THE CARBON FOOTPRINT OF
ECLAC SUBREGIONAL HEADQUARTERS FOR THE CARIBBEAN:
MOVING TOWARDS A CLIMATE NEUTRAL STRATEGY

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Executive Summary

In combating climate change the United Nations Secretary-General, Mr. Ban Ki-Moon, has resolved that the United Nations should lead by example. He mandated that the United Nations system develop a climate-neutral approach for its premises and operations. Accordingly, this study presents the first attempt to capture data on the carbon footprint of the Economic Commission for Latin America and the Caribbean subregional headquarters for the Caribbean (ECLAC-POS).

The methodology for this study follows that employed by the United Nations Environment Programme (UNEP) in their annual carbon footprint analysis of the United Nations system, as well as applying emission factors from the Greenhouse Gas (GHG) Protocol accounting tool. The results generated from this methodological approach revealed that in 2009 the operational activities of ECLAC-POS produced a total of 1,325 tonnes of CO_2eq emissions, which equates to roughly 29 tonnes of CO_2eq per staff member. This figure was disaggregated into four activity components with the biggest portion resulting from the procurement of goods and services (65 per cent of total emissions) followed by the direct use of energy (21 per cent), travel (14 per cent) and water consumption (only 1 per cent). Carbon footprint data from 2004, showed that GHG emissions from the activities conducted in 2009 were 21 per cent larger (despite a 39 per cent reduction in electricity consumption), representing an increase of 277 tonnes of CO_2eq emissions. An increase in the procurement of goods and services and air travel contributed to this larger footprint in 2009.

By identifying the activities that are responsible for the highest emissions, the analysis by extension identifies the activities with the greatest scope for implementing GHG emission reduction measures. Within this context, the study recommends that strategies to reduce GHG emissions focus on:

(a) Strengthening and promoting existing reduction efforts.

(b) Instituting efficient energy use practises.

(c) Encouraging lower carbon travel practices.

(d) Implementing green meetings.

(e) Adopting sustainable procurement measures.

Notwithstanding the structural and building maintenance constraints faced by ECLAC-POS, there are many initiatives that could be implemented to reduce emissions associated with the activities of the organisation. In order to achieve effective implementation of these measures and to realize subsequent meaningful impact, the following factors need to be considered:

(a) Identifying roles and responsibilities among staff and securing commitment from senior management in the implementation of the GHG reduction measures.

(b) Benchmarking and goals setting alongside implementation, which would involve calculating the carbon footprint of ECLAC-POS on an annual basis.

(c) Regular staff engagement and awareness raising of the reduction measures and their impact on GHG emissions.

(d) To make accessible useful United Nations guidance material and resources to help kick start this process.

By focussing on these five reduction areas and following the considerations outlined, ECLAC-POS can gain a sure footing on the path to climate-neutrality.

I. INTRODUCTION

The phenomenon of climate change, cited as perhaps the most defining issue of our time, is affecting the Earth because we release more GHG into the atmosphere than can be absorbed by ecosystems. Scientists have alerted the international community that we have less than 10 years to halt the global rise in GHG emissions if we are to avoid catastrophic consequences. For this reason, the United Nations Secretary-General, Mr. Ban Ki-Moon, has made climate change a top priority and is determined that the United Nations should lead by example.

In October 2007, the United Nations Chief Executive Board (CEB) adopted a Climate Neutral Strategy for the United Nations. This strategy commits all United Nations agencies, funds and programs to calculate their GHG emissions, to reduce their emissions of GHG to the extent possible and to prepare required data and economic analysis for purchasing offsets for remaining emissions[1].

This report represents the first attempt to calculate the GHG emissions of ECLAC-POS. The total set of GHG emissions generated by the activities of the organization can also be referred to as the carbon footprint. The results of this assessment, or the carbon footprint of ECLAC-POS, are disaggregated by activity components such as purchased electricity, water, travel and goods and services. These components will identify the activities that are responsible for the highest emissions and hence, have the greatest scope for implementing GHG emission reduction measures.

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[1] UNEP (2010) Climate friendly buildings and offices: a practical guide.

II. METHODOLOGY FOR ESTIMATING GREENHOUSE GAS EMISSIONS

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A. THE SCOPE

The Greenhouse Gas Protocol[2], is the most widely used international accounting tool for governments and business leaders to understand, quantify and manage GHG emissions. It defines three scopes that help to delineate direct and indirect emission sources, improve transparency and avoid double counting of emissions (see Figure 1). Scope 1 refers to direct GHG emissions, which occur from sources that are owned or controlled by the organisation (for example boilers, generators and company vehicles). Scope 2 refers to indirect GHG emissions from the generation of purchased electricity consumed by the organisation. Scope 3 emissions are a consequence of the activities of the organisation, but occur from sources not owned or controlled by the organisation (for example commercial airline business travel).

Figure 1
Depiction of Greenhouse Gas emissions protocol "Scope"
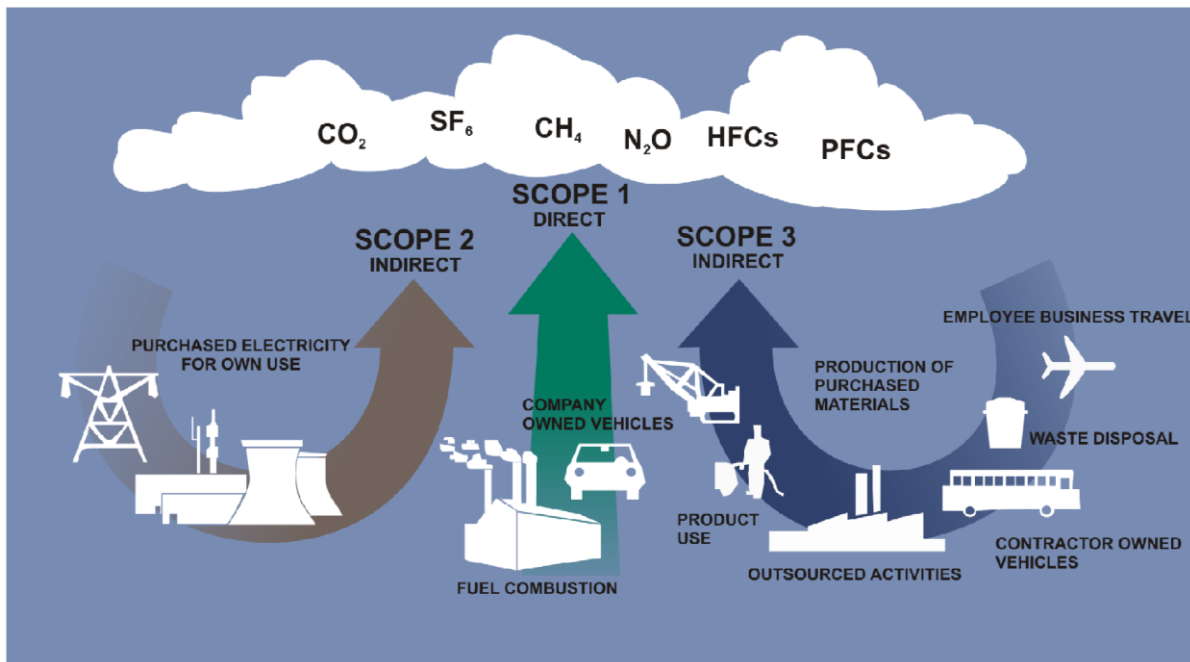
Source: GHG Protocol, Corporate Accounting and Reporting Standard (Revised Edition), adopted from NZBCSD 2002

