become standard practices for future meetings. Therefore, the UN Environment Programme expressed its commitment to continue to make the Third United Nations Environment Assembly a sustainable, climate neutral, paper smart, and plastic less event, as it was previously done for the Second United Nations Environment Assembly in 2016. The event hosted 3,889 participants from all around the world took place at UN Environment Programme's Headquarters in Nairobi in December 2017.

In order to decrease and minimise the environmental impacts of the Third United Nations Environment Assembly, the event was organized accounting for six main environmental goals: measuring the environmental footprint, reducing Greenhouse Gases (GHG) emissions, offsetting emissions, minimizing paper use, reducing waste and raising awareness on environmental sustainability.

- **Reducing GHG emissions**

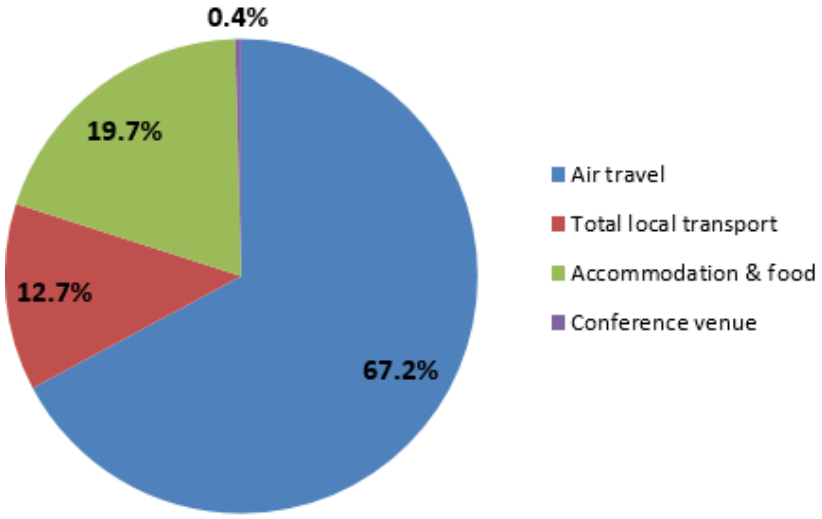

Figure 1: The Third United Nations Environment Assembly GHG emissions by source

The total emissions of the Third United Nations Environment Assembly were 2,741 tons of CO_2e of which 67.2% (1841 tons of CO_2e) were associated with air travel, 12.7% (349 tons of CO_2e) with local transport, 19.7% (538 tons of CO_2e) with accommodation and food and 0.4% (11.3 tons of CO_2e) with conference venue. These represent activities beyond the boundary of control of UN Environment Programme. They were included so as to provide a complete accounting of climate emissions associated to the Assembly.

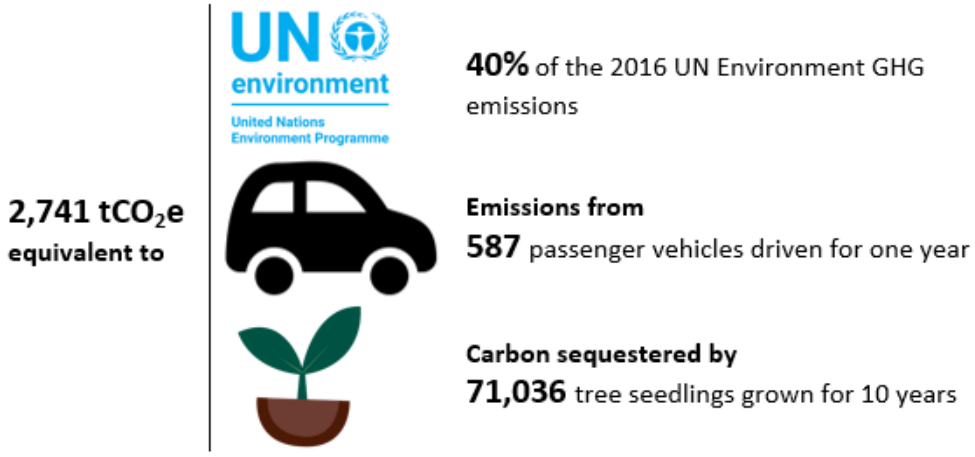

Figure 2: Carbon emissions comparison

- **GHG offsetting**
  The Third United Nations Environment Assembly was a climate neutral event, as all emissions related to the event were offset using Certified Emission Reductions (CERs) bought from the UN Climate Change.

- **Minimizing paper use**
  Hard copies were avoided when possible, if not, double-side printing was adopted. Moreover, the initiative was facilitated by sharing all event's related information, e.g. agenda, through projection screens and the Assembly's mobile application. Indicatively, the use of around 2.5 million prints/copies was prevented, which avoided around 14.5 tons of CO_2e and saved about USD 9,600.

- **Reducing waste**
  Waste reduction aimed at targeting plastics cups and bottles, the event's decoration material and paper use. In fact, no plastic cups or bottles were provided during the event. Thus, delegates either had their own reusable bottle or were given reusable glass ones. Indicatively, about 54,450 plastic bottles and 81,670 plastic cups were saved, which prevented 6.9 tons of CO_2e. Concerning the decoration, PVC banners were avoided when possible using more environmentally friendly set ups, e.g. green backgrounds. Also, all papers used were collected and recycled (6.7 tons), preventing the indicative emission of 29 tons of CO_2e.

- **Raising awareness on environmental sustainability**
  The "Greening the Third United Nations Environment Assembly" communication strategy included actions before, during and after the event. They were implemented not only through UN Environment Programme's social media accounts and official website and tools, but also through internal bottom - down communication to staff.

Substantive improvement in sustainable operations has been made with the Third United Nations Environment Assembly. UN Environment Programme is looking forward to the next United Nations Environment Assembly to continue its green event initiative, where even more actions and achievements could be considered and lessons learned from the past Assemblies could be applied.