The activities included in this carbon footprint analysis include those which fall under Scopes 1, 2 and 3 emissions. Table 1 presents the common minimum boundary of activities excluded in the annual carbon footprint reports of the United Nations system, published by the United Nations Environment Programme[3] (UNEP). It also shows the areas and the extent to which this carbon footprint analysis of ECLAC-POS differs from that of the minimum boundary.

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[2]   http://www.ghgprotocol.org.

[3]   Access the most recent report here: UNEP (2011) Moving towards a climate neutral United Nations: the United Nations system's footprint and efforts to reduce it.

The boundary of activities included in the carbon footprint analysis of ECLAC-POS versus the common minimum boundary

Common minimum boundary *(excluded activities)*	*Boundary of this analysis* *(included activities)*
1. Emissions associated with decisions for which individual staff members are responsible and those which relate to their personal sphere, for example emissions from personnel commuting to and from the work place.	• Emissions from personal commuting to and from the work place are included.
2. Military activities conducted under the auspices of the United Nations.	**Not Applicable**
3. Emissions from projects implemented by external entities.	**Not Applicable**
4. Emissions due to couriers and mail.	• Emissions due to couriers and mail are included.
5. Embodied carbon in products or equipment used by the United Nations such as food, beverages, paper and computers.	• Emissions from the production of all the goods and services purchased by ECLAC-POS, including food, beverages, paper and computers among many others[4].

B. GENERAL APPROACH

The general approach for calculating the carbon footprint is presented in Figure 2. The first step involves identifying the activity data and compiling it in the required unit and for the required time period. For example, the total distance travelled by air in 2009, expressed in kilometres (km), is obtained. This value is then multiplied by the emission factors[5] for each of the six Kyoto Protocol gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydroflourocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexaflouride (SF_6). The emission factors for CH_4, N_2O, HFCs, PFCs and SF_6 take into account the Global Warming Potential (GWP) of each of these GHGs to create a common comparable unit known as CO_2 equivalent (e.g, tonnes CO_2eq of CH_4). For each emission category, the CO_2eq of all relevant GHG are added, to find the total emissions. For example, in the case of electricity consumption, the CO_2eq of CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 emissions are summed up to yield the total emissions. The total emissions from each activity are then added together to give the final carbon footprint.

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[4] For the complete list of goods and services accounted for in the analysis see Annex 1.
[5] Emission factors are coefficients that describe the amount of a specific GHG that is released from doing a certain activity, such as the mass of CO_2 released by driving a vehicle for a kilometre, or by burning a tonne of fuel in a boiler.

Figure 2
General method for calculating GHG emission factors

Example activity data		
	X CO$_2$ emission factors → CO$_2$ emissions	
✓ Amount of electricity consumed	**X** CH$_4$ emission factors → CH$_4$ emissions in CO$_2$ eq	
✓ Number of kilometres travelled by plane	**X** N$_2$O emission factors → N$_2$O emissions in CO$_2$ eq	
✓ Amount spent on hotel and catering	**X** HFC$_S$ emission factors → HFCs emissions in CO$_2$ eq	
	X PFC$_S$ emission factors → PFCs Emissions in CO$_2$ eq	
	X SF6 emission factors → SF6 emissions in CO$_2$ eq	

Total CO$_2$ eq emissions (tonnes)

Activity data were collected for the year 2009. A number of GHG reduction measures had been implemented in the office from 2005 onwards. The baseline data from 2004 were collected to try and ascertain the nature of the impact, if any, these measures had on the carbon footprint. Results from both years are presented in the analysis.

C. EMISSION SOURCES

1. Purchased electricity

Trinidad and Tobago Electricity Commission (T&TEC) utility bills were collected to identify the amount of electricity purchased (in the billing unit for energy delivered to consumers by electric utilities known as kilowatt-hour (KWh)) during 2004 and 2009. The GHG Protocol calculation tool entitled "GHG emissions from purchased electricity" (http://www.ghgprotocol.org/calculation-tools/all-tools) was used to convert these KWh values into CO_2eq emissions (tonnes of CO_2eq).

2. Travel

(a) Missions: mission reports and records were accessed to determine the number of flights and flight routes taken in 2004 and 2009. The flight carbon footprint calculator compiled by Carbon Footprint Ltd (http://calculator.carbonfootprint.com/calculator.aspx?tab=3) was used to get an estimate of CO_2eq emissions (tonnes of CO_2eq) associated with all journeys undertaken.

(b) Staff commute: a questionnaire was administered to collect information on the commuting habits of staff including mode of transport used, type of car and distance travelled (Annex 2). This information was then entered into the car carbon footprint calculator compiled by Carbon Footprint Ltd (http://calculator.carbonfootprint.com/calculator.aspx?tab=4) to get an estimate of CO_2eq emissions (tonnes of CO_2eq) associated with these commuting patterns. The questionnaire was administered in 2011 and the data used as proxy for both 2004 and 2009.

(c) Office car: mileage records were accessed for the previously owned office vehicle (2002 Toyota Camry PBG 4048) for the years 2005 to 2010. The mileage data (in km) were entered into the car carbon footprint calculator compiled by Carbon Footprint Ltd. (http://calculator.carbonfootprint.com/calculator.aspx?tab=4) to get an estimate of CO_2eq emissions (tonnes of CO_2eq) associated with the use of this vehicle.

3. Water

Water and Sewerage Authority (WASA) utility bills were collected to quantify the amount of water consumed (in m^3) by ECLAC-POS in 2004 and 2009. The carbon emission factor for tap water taken from the report "Sustainability Indicators 2009-2010" (http://www.water.org.uk/home/policy/publications/archive/sustainability/2009-10-report), which was published by the United Kingdom's water industry body was used to calculate CO_2eq emissions (tonnes of CO_2eq) associated with the consumption of tap water.

4. Procurement of goods and services

GHG conversion factors provided by the United Kingdom Government Department for Environment, Food and Rural Affairs (DEFRA) (http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/) were used to calculate the CO_2eq emissions (tonnes of CO_2eq) associated with the goods and services procured by the organisation in 2004 and 2009. Data from ECLAC-POS procurement records (amount spent by product category in GBP) were organised and aligned to the product categories defined in the DEFRA emissions calculator and used to determine the final CO_2eq emissions.

D. DATA AVAILABILITY

Lack of data and missing records presented a challenge in conducting this exercise. A number of approaches were therefore undertaken to overcome this data deficiency, specifically:

(a) No data on the mileage of the office vehicle for 2004. An average figure was calculated based on the mileage from years 2006, 2007, 2008 and 2009 and used as proxy for 2004.

(b) No staff commuting data existed for either 2004 or 2009. A questionnaire was compiled to collect this data from staff in 2011. This figure was subsequently used as proxy for both years.

(c) The "low-value payment" procurement file for 2004 could not be located, so the data were extracted from various other procurement and travel files. This process was time consuming and increased the risk of double-counting.

In the case of water, goods and services, emission factors were not available for Trinidad and Tobago. In this instance, related emission factors of the United Kingdom were used.

III. THE CARBON FOOTPRINT OF ECLAC – PORT OF SPAIN

A. TOTAL GREENHOUSE GAS EMISSIONS

"In 2009, the organizations that make up the United Nations system were collectively responsible for 1.7 million tonnes of carbon dioxide equivalents. United Nations peacekeeping operations emitted an additional one million tonne of carbon dioxide equivalents."[6]

In 2009 the operational activities of ECLAC-POS produced a total of 1,325 tonnes of CO_2eq emissions, which equates to roughly 29 tonnes of CO_2eq per staff member[7]. Figure 3 shows the breakdown into four main activity categories, which together account for Scope 1, 2 and 3 emissions. The biggest component is related to the procurement of goods and services which accounts for 65 per cent of total emissions. The direct use of energy, only electricity in this case, makes up the second largest part of the footprint at 21 per cent. The next big contribution to the footprint comes from travel (14 per cent) and the smallest category, water consumption, is responsible for only 1 per cent. Together, these emissions equate to approximately 0.2 per cent of the total CO_2eq emissions of the United Nations system in 2009.

Figure 3
Breakdown of the total carbon footprint of ECLAC-POS in 2009

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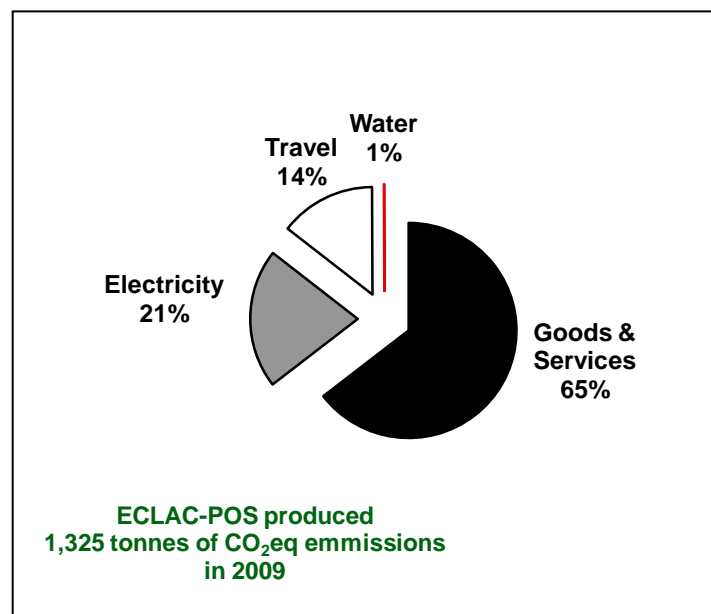
[6] UNEP (2010) Moving towards a Climate Neutral United Nations: the United Nations system's footprint and efforts to reduce it.

[7] NOTE: This figure is almost 3.5 times higher than the 8.3 tonnes CO_2eq per staff capita calculated for all United Nations staff in 2009 (see UNEP 2010 publication). The reason being that the analysis presented in this report includes: (i) a greater number of activities, such as emissions associated with personal commuting (see Table 1) and; (ii) a more detailed accounting methodology, including emission factors, for the procurement of goods and services. This however, should not deter ECLAC-POS from using the results of this analysis as a guide to implementing greening measures across the office. In order for future analysis to be comparable at the United Nations level, it is recommended that the common minimum boundary established by the United Nations be followed.

B. 2004 VS. 2009 GREENHOUSE GAS EMISSIONS

A look at the available[8] 2004 CO_2eq emissions data shows apparent differences in the composition of the activity categories when compared to 2009 (see Figure 4). In 2009 the procurement of goods and services was 45 per cent higher than in 2004, the travel footprint was also 34 per cent larger. Conversely, electricity consumption was reduced by 39 per cent and although there was a slight increase in the use of water, it was minimal. In total, the carbon footprint was 21 per cent larger in 2009, up by 277 tonnes of CO_2eq emissions from 2004.