1. Background

The UN Environment Programme has committed to continuously reduce its carbon footprint and improve its environmental performance. Since 2007, this has been done by annually measuring its Green House Gases (GHG) emissions within the Programme's boundary of control, setting reduction goals and strategies, and offsetting the remaining emissions. Despite the significant emission reduction efforts (60% since 2011), some of the emissions generated are unfortunately unavoidable in fulfilling our mandate and, therefore, need to be offset to make UN Environment Programme a Climate Neutral organization. In addition, efforts to make our operations green and sustainable have also meant the measuring and management of water, waste and energy, and the sensitization of staff on their environmental footprint.

Organizing green and carbon neutral events is another pillar for improved environmental sustainability of activities in UN Environment Programme. On the occasion of the Third United Nations Environment Assembly, whose overarching theme was "Towards a Pollution-Free Planet", UN Environment Programme decided to lead by example and show how environmental sustainability can be integrated into large events and become standard for future meetings. Therefore, UN Environment Programme expressed its commitment to make the Assembly a sustainable, climate neutral, paper smart, and free of plastic bottles and cups event. Some additional green initiatives were also implemented to reduce its carbon footprint, such as the use of food ingredients mainly produced locally and red meat-free menus, the use of bikes to move around the UN Gigiri compound, as well as the choice of sustainable materials whenever possible.

The Sustainable UN (SUN) Facility wishes to thank to the Secretariat of Governing Bodies within UN Environment Programme, who kindly supported the implementation of green activities and data collection gathering on participants travel information; the United Nations Federal Credit Union (UNFCU) who kindly sponsored the Assembly emissions offsetting; and the colleagues from the United Nations Framework Convention on Climate Change (UNFCCC) who always efficiently procure Certified Emission Reductions (CERs) offsets for UN Environment Programme. Credit should also be given to International Civil Aviation Organization (ICAO) colleagues, who developed an excellent tool for air travel carbon emissions calculation, which has been used systematically by UN Environment Programme in its climate action. Additionally, the United Nations Office at Nairobi (UNON) Division of Conference Services, Commercial Unit, and Facilities Management and Transport Unit, who supported with facilities and caterers' management and data collection. Last, but certainly not least, our thanks go to the colleagues from the SUN team who provided inputs and feedback on the methodology and positively contributed to its completeness and sharing across the UN system.

2. Results

In order to decrease the environmental impacts of the Third United Nations Environment Assembly, the Assembly was organized keeping in mind six main environmental goals:

1. *Measuring the environmental footprint*
2. *Reducing GHG emission by allowing remote streaming*
3. *Offsetting our emissions to have a Carbon neutral event*
4. *Minimizing paper use*
5. *Reducing waste by avoiding unnecessary waste and promoting reuse*
6. *Raising awareness on environmental sustainability among member states, UN organizations, and the general public*

The table below outlines the different environmental aspects that were considered key for the Assembly and can be applied to green meetings in general. The methodology and detailed calculations to estimate the emissions (actual and prevented) are included in Annex 1.

Targeted environmental aspects	Details	Results
GHG emissions generation	*Climate Neutral event* The GHG emissions generated by all participants travelling to Nairobi to attend the meeting, those produced by the participant's hotel facilities and local transport, and those related to the use of conference facilities (venue) and food were calculated/estimated and offset thanks, in-kind, to the contribution of UNFCU of 2,512 CERs. The remaining balance of 1188 CERs required was obtained from the 2,663 CERs UN Environment Programme has for its inventory work.	**The Assembly accounted for about 2,741 tons of CO_2e.** Due to the new European CERs scheme for airlines, about 19 tons of CO_2e were already offset by European airlines. Additionally, UN Environment Programme conference venue emissions (11 tons of CO_2e) are already offset by UN Environment Programme annually. Therefore, UN Environment Programme used **2,711 CERs to offset** all the emissions produced. Out of 2,741 tons of CO_2e, 67.2% (1841 tons of CO_2e) were associated with air travel, 12.7% (349 tons of CO_2e) with local transport, 19.7% (538 tons of CO_2e) with accommodation and food, 0.4% (11.3 tons of CO_2e) with conference venue.
Paper use	*Paperless event* • Efforts were made to reduce the overall use of papers during the event. The agenda of the Assembly was projected on the UNON screens, no hard copies were to be provided to participants and exhibitors were encouraged to bring their own tech devices. • Sharing information through the Assembly's mobile application and screen projections in the venues was a real asset for this paperless initiative.	Double-side printing made it possible to **prevent about 2.5 million prints/copies**, equal to nearly 2,500 paper reams, which **avoided about 14.5 tons of CO_2e**. The overall associated **savings equal to 9,600 USD**, a quite significant amount. *Note:* - *The data related to paper prints was only partially available. Thus, the paper use was estimated based on a proportionality basis using the Second United Nations Environment Assembly figures. c.f. Annex 1*
Plastic bottles use	*Plastic bottle free event* • Delegates were invited to bring their own reusable bottle for the Assembly and participants were provided with reusable glass branded bottles from all cafeterias. • Water dispensers were made available in conference rooms for participants to	Indicatively, about **54,450 plastic bottles were saved,** which **prevented 5.2 tons of CO_2e.** Additionally, around **81,670 plastic cups were saved** by not providing them next to water dispensers. This **prevented around 1.7 tons of CO_2e,** indicatively.

	refill their bottles, ensuring that the health and hygiene standards were met. • Plastic cups next to water dispensers were banned to encourage participants to refill their reusable bottles and avoid unnecessary plastic waste. A sign was included next to every water dispenser. • In order to pursue the path "towards a pollution-free planet", the Clean Seas team rose awareness on plastic marine litter by building a CleanSeas tent, where side events, conferences and movie screenings on plastic marine pollution were held. In addition, a Clean Seas dome was built to host a VR experience and pledge-signing events with Ministers and UN representatives.	
Catering	*Locally produced food and red meat-free menus* • Most of the food options proposed were locally grown to reduce the transport-related GHG emissions. Also, no red meat was proposed during special events, due to its higher carbon footprint compared to vegetarian and white meat diets. • The food emissions associated to non-resident delegates/participants' stay for attending the Assembly were estimated and offset.	About **72 tons of CO_2e were offset** as food-related emissions. About **7 tons of CO_2e were prevented** by proposing red-meat-free menus.
Teleconferencing	*Remote attendance* Participants were given the possibility of joining the United Nations Environment Assembly meeting remotely (key sessions), thus emissions linked to in-person meeting attendance would potentially be reduced by this initiative.	Around **52 tons of CO_2e were potentially prevented** by providing online access to the event. 32 people accessed the event remotely.
WASTE MANAGEMENT STRATEGY		
Waste	*Waste measurement* Unfortunately, due to the compound's waste management system in place, a physical audit of the waste generated during the Assembly only was not possible. Thus, an average daily waste production was assumed based on the December	About **81,670 plastic cups were prevented** as well as around **54,450 plastic bottles**. However, some glass bottles (a lower number due to reuse) replaced plastic bottles use. Additionally, with the new recycling about all paper sheets used were prevented from becoming waste. In fact, all **papers were**

	2017 waste data provided by the contractor company TakaTaka. The Christmas holidays and weekends were considered.	**recycled 6.7 tons, preventing 29 tons of CO_2e** to be produced.
Decorations	*Avoiding Unnecessary Conference Waste* • Where possible, decorations and set up types were chosen to minimize their environmental impact. Mostly green backgrounds and green separation walls were installed, which reduced the amount of PVC banners used (in comparison to previous United Nations Environment Assemblies). • Lanyards for registration badges were made from recycled plastic. Attendees were encouraged to return them at the end of conference to ensure reuse at future events.	The PVC banners that were used for branding are to be recycled into bags.

3. The Assembly's environmental performance at a glance

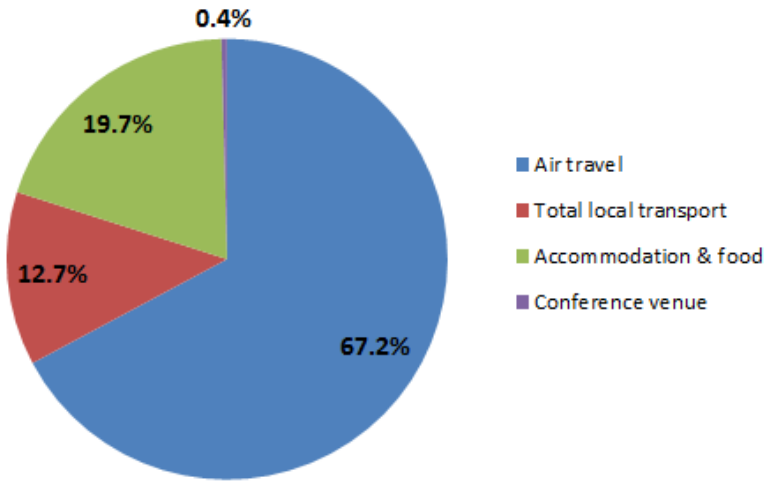

Figure 1: The Assembly's GHG emissions by source

4. Summary table of the Assembly's estimated and prevented emissions, and financial savings

1. The Assembly Main Figures	
Overall Number of Participants	3,889
Number of Kenya based participants	2,390
Number of international flights	1,499
Local transport distance (km)	1,635,202
Number of participants accessing remotely (views)	32
2. Event's overall GHG emissions calculation	**Tons of CO_2e**
Air travel emissions	1841
Local transport emissions from/to airport	10
Local transport emissions	340
Accommodation-related emissions	467
Food-related emissions	72
Conference venue-related emissions	11
TOTAL	**2,741**
3. Offsetting	**Tons of CO_2e**
Overall GHG emissions	2741
Emissions offset by Airlines	-20
Conference venue-related emissions	-11
Emissions covered by UN Environment Programme's offset	**2,710**
4. Estimated maximum potential mitigated emissions	**Tons of CO_2e**
Teleconferencing	52
Banned plastic bottles	5.2
Banned plastic water cups	2.0
Papersmart event	43
Red meat-free event	7.4
TOTAL	**110**
5. Cost savings	**Total savings (USD)**
Paper use cost	9,601
Printing cost	48,646
Plastic cups	1,633
6. Good practices	
- Use of green walls and plants for decorations and setup to reduce the use plastic banners - No provision of water cups next to water dispensers - Plastic-bottle free event to promote reuse of glass bottles - Papersmart event - Carbon Neutral event: The emissions were offset through CERs leading to a zero-net carbon emissions event	

5. Communication and Visibility

Participants' awareness was raised through proper communication conveyed via the registration website, and then by all UN Environment Programme staff directly involved in the event's organization and hosting, from top management to the event organizers. Main communication actions are listed below.

Prior to the Assembly

- Governments and all those who pledged to the "Beat Pollution" campaign sponsored on the Assembly's official website received weekly emails on the United Nations Environment Assembly, starting from September 2017.
- A video on "Beat Pollution" was showed in all TV screens around the UN Gigiri compound.
- A briefing note was shared with the UN Environment Secretariat of Governing Bodies in charge of the event to brief their Secretary on the Assembly's greening initiatives.
- The application form for the Assembly had mandatory questions on sustainability. Participants were required to provide information on how they had travelled to Nairobi and how they would have reached the UN Gigiri compound, as well as if they would have brought their reusable bottle to the Assembly.
- Information on the expected outcome of the green initiative were included in the Assembly proceedings.
- The Assembly's official website provided knowledge on pollution by dedicating a full page on the issue. It also gave visibility to the Green initiative by hosting a "Greening the Assembly" page on its home page.
- An email was sent out to all side events' organizers to inform them about the green initiative and seek for their support in sensitizing the Assembly participants.
- The weekend ahead the official opening of the Assembly, an article on four highlights regarding the Assembly was released on UN Environment News and Stories page.