Figure 4
A comparison of ECLAC-Port of Spain carbon footprint: 2004 vs. 2009
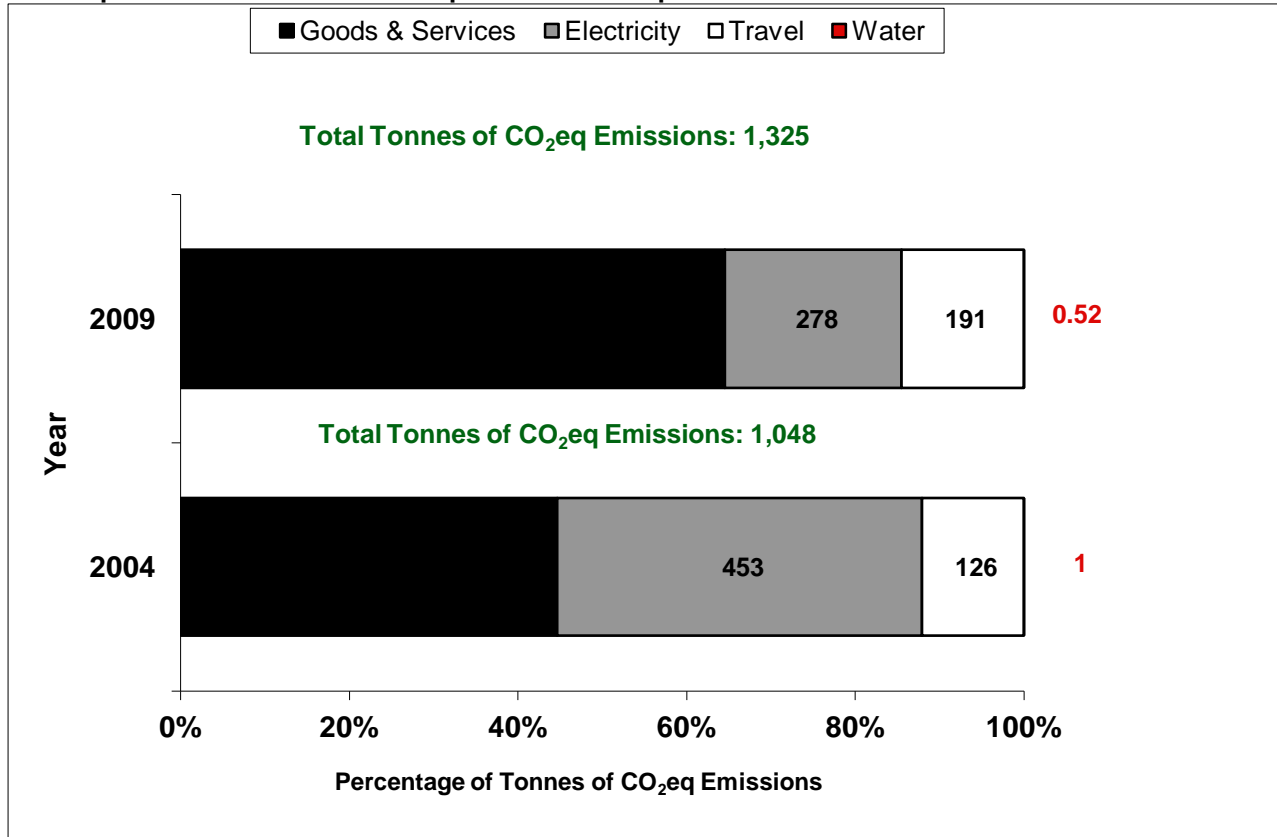
The reduced consumption of electricity in 2009 can be attributed to a couple of measures that were instigated in 2005: (a) turning off air conditioning units each night, as well as during weekends and United Nations holidays; (b) switching off lights (except those for emergency exits, staircases and corridors) each night.

The increased emissions from goods and services, as well as travel in 2009, is the result of executing additional externally funded projects which required supplementary resources such as external technical support, office supplies and communication services. It also involved convening a number of large regional level expert group meetings and training workshops which relied on transport, accommodation, and catering services. These activities are reflected in figure 5 where the top five goods and services, or roughly 90 per cent of the total, purchased by ECLAC-POS in 2004 and 2009 are

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[8] Data were either not available or incomplete for CO_2 emissions associated with staff commuting and the office car in 2004. These are components of the total travel footprint of ECLAC-POS.

presented. Road transport[9], air transport[8], hotels and catering, and research and development[10] were the goods and services procured most frequently in both years. Other service activities[11] in 2004, office machinery and computers in 2009, were the smaller procurement components in these two years respectively.

Figure 5
Composition of the carbon footprint of the goods and services procured by ECLAC-POS, 2004 and 2009
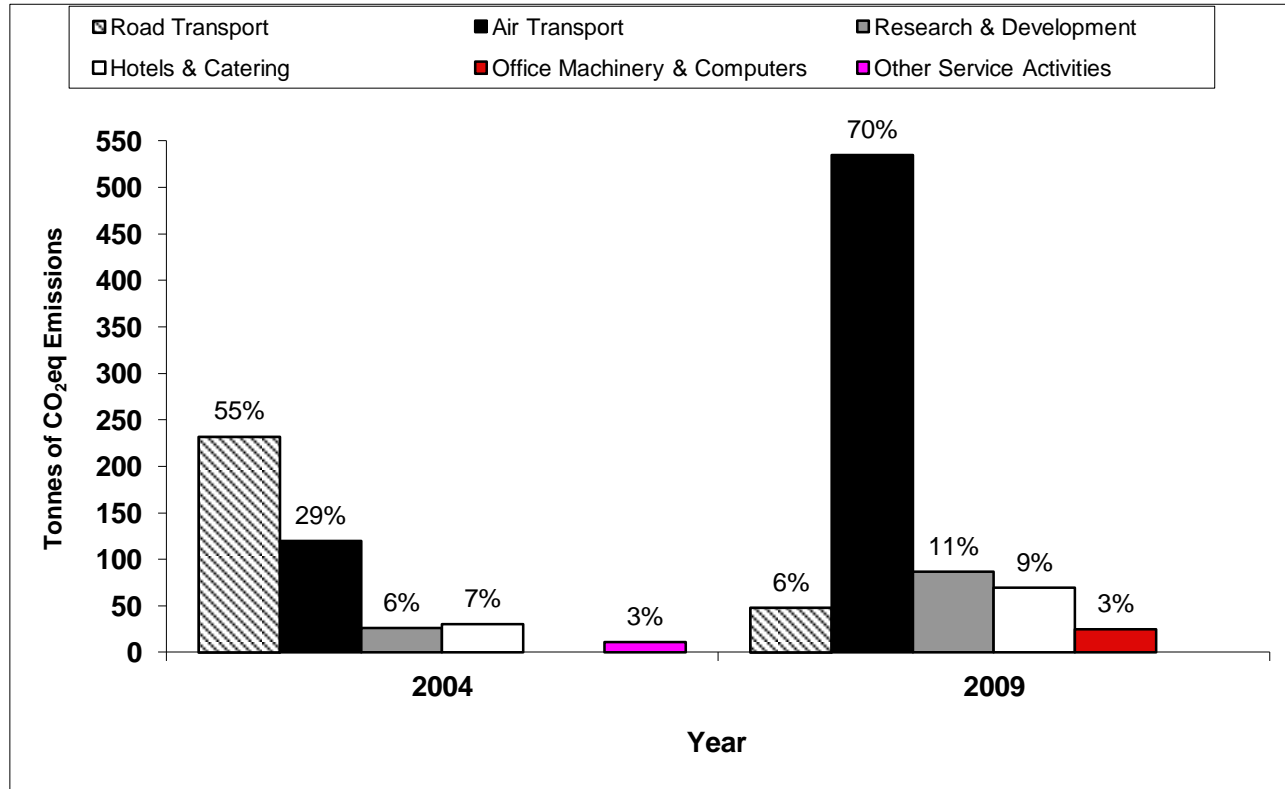
The use of air transport services by ECLAC-POS was almost 80 per cent greater in 2009 than in 2004. Conversely, the hiring of road transportation services was reduced by 80 per cent. Although not nominal, there was also an increase in the use of research and development services and hotels and catering.