During the Assembly

- All articles shared during the event, both from UN official sources and under the #beatpollution hashtag, contained information on the sustainability of the event in line with the theme of the assembly "Towards a Pollution-Free Planet".
- Top management explained the Green features of event to participants.

After the Assembly

- An article on the actual Assembly environmental footprint, based on the data included in the present report will be published by the beginning of 2018.
- The results will be published online and sent by email to all participants and staff.
- The Assembly's methodology and initiatives will be shared with other UN organizations for their replication. The SUN Facility will support the dissemination of the event results across the UN system to lead by example and will use this as a base of its work with UN Climate Change.

6. Conclusions and recommendations

With the Third United Nations Environment Assembly, UN Environment Programme made substantive steps forward towards a greater environmental sustainability of its operations.

The Assembly greening initiative made it possible for the organization to measure, manage, reduce, monitor and benchmark its environmental performance as well as sensitizing staff and member states about the urgency of taking concrete action for the environment in our operations.

The outcome of this report along with the Second United Nations Environment Assembly Greening Report will be used to benchmark UN Environment Programme's performance over the next Assembly's events and seek continuous improvement in line with the goals of the organization's Environmental Management System (EMS).

While most of the actions identified in the methodology were implemented during the Assembly --this alone representing an achievement - the UN Environment Programme could enhance further its environmental sustainability during future meetings by focusing on the following aspects:

1. Increase the visibility of the event's green features (visually and through media).
2. Ensure that in key official speeches the greening efforts are mentioned.
3. Promote the sustainability of the event by asking side-event's organizers to align with the green initiatives, e.g. paperless initiative and have paperless booths and stands. Early coordination is key.
4. Coordinate prior to the event with the waste contractor to have accurate data on the waste generated during the event.
5. Look into getting the Assembly's related data of energy and water consumption, by investing in dedicated meters.
6. Improve coordination between different UN Environment divisions and have a clearer division of responsibilities.
7. Expand the sustainable and local food criteria to all the meals provided during the Assembly's week.
8. Revise the registration survey to ensure more accurate information provision. More specifically, clarify the inputs related to the means of transport to and within Nairobi in order to avoid confusion. A revised format of the survey will be shared with the team in charge.
9. Liaise with approved hotels to ensure sustainability measures are applied and used for participants.
10. Promote car-pooling, bike-sharing and public and UN-based transport usage during the event to minimize environmental impacts in the compound.
11. Encourage Member States to give feedbacks and recommendations for future United Nations Environment Assemblies.
12. Obtain an external recognised "sustainable event" certification to ensure that the efforts made by the Organization are benchmarked.

Annex 1 – United Nations Environment Assembly Methodology for GHG emissions calculation (v.2)

Sustainable UN Facility (SUN)

Economy Division

United Nations Environment Programme

Nairobi, Kenya

January 2018

Table of Contents

1. Background

The UN Environment Programme has committed to continuously reduce its carbon footprint and improve its environmental performance. Since 2007, this has been done annually by measuring its GHG emissions within UN Environment Programme's boundary of control, setting reduction goals and strategies, and offsetting the remaining emissions. Despite the significant emission reduction efforts, some of the emissions generated are unfortunately unavoidable in fulfilling the United Nations mandate and need therefore to be offset to make UN Environment Programme a Climate Neutral organization. In addition, efforts to make operations green and sustainable have also meant the measuring and management of water, waste and energy, and the sensitization of staff on their environmental footprint.

> **Offsetting** is "*the process whereby organizations take responsibility for their remaining GHG emissions by purchasing carbon credits from projects that are achieving reductions in greenhouse gas emissions of an equivalent amount*"[1]. UN Environment Programme decided to buy Certified Emission Reductions (CERs) offsets from projects in Developing Countries as mandated by the United Nations Framework Convention on Climate Change (UNFCCC).

Organizing green and carbon neutral events is another pillar for improved environmental sustainability of activities in UN Environment Programme. On the occasion of the Second United Nations Environment Assembly, UN Environment Programme decided to lead by example and show how environmental sustainability can be integrated into large events and become standard for future meetings. Therefore, UN Environment Programme expressed its commitment to make the United Nations Environment Assembly a sustainable, climate neutral, paper smart, and free of plastic bottles and cups event. Some additional green initiatives were also implemented to reduce its carbon footprint, such as the use of food ingredients mainly produced locally and red meat-free menus, the use of bikes to move around the UN Gigiri compound, as well as the choice of sustainable materials whenever possible. In this context, the first methodology for a green United Nations Environment Assembly was put in place in 2016. This year 2017, to keep on with the good practices of the 2016 Assembly, the Third United Nations Environment Assembly was as well organised in view of climate neutral event.

[1] http://www.greeningtheblue.org/our-approach/offsetting

This methodology was drafted to:

- Ensure that the United Nations Environment Assembly's footprint is continuously measured and compared to the previous meetings;
- Ensure that consistent, transparent and verifiable methodologies are used to produce Environmental Sustainability Reports for United Nations Environment Assemblies over the years;
- Allow for the better management of United Nations Environment Assembly's footprint;
- monitor the environmental impacts of UN Environment Programme governance meeting and record improvements over time and
- Create a useful reporting tool for green events to be shared with other UN organizations and UN Environment Programme duty stations.

Note: some updates were implemented to the first methodology of the Second United Nations Environment Assembly, thus the nomenclature 'version 2'.