Figure 6 highlights the different components that make up the GHG emissions associated with travel undertaken by ECLAC-POS. Work missions, of which all involved air travel, are the greatest contributors to the travel footprint. In 2004 and 2009, missions were responsible for approximately 70 and 80 per cent of the carbon footprint travel. The fact that air travel is the most energy intensive mode of transport explains the high footprint value.

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[9] All services related to transport for hire and use (including public transport services). Does not include fuel consumption.

[10] Research and experimental development services on natural and social sciences, humanities and engineering.

[11] Cleaning, servicing and installation of equipment, security, maintenance and repairs, technical support and other miscellaneous duties.

Commuting to the office is the second largest component of the footprint. Although it is not possible to determine the exact difference between the two years, it is unlikely that a huge disparity would exist, since the 2011 figure is used as proxy for both 2004 and 2009. Despite a large difference between the two years in the number of staff commuting to ECLAC-POS, the transport trend in Trinidad and Tobago over the last seven years has been one of increased car ownership. As a result, one could speculate that if a difference between 2004 and 2009 did exist, 2009 would very likely have a greater emissions value associated with staff commuting.

Overall, the use of the office car has minimal impact on the travel footprint of ECLAC-POS (0.003 per cent).

Figure 6
Composition of the carbon footprint of travel undertaken by ECLAC-Port of Spain, 2004 and 2009
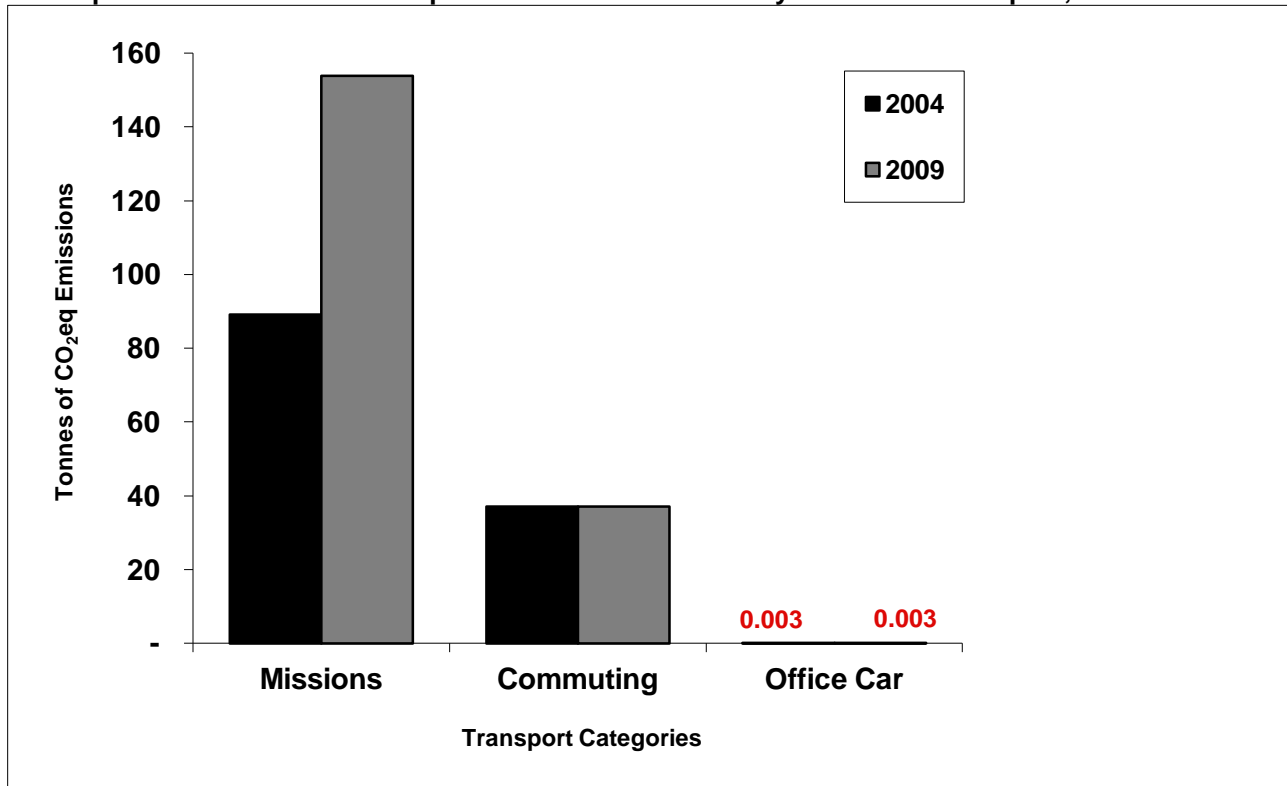
C. CONCLUSIONS

The Carbon footprint analysis has served to highlight the activities of ECLAC-POS which generate the highest GHG emissions. Overall, the results suggest that activities in 2009 produced a larger carbon footprint than those of 2004 even though there was a reduction in emissions in electricity use. This may well have been influenced by the increase in GHG emissions from procurement and travel as a result of the increased focus on implementation of donor-funded projects. These projects, although contributing to the organisation's mandate in the Caribbean subregion, do involve increased activity and as such, efforts should be made to implement them more sustainably.

The results indicate that it may be necessary to sensitise staff to cooperate in taking action to reduce GHG emissions. Of particular importance is implementing GHG reduction measures in the areas of electricity use, air travel and the consumption of goods and services in order to place ECLAC-POS on

a climate neutral strategy. These areas will therefore be the focus of implementing GHG reduction measures in ECLAC-POS. Furthermore, calculation of the Carbon footprint for 2010 onwards should be carried out so as to monitor the trends in GHG emissions. This will ensure that the most appropriate action is always undertaken.

IV. REDUCING GREENHOUSE GAS EMISSIONS: NEXT STEPS

A. EXISTING REDUCTION EFFORTS

The following measures have been gradually introduced to ECLAC-POS since 2005. Although primarily implemented to cut back on costs, these measures have resulted in reduced electricity consumption, paper usage and recyclable waste going to landfill. It therefore shows that reducing resource consumption results in lower financial costs.