The Sustainable UN (SUN) Facility wishes to thank to the Secretariat of Governing Bodies within UN Environment Programme, who kindly supported the implementation of green activities and data collection gathering on participants travel information; the United Nations Federal Credit Union (UNFCU) who kindly sponsored the Assembly emissions offsetting; and the colleagues from the United Nations Framework Convention on Climate Change (UNFCCC) who always efficiently procure Certified Emission Reductions (CERs) offsets for UN Environment Programme. Credit should also be given to International Civil Aviation Organization (ICAO) colleagues, who developed an excellent tool for air travel carbon emissions calculation, which has been used systematically by UN Environment Programme in its climate action. Additionally, the United Nations Office at Nairobi (UNON) Division of Conference Services, Commercial Unit, and Facilities Management and Transport Unit, who supported with facilities and caterers' management and data collection. Last, but certainly not least, our thanks go to the colleagues from the SUN team who provided inputs and feedback on the methodology and positively contributed to its completeness and sharing across the UN system.

2. Methodology

The table below outlines the different environmental aspects that are important to the Assembly and green meetings in general. The methodology for GHG emissions calculation associated with these aspects is also described.

Targeted environmental aspect	Details	Methodology for the GHG emissions calculation
GHG emissions generation	*Carbon Neutral event –* The United Nations Environment Assembly related GHG emissions included the emissions generated by the travel of the participants to Nairobi, as well as those produced by the participant's hotel facilities, local transport and food consumption. Those emissions will be calculated/estimated and offset. *Note:* - *These represent activities beyond the boundary of control of UN Environment Programme that would only cover flight emissions for funded participants (GHG Protocol Scope 3). They were included to provide a complete accounting of climate emissions associated to the Assembly.*	**1. Collection of information:** One week prior the event, a link will be sent to all confirmed participants for them to include the following information: ✓ Full name ✓ Means of transport (airplane, car, etc.) ✓ Departure from (town, country) ✓ Connecting airport(s) ✓ Arrival to (town) ✓ Travel class (economy/business/premium) ✓ No. of nights of stay for the United Nations Environment Assembly ✓ Accommodation neighbourhood in Nairobi/ Name of Hotel/ Likely Neighbourhood or Hotel (if the hotel has not been booked yet) ✓ "Was your air travel cost sponsored by UN Environment Programme?" (yes/no) ✓ Additional comments *Note:* - *This survey is also included on the event's application; thus, participants could also provide the information there.* **2. Confidentiality:**

	- *In case of UNFCU kind contribution, the offered carbon credits should be considered while calculating the offset requirement.*	The following disclaimer will be included to justify the request and reassure the participants about the non-disclosure of the confidential information provided. Full confidentiality will be ensured. This information will be processed for the exclusive purpose of calculating participants daily travel emissions from their accommodation to the United Nations Environment Assembly premises. *Note:* - *Participants are kindly requested to accurately provide this information as the Assembly will be a fully carbon neutral event, i.e. all emissions generated by the event and participants travel will be offset by UN Environment Programme by purchasing CERs.* **3. Event's overall GHG emissions calculation:** **Overall GHG emissions** = Air travel + Local transport + accommodation + conference venue + Food consumption Air travel emissions will be summed up with the local transport, food-related emissions and those associated with the accommodation facilities and building area occupied by the United Nations Environment Assembly to come up with the overall footprint of the event. *Note:* - *The assumptions related to participants attending the conference with national flights are taken the same as non-resident participants.* - *Resident participants GHG emissions = local transport.* - *Non-resident participants GHG emissions = accommodation + local transport + airport transport + food consumption.* - *The conference venue related emissions are considered independent from the number of participants.* ***3.1. Air travel emissions calculation:***

		Based on the information provided, the ICAO calculator will be used to calculate the air travel emissions of each participant. The new ICAO calculator version, released in June 2016, will be used to avoid any double offsetting of GHG emissions as some airlines in the European Union have already started offsetting their flights. The GHG emissions generated will be expressed as the equivalent amount of carbon dioxide (tons/Kg of CO2e). ***3.2. Local transport emissions calculation:*** The participants will be requested to provide information on their accommodation neighbourhood to calculate the distance from their hotel/accommodation to the venue (see point 1 above). A Nairobi map will be used and each neighbourhood will be given an average indicative distance, so that based on the selected neighbourhood the distance will be calculated automatically. An excel sheet will be prepared for the local transport automatic calculation, considering for each participant two trips per day from/to their hotel/accommodation. The emission factor will be associated to car fuel combustion, considering an emission rate based on Kenya's vehicles average. The information used for the emissions calculation will use as reference 0.075 L/km, as reported in the UN Environment Economy Division Transport Unit report on motorized transport (car) in Kenya[2]. An average emission factor equal to 2.84886 Kg of CO2e/L[3] was used to estimate the associated emissions. The data will include the following emissions: ✓ Carbon dioxide (CO_2) ✓ Nitrous Oxide (N_2O) (the equivalent amount of CO_2 emissions generated) ✓ Methane (CH_4) (the equivalent amount of CO_2 emissions generated)

[2] Report on Global Fuel Economy Initiative (GFEI) study in Kenya, University of Nairobi Enterprises and Services Ltd, in partnership with UN Environment Programme, Division of Technology, Industry and Economics (Economy Division) (2014), p. 15. The average fuel consumption is calculated based on consumption data of imported vehicles (diesel and gasoline) in Kenya in the reference years (2010 to 2012).

[3] Gasoline emission factor is estimated at 2.75424 kg CO2e/L and diesel's at 2.94348 kg CO2e/L. The average of the two emission factors were used to estimate the emissions associated with local transport. Source: http://www.thegef.org/sites/default/files/publications/GEF_CalculatingGHGbenefits_webCD_1.pdf - page 10 and http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_3_Ch3_Mobile_Combustion.pdf)

		Alternatively, should the participants' actual data not be available, an average of 12 km distance (6 km per transport leg) will be used as the estimated local daily travel per participant not resident in Nairobi. The assumption is that participants coming to attend the Assembly will not opt for very distant accommodations. This figure was calculated considering the average distance of the most common accommodation neighbourhoods in Nairobi from the UN Gigiri Compound (Gigiri, Runda, Muthaiga, Westlands, Parklands, CBD)[4]. Additionally, 30 extra km will be added to each international participant's local travel to cover the average distance from/to the airport. Regarding participants based in Nairobi for which information on their residency area will not be available, an average of 40 km per day will be used. 40 km was estimated as the average distance from the UN Compound for the most common neighbourhoods in Nairobi. The average number of accommodation nights was taken. *Note:* - *Local transport assumption: no shared transport took place* ***3.3. Accommodation-related emissions*** Regarding the Hotel facilities, the following formula will be used: **Total accommodation GHG emissions =** Total Number. of international participants x Average number of accommodation nights x Average emission factor ***Average emission factor*** = [Average energy use per guest-night[5] (kWh) x EF_{Kenya} (gCO_2/kWh)] = 75.5 kWh (272 MJ) x 589.3 gCO_2/kWh[6] = 44492 gCO_2 = 44.5 Kg CO_2

[4] Gigiri (1 Km), Runda (5 Km), Muthaiga (5 Km), Westlands (9 Km), Parklands (8 Km), CBD (9 Km).

[5] Source: Gössling, S. (2010). Carbon management in tourism: Mitigating the impacts on climate change, p.7-8. London: Routledge.

[6] Source: https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20150121154302392/KENYA%20GEF%20REPORT.docx (combined emission factor, p.10)

		Note: - *For non-resident participants, if the number of nights spent is not mentioned, 5 days were assumed.* - *In case the number of nights of accommodation is higher than 10 nights, the value was replaced by 10 nights as the main event and side events lasted 10 days, and any additional days would be assumed for personal reasons, independent of the Assembly.* *> Based on those changes the average number of accommodation nights was calculated* - *Residents will not be included in the emissions counting from accommodation, because our scope is to only consider the extra emissions associated with the event, not those that would have been produced in country regardless of the Assembly.* ***3.4. Conference venue-related emissions*** The following methodology could be considered to calculate total annual energy based on the conference facilities occupied areas. The conference venue-related emissions will be calculated as follows: $A = A_1 + A_2 + A_3$ = Total annual energy consumption associated with the UN Gigiri common built area *A_1 = Grid electricity (Kwh)* *A_2 = Solar power (Kwh)* *A_3 = Diesel generators (L of Diesel)* B = Total area (Square meters) = 80,249 m^2 (UNON, 2016 GHG emissions data) C = 365 days D = 7 days E = Area occupied by the Assembly F = Energy Emission Factor *F_1 = Grid electricity Emission Factor in Nairobi*

		F_2 = Solar power Emission Factor (which is null) *F_3 = Diesel generators Emission Factor* ***Conference Facilities GHG emissions*** $= \sum_{k=0}^{n}(A_{1,2.3} \cdot F_{1,2,3}/B)/C) \cdot D \cdot E$ *Note:* - *At the UN Gigiri compound, facilities consumption data is available as of the second half of the next calendar year. Therefore, for reporting purposes, the figures to be used for the Assembly energy consumption will refer to the current year facilities data, if already available at the time of reporting. Alternatively, the previous year reporting data will be used.* ***3.5. Food-related emissions*** Food emissions related to the participants' stay in Kenya: Considering that most people have an average intake of red meat in their diet, the annual carbon footprint associated with this type of dietary habit was assumed as 2.5 tons of CO_2e/person/year[7]. **GHG emissions related to food consumption by the United Nations Environment Assembly participants** = number of international participants x per capita daily food GHG emissions x average number of accommodation nights *Note:* - *These calculations are a rough estimate for the entire stay and do not consider the efforts made to have a more sustainable United Nations Environment Assembly menu (red meat free).* - *Residents will not be included in the emissions counting, because our scope is to only consider the extra emissions associated with the event, not those that*

[8,9] Source: http://shrinkthatfootprint.com/food-carbon-footprint-diet.

		would have been produced in country regardless of United Nations Environment Assembly. Food emissions related to the main United Nations Environment Assembly event: An average no beef American's diet has a footprint of around 1.9 t CO_2e/person/year[8]. To have an idea about how much the choice of red meat free menu can affect the total food related footprint, the prevented emissions for the Assembly days can be calculated. *Note:* - *The catering for the Assembly's special events was red-meat free (side-events not included), thus only the number of days of the main event were assumed to have a rough idea about the emissions prevented by this special diet.* Further information is provided in the section "Catering" below. **4. Offsetting:** As UN Environment Programme annually offsets the air travel emissions generated by its staff and the sponsored participants, the Organisation will need to ensure that no double emission counting and offsetting will take place. This will be done as follows: - UN Environment Programme will calculate all emissions associated with air travel for all participants based on the information and participants list provided by the Secretariat of Governing Bodies. Their routing will be estimated if not available. - UN Environment Programme will use the participants' air travel emissions list and calculate the emissions of non-sponsored participants. Non-sponsored participants will be identified based on the reply to the survey link sent prior to the Assembly (see above), the information provided by the Secretariat of Governing Bodies (list of participants that entered the