(a) Turning off air condition units each night, as well as during weekends and United Nations holidays.

(b) Switching off lights (except those for emergency exits, staircases and corridors) each night, as well as during weekends and United Nations holidays.

(c) Installation of printers with the capability to print double-sided.

(d) Default print settings on computers set at double-sided.

(e) Correspondence with Government focal points is now emailed or faxed.

(f) Availability of ECLAC reports online and their circulation via e-mail has been increased.

(g) Windows covered with anti-shatter film.

(h) Recycling services for plastic, glass, paper and cardboard established.

B. NEXT STEPS

There are other measures, which could be implemented, to further enhance the existing GHG reduction efforts. However it is necessary to be aware of some of the factors hindering their implementation which include:

(a) The condition of the office building. ECLAC-POS currently occupies a building that requires major renovations in several aspects, specifically: (i) an outdated, centrally controlled air conditioning system which prevents the operation and control of temperature within each working space. For example, when a member of staff is in the office outside of working hours and needs to use air conditioning, the system operates across the entire floor, rather than being operational only in their office and; (ii) the lighting system also has a similar set-up, as lights are operated across sections on a floor rather than in workspaces alone. Due to budgetary constraints and the anticipation of relocating to a more modern office space, with more energy-efficient capability, the organization has had to be reticent in upgrading these systems.

(b) Lack of general awareness of the options for implementing environmentally sound processes, along with the motivation of staff to change their behaviour and actively participate in GHG reduction efforts.

Overcoming these obstacles will be the key to the successful implementation of any greening policy or carbon neutral strategy for ECLAC-POS.

In order to therefore build on existing carbon reduction efforts and truly place ECLAC-POS on a climate neutral path, a number of other measures will need to be implemented. The sections below

identify the priority areas for action, along with the associated implementation measures and guidance materials, to help with the ECLAC-POS greening process.

C. EFFICIENT ENERGY USE

Despite the 39 per cent reduction in energy consumption in 2009 compared to 2004, the contribution of GHG emissions associated with electricity consumption in the office remains large (a fifth of the total carbon footprint). Implementing energy efficiency measures that result in the reduction of energy consumption will therefore have a considerable impact on the footprint and will require the consideration of (a) energy supply and distribution, (b) lighting, (c) ventilation and air conditioning, (d) building envelope, (e) office equipment and (f) GHG compounds and refrigerants.

In identifying the measures outlined below, special consideration was given to the uncertainty over the length of the organization's tenure at the current office location and therefore limited opportunities for improvement. As a result, the short-term measures listed are the most simple and low-cost.

1. Short term

(a) Until the air conditioning system is upgraded or ECLAC-POS relocates to a more modern, energy-efficient building, dress appropriately to stay warm.

(b) Change the current thermostat setting on the air conditioning system (consider increasing the temperature by 1 or 2° C).

(c) Ensure that regular and routine maintenance and inspections of the ventilation and air conditioning systems are undertaken, especially to prevent blockage or obstruction of vents and grilles.

(d) Switch off the air conditioning system and the lights on your floor when you are the last person to leave the office at the end of the day.

(e) Ensure each office is arranged in a way that makes the best use of natural light.

(f) Don't switch on equipment until you need it.

(g) When electrical items are not in use, switch off at the plug socket and eliminate phantom electricity consumption due to standby modes.

(h) Ensure all equipment and systems are not operating during periods of non-activity, for example night-time, weekends and holidays. Establish a policy to switch off all computers, printers, copiers, shredders, scanners and all other appliances at the end of each working day.

(i) Activate the energy saving mode in your computer.

(j) Screensavers do not save energy so if you are going to be away from your computer for over an hour, switch it to sleep mode or turn it off.

2. Medium-long term

(a) Establish procurement policies to only purchase energy-efficient equipment.

(b) When the opportunity for lease renegotiation or a new office tenancy arises, implement a green lease[12] agreement which includes the establishment of a system which harnesses renewable energy.

(c) Formalise and institutionalise the above action points, and more, into an energy efficiency and building management policy for ECLAC-POS.

3.   Useful resources

(a) UNEP (2010) Climate friendly buildings and offices: A practical guide.

(b) UNEP (n.d) Energy efficiency in buildings: Guidance for facilities managers.

(c) Read other literature on reducing greenhouse gas emissions from buildings and the Interagency Network for Facility Managers from the Greening the Blue website.

D.   GREEN TRAVEL

All forms of travel are responsible for roughly 55 per cent of the ECLAC-POS carbon footprint and represent a major cost to the organization. At the same time, travel is an essential means by which ECLAC-POS delivers its mandate and cannot always be avoided. As a result, a combination of the three approaches to reducing GHG emissions must be considered in the establishment of a green travel policy for ECLAC-POS:

(a) Travelling less.

(b) Travelling more efficiently and

(c) Carbon offsetting.

The following measures have therefore been identified as critical components of a green travel policy:

1.   Short term

(a) Use teleconferencing, videoconferencing, and e-mail where possible to reduce the need for travel, especially flights.

(b) Limit staff travel to those that are essential to achieving the purpose of the mission. Bundle travel so that a one-person mission can accomplish more instead of sending additional colleagues.

(c) Use local staff instead of staff from headquarters, thereby substituting a long-haul travel from headquarters, with a short-haul trip at the local level.

(d) Invite more regional than international experts, maybe considering the international experts join the meeting via videoconferencing where possible.

(e) Identify cost-effective measures that allow staff to stay at the destination in between meetings.

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[12] Defined by UNEP in the publication "Climate friendly buildings and offices: a practical guide" (2010) as: *"a lease between the landlord and tenant with an additional set of schedules compared to "normal" lease contract, such as a contractual basis for monitoring and improving energy performance, mutual obligations for both tenants and owners to achieve resource efficiency targets (e.g. energy, water, waste) and to minimize environmental impacts"*. See same UNEP publication for guidance on implementation.

(f) Use the most efficient mode of travel and when possible cut back on air travel.

(g) Travel in economy class instead of business class.

(h) Give preference to airlines with modern aircraft fleets.

(i) Give preference to the most direct route. Avoid, if at all possible, too many stops as well as long layovers.

(j) Stay at the hotel where the meeting is being hosted or within walking distance if possible.

(k) As done by some airlines calculate and inform travellers of the carbon footprint of their travel when issuing tickets, and provide them with a link to information on carbon offsetting.

2. Medium - long term

(a) Establish a carbon offsetting scheme[13] for ECLAC-POS.

(b) Formalise and institutionalise the above action points, and more, into a green travel policy for ECLAC-POS with a check-list that staff can use as a guide when they plan a mission.