		Compound to attend the meeting) and UN Environment Programme travel records (through UNON)[9]. - Air travel emissions will be summed up with the local transport emissions (for all participants) to come up with the amount of CERs to be purchased to have a Climate Neutral event. UN Environment Programme will only include the air travel emissions not already offset by airlines. - UN Environment Programme will offset the event's overall emissions with CERs kindly donated by the UNFCU[10].Should this not suffice; UN Environment Programme will use the CERs it has already purchased[11] or launch a CERs procurement process via the UNFCCC to offset the remaining emissions. On the contrary, should the UNFCU CERs exceed the Assembly needs, the amount of remaining credits will be recorded and reported in the United Nations Environment Assembly greening report (see section 4 below) and used to (partially) offset the next year's Assembly's emissions. - In the GHG inventory exercise of the corresponding year, UN Environment Programme will deduct the amount of emissions already offset for sponsored participants during the Assembly. This will avoid double-offsetting. - The building emissions will be calculated for the GHG inventory reporting, but no additional CERs will be purchased to cover them, as they are already offset through the UN Environment annual GHG inventory as part of UN Environment Programme's common area share. UN Environment GHG inventory includes air travel and building facilities emissions. The building emissions are calculated based on the built area occupied. UN Environment Programme share of built area includes both its office facilities as well as its share of common area, which is allocated by UNON based on the rented area share, Therefore, the organisation annually offsets the emissions associated with its indicative use of the common area facilities for events,

[9] Those participants not included in the UNON travel report will be considered as self-sponsored participants.

[10] Purchased through UNFCCC.

[11] UN Environment Programme usually purchases in advance a slot of CERs to cover about two inventory years; therefore, some of these might be used to offset the extra event emissions not covered by UNFCU CERs slot.

		such as the United Nations Environment Assembly, and other usage (lighting at night etc.). The amount of emissions generated by the Assembly will be certainly lower than UN Environment Programme's annual share of common area emissions, therefore the Assembly facilities-related emissions will be considered as already offset, to avoid double counting. Nevertheless, these emissions will be included in the overall Assembly footprint report, as they were generated by the event.
Paper use	*Paperless event –* In order to avoid excessive printings, the agenda would be shared in the Assembly mobile application and projection screens in the venues. • The option of providing iPads/ laptops/ television screens to participants could be considered.	Calculation of the total prevented GHG emissions from avoided paper use accounts for: 1- Double-side printing 2- Paper recycling 1- Double-side printing - In the week following the Assembly, UN Environment Programme will ask the Secretariat of Governing Bodies to share the documents that were circulated to participants and estimate, based on the number of participants and document pages, how many copies of each document would have been produced in a standard event (Figure provided by the Secretariat of Governing Bodies: 1500 copies per document which include the different language versions). A dedicated Excel sheet will be prepared including for each document the following information: ✓ *Document name* ✓ *No. of pages* ✓ *Type of paper format likely to be used (A4, A3, etc.)* ✓ *Estimated No. of copies in standard events* - Based on the number of paper sheets, the overall weight of prevented paper will be calculated. - The Environmental Paper Network (EPN) calculator will be used to have the indicative amount of GHG emissions avoided (CO_2e). http://c.environmentalpaper.org/home

		Note: - *In case the information above is unavailable, estimation based on the number of participants and the average number of copies using the Second UN Environment Assembly as baseline would be calculated (rule of thumb). The effort of reducing paper use from previous United Nations Environment Assemblies won't be given credit; however due to data constraint this estimation is necessary.* 2- Paper recycling: - The number and percentage of recycled papers will be collected from the waste contractor company, and the prevented emissions by recycling will be calculated.
Plastic bottles use	*Plastic bottle free event* - Delegates will be invited to bring their own reusable bottle for the UN Environment Assembly and some provided with reusable UN Environment Programme / UN Environment Assembly branded bottles at the beginning of the Assembly in line with the zero-plastic bottle initiative. The healthy habit in drinking fresh water and not using plastics, will be promoted in line with the UN Environment Assembly year's theme.	- In the week following the Assembly, UN Environment Programme will calculate the amount of plastic bottles avoided based on the number of participants that attended. The calculation will be made considering the following: ✓ *No. of bottles (500 mL) provided to delegates per day: 2* ✓ *No. of participants* ✓ *No. of days of the Assembly* **Number of plastic bottles avoided** = No. of participants x No. of days x No. of bottles/day The carbon footprint of plastic (LDPE or PET, polyethylene) is about 6 kg CO_2e per kg of plastic[12]. The average plastic bottles provided at the UN Compound weight about 16 g.

[12] http://timeforchange.org/plastic-bags-and-plastic-bottles-CO2-emissions

	• Water dispensers will be made available for participants to refill their bottles ensuring that the health and hygiene standards are met. • Initiatives to raise awareness and draw the attention of participants on specific environmental issues will be organized in liaison with the UN Environment Programme colleagues working on this specific theme.	Alternatively, the calculator below can be used for more detailed information on emissions, water, energy and oil savings: http://205.153.117.210/water/calculator.php - The same logic was used for the calculation of the GHG emissions prevented from avoided plastic cups use: ✓ *No. of cups used per delegates per day: 3* ✓ *No. of participants* ✓ *No. of days of the Assembly* **Number of plastic cups avoided** = No. of participants x No. of days x No. of cups/day Taking as for the plastic bottles that 6 kg of CO_2e is produced per kg of plastic. The average weight of a plastic cup is 3.5 g.
Catering	*Locally produced food* – Delegates will be provided with a sustainable menu with locally grown products and no red meat will be served, if possible.	Steps: - Agreement with the catering facilities managers to: o Offer locally sourced and no red meat menu suggestions during the Assembly. o Alternatively, propose a sustainable option clearly labelled as such in the menu of each caterer. - Use the average food associated emissions per person daily (see point 3.5 above) to estimate the emissions and multiply it by the number of days of attendance of international participants.
Teleconferencing	*Remote attendance -* Participants will be given the possibility of joining the UN Environment Assembly meeting remotely, thus emissions linked to in-person	Calculation of the potential air travel GHG emissions prevented thanks to the provision of remote connection facilities: - UNON Conference Services Unit will be asked to provide the records of participants that joined the meeting remotely.

	meeting attendance could potentially be reduced by this initiative.	- Based on the data collected on non-resident participants attending the Assembly, their average attendance emissions will be calculated (including air travel, accommodation, local transport, and food emissions). This average figure will be used to estimate the potential emissions of all international participants who joined the meeting remotely. The average value will be multiplied by the number of participants based out of Kenya, which accessed the conference online. [No. of international potential participants x average emissions related to international participants]. - The average local transport distance (40 km) will be used to estimate the emissions associated with Kenya based potential participants, which accessed the conference online [No. of Kenya based potential participants x average local travel emissions (see section 3.2 above)]. *Note:* - *The general assumption is that all participants who joined remotely would have attended the meeting in person if online connection facilities were not offered.* - *An indicative number of online participants is taken from the live webcasts statistics of the Assembly's videos.*
Waste	*Waste measurement* - Physical audit of the waste generated during the UN Environment Assembly.	- If possible, separate collection of the Assembly waste by source through arrangements with UNON and the cleaning providers "Parapet" to obtain an accurate measurement of the Assembly's waste generation and calculate the amount of recycled waste. - Include the figures of prevented waste (plastics, paper, etc.)
Decorations	*Avoiding Unnecessary Conference Waste*	- All decorations and set up should be chosen to have minimum environmental impacts. Sustainable choices are the use of plants instead of flowers, either to be replanted later or to be given back to the plant nursery after the Assembly in case rented.

		- When possible, banners should be avoided and replaced with projectors in different areas of the Assembly; should there be printed banners, preference will be given to green walls, recyclable and more sustainable material and to less pigment-intensive colours. - The United Nations Environment Assembly will aim to avoid waste by reusing the material used either internally or by donating it to social projects/communities in Kenya. In this case, UN Environment Programme will liaise with UNON Property Management Unit (PMU) to make this possible. - UN Environment Communication Division selected the following material based on sustainability principles, whenever possible: o Green walls can be used as backgrounds for the main conference rooms as well separators between different sections o Decorations can be made of Oriented Strand Board (OSB)[13] and then reused by the organization. This material is made of thin veneers or plies of softwood or hardwood made from waste of wood production.

[13] Also known as flakeboard, OSB is made out of compressed layers of wood strands (flakes).

3. Communication and Visibility

Participants' awareness about the United Nations Environment Assembly's carbon neutrality and green features is raised through appropriate and continued communication conveyed by all UN Environment Programme staff directly involved in the Assembly's organization and hosting, from top management to the event organizers. The following actions will be taken:

Prior to the Assembly

- A briefing note was shared with the UN Environment Secretariat of Governing Bodies in charge to brief their Secretary on UN Environment Assembly greening initiatives. The key points were used by the Secretary during his opening speech to inform the delegates.
- A week prior to the Assembly, all participants will receive a survey link to include their travel and accommodation information required for the event's GHG emissions calculation. An explanatory note will be provided for participants to be aware of and understand the initiative.
- UN Environment Programme top management will be kindly asked to highlight the greening Assembly initiative during the opening remarks, including some details on its green features and carbon neutrality. When the information is conveyed through top management, it is deemed to be of greater effectiveness as it reaches the attention of a larger audience.
- At least two weeks prior to the Assembly, organizing a brown bag meeting to brief UN staff about the green initiatives so that staff attendance is more likely (as the days immediately before the event tend to be quite busy for all staff).

During the Assembly

The participants will be provided with brief guidelines on their potential contribution to greening the event by practicing environmental sustainability and this might be done through:

- A video, produced by the Communication Division, in collaboration with the Economy Division/SUN.
- The United Nations Environment Assembly official website will give visibility and provide information on the green features of the event.
- Use of social media e.g. twitter.
- Special feature on the United Nations Environment Assembly website on how to green the Assembly (e.g. sustainable commuting).
- Meetings with side event's organizers informing them of the green initiatives and seeking for their support in sensitizing participants. The Secretariat of Governing Bodies will be kindly requested to make the link with the side events' organizers.
- Awareness campaigns on good practices to be adopted both during the Assembly and in our daily lives.
- Communication on the green efforts made for the event will also be displayed during the Assembly.

After the Assembly

- All Assembly participants and UN Environment Programme staff will be informed of the overall environmental performance of the Assembly (GHG emissions, waste generation, resources savings, etc.). The results will be published online and sent by email to all participants and staff.
- The United Nations Environment Assembly greening methodology and initiatives will be shared with other UN organizations for their replication. The SUN Facility will support the dissemination of the event results across the UN system to lead by example, and will use this as a base of its work with UNFCCC.

4. Reporting

In the weeks following the Assembly, a report will be produced including the sustainability initiatives carried out and the results achieved. The methodology outlined in section 2 will be used to obtain the GHG emission results and the overall Assembly 's footprint. This report was based on the methodology put in place for the Second United Nations Environment Assembly, which will help measure and compare the Assemblies' environmental footprint.

Annex 2 – UNFCU CERs purchase certificate for the Assembly

United Nations
Climate Change Secretariat

Certificate

presented to the

United Nations Federal Credit Union

to confirm the voluntary cancellation of

5,250 Adaptation Fund Certified Emission Reductions

from the Clean Development Mechanism

for the purpose of

compensating the greenhouse gas emissions
from the second meeting of the United Nations Environment Assembly,
held from 23 to 27 May 2016, at UNEP Headquarters, Nairobi, Kenya

while supporting mitigation and adaptation projects.

Christiana Figueres
Executive Secretary

Climate Neutral Now

Note: Most of the CERs used to offset the Third UN Environment Assembly were used from the remaining CERs offered by UNFCU for the Second UN Environment Assembly