3. Useful resources

(a) UNEP (2012) Making policies work for sustainable travel.

(b) UNEP (2010) Sustainable travel in the United Nations.

(c) Read case studies of how different United Nations organizations have reduced the environmental impact of their travel.

E. GREEN MEETINGS

Meetings are also an essential means by which ECLAC-POS delivers its work output. The convening of meetings requires a range of goods and services linked to travel, hotels and catering, IT equipment, furniture and stationary, to name but a few. Reducing the Carbon footprint of meetings therefore requires integrating environmentally sustainable principles into the different facets of the event including: (a) destination and venue selection, (b) accommodation selection, (c) catering services selection, (d) designing and reproducing communication and event material, (e) local transport and mobility, and (f) exhibitions. The action points outlined below thus represent a starting point for the development of a Green Meeting Policy for ECLAC-POS:

1. Short term

(a) Consider if the event is absolutely necessary. Is it possible to obtain the same results by alternative design? (for example, can you hold smaller meetings in different regions in combination with videoconferencing or is it possible to plan the event back-to-back with another larger one?)

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[13] For ideas check out the carbon offsetting activities implemented by the:
Convention on Biological Diversity: http://www.greeningtheblue.org/case-study/cbd-planting-trees-offset-emissions
UNEP: http://www.greeningtheblue.org/case-study/unep-offsetting-and-achieving-climate-neutrality
http://www.greeningtheblue.org/case-study/uneps-climate-neutral-fund
World Bank: http://www.greeningtheblue.org/case-study/world-bank-offsetting-and-setting-example

(b) Use teleconferencing or videoconferencing whenever possible.

(c) For meetings held outside of the ECLAC-POS office, choose a centrally located, easily accessible venue to keep transport needs minimised.

(d) Identify and promote the use of green certified hotels or hotels with eco-friendly practices to meeting participants.

(e) Walk or take public transport to meetings. If driving is your only option, consider carpooling.

(f) When selecting caterers give preference to local and seasonal produce; organic products as well as, vegetarian, non-processed food and fair trade products.

(g) Ensure that the caterer knows the exact number of participants in time, to avoid food waste.

(h) Request caterers to eliminate the use of packaging in the presentation of food.

(i) Ban the procurement of shark and all other endangered fish, including grouper. The United Nations is assiduously working to save these commercially exploited fish from extinction and it is our responsibility to ensure ECLAC-POS is supporting these efforts[14].

(j) Ban the procurement of individual water bottles. Use bulk dispensers and jugs to serve water.

(k) Eliminate the use of all plastic utensils, cups and plates. Use metal cutlery, ceramic plates, cups and glasses. When plastic is used ensure a separate bin is used to collect this waste and recycle it.

(l) Continue pre- and post-meeting communication with participants via e-mail.

(m) Impress upon participants that printed copies of meeting documents will not be provided at the meeting. Advise the participants that all documents will be made available for viewing and downloading from ECLAC-POS website. It is therefore advisable that they also use their laptop, tablet or other mobile device to access the documents during the meeting.

(n) When it is necessary to print documents, ensure they are prepared in a format that saves the use of ink and paper. For example, minimise the text to reduce the number of pages and choose fewer colours. Print multiple sides on one page.

(o) Edit working documents on the computer so as to avoid wasting paper, ink and energy. Only print the document when finalised.

(p) As in your office, make the best use of natural light. Ensure that lights and equipment are turned off after the meeting concludes.

(q) Alert participants of the green nature of the meeting and make them aware of their own responsibilities beforehand.

(r) Incorporate a green meeting check-list into the existing checklist used by staff when preparing for a meeting.

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[14] For more information on the status of commercially exploited shark species and the United Nations' involvement in their conservation see:
http://www.unep.org/newscentre/Default.aspx?DocumentID=2694&ArticleID=9285&l=en

2. Medium - long term

(a) Create an online registration system and meeting website so that participants can access meeting information and documents online.

(b) Explore the Integrated Sustainable Papersmart Services (ISPS) Portal[15] developed by the Meetings and Publishing Division of the Department for General Assembly and Conference Management (DGACM) and its applicability for use or replication within ECLAC-POS.

(c) Formalise and institutionalise the above action points, and more, into a green meeting policy for ECLAC-POS.

3. Useful resources

(a) UNEP (2012) Sustainable Events Guide: Give your large event a small footprint.

(b) UNEP (2009) Green meeting guide 2009: Roll out the Green carpet for your participants.

(c) Integrated Sustainable Papersmart Services (ISPS) Portal.

F. SUSTAINABLE PROCUREMENT

The delivery of effective and quality work outputs from ECLAC-POS is heavily dependent on accessing and using numerous goods and services. In 2009, the procurement footprint alone accounted for 65 per cent of the total carbon footprint. There is therefore a strong need to adopt sustainable procurement measures in order to reduce the carbon emissions associated with consuming goods and services. In addition, through the purchasing power of ECLAC-POS, there is an opportunity to leverage the local market to produce more sustainable goods and services. This can be achieved by establishing a sustainable procurement policy that requires identifying guidelines for the areas of: (a) ICT, (b) cleaning products and services, (c) furniture, (d) stationery, (e) vehicles and (f) catering. Identifying feasible action points will not only require adopting a lifecycle approach[16], but will also involve careful groundwork and planning, including the following activities:

1. Short term

(a) Ensuring that all printing and photocopying equipment are properly maintained so as to avoid paper and ink wastage through faulty printing.

(b) Reduce the consumption of paper by: cutting back on unnecessary printing, remembering to collect printed copies from the printer, using the multiple page selection when printing, using the paper recycle box on your floor to dispose of unused printed matter, circulating documents electronically, reusing one sided printed paper, using free spaces of old paper for note-taking and reusing folders, binders and envelopes as much as possible.

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[15] The Integrated Sustainable Papersmart Services (ISPS) Portal offers an integrated approach to planning and managing meetings and documentation through strategic utilization of information technology and includes: (i) ISPS-e-Publish that serves meeting participants by transferring documents to their mobile devices; (ii) the ISPS-Media that can make documents available on tablets, flash-drives or CD-ROMS; (iii) and finally the ISPS-Print-on-demand which provides hard copies, upon request. More information available at: http://papersmart.un.org/

[16] A lifecycle approach takes into account the costs incurred by the purchasing organization over the whole life of the product from purchase, through usage and maintenance costs to disposal. It should also take into account the environmental impact of the product throughout its life.

(c) When outsourcing printing ensure that only the required number of copies for distribution is printed.

(d) Where possible, repair office equipment and furniture before replacing it.

(e) Purchase energy efficient equipment.

(f) Refill and recycle ink cartridges from printers and photocopiers.

(g) Ensure office car is well maintained to keep emissions of particulate matter at a minimum, enhance fuel efficiency and increase the longevity of engine parts.

(h) Apply the green meeting action points in the selection of catering services as outlined in page 15.

(i) Be more proactive at recycling plastic, glass, paper and cardboard waste. Use the recycling bins in the car park.

The above activities will contribute to a more efficient use of resources and a more sustainable economy.

2. Medium - long term

(a) Undertake a scoping study of the "green" market in Trinidad and Tobago. This will ensure that the final procurement guidelines are reflective of the available products, suppliers, service providers and contractors in the country.

(b) Establish and institutionalise the above action points, and more, into a comprehensive sustainable procurement policy for ECLAC-POS.

3. Useful resources

(a) UNEP, UNOPS, ILO and ITC-ILO (2011) Buying for a better world: a guide on sustainable procurement for the United Nations system.

(b) UNOPS and UNEP (2009) A guide to environmental labels: for procurement practitioners of the United Nations System.

(c) UNEP, UNDP and UNOPS (2008) Sustainable procurement: buying for a better world.

(d) UNDP (2008) Environmental Procurement: practice guide volume 1.

(e) UNEP and CSCP (2007). Saving for a brighter future: a manual for efficient lighting procurement in United Nations agencies.

(f) Individual sustainable procurement guidelines available for: ICT, vehicles, cleaning products, furniture, stationery, catering, freight forwarding, generators and batteries.

G. TAKING ACTION

1. Identifying responsibility and securing commitment

The success of any measures implemented to reduce resource consumption and GHG emissions in the ECLAC-POS office is reliant upon careful planning and preparation. Ensuring that appropriate responsibility and senior management support is in place is fundamental. An improvement cycle can then be defined and followed, as depicted in figure 7.

Figure 7
Improvement cycle diagram
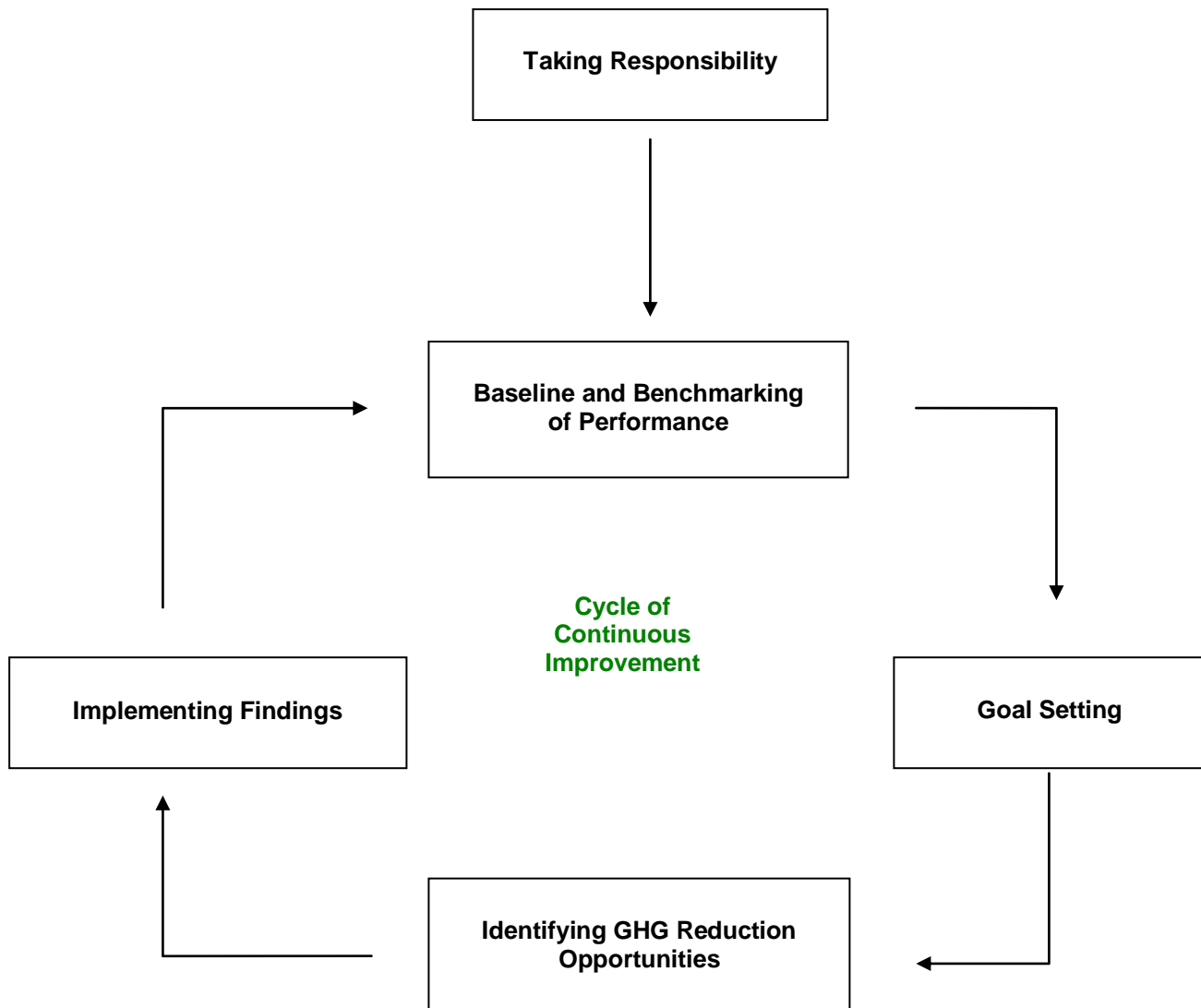
Source: UNEP (2010) Climate friendly buildings and offices: a practical guide

While an individual may be enthusiastic to manage and lead a greening initiative for the office, he/she will invariably have to liaise with a number of staff across different departments. Additionally, an understanding of how certain processes and activities are organised in the office is also essential. It is therefore recommended that a group be established to lead the initiative. This group could continue under

the existing structure of the "Working Environment Committee" or could be reformulated with a different name and a more focussed mandate. Once the structure is established and responsibilities are clearly assigned, the group can then begin to follow the cycle of continuous implementation as presented in figure 7. The success of implementing any action point will be heavily dependent on the support of all actors, which includes each and every individual in this office.

2. Benchmarking, goal setting and implementation:
"You can't manage what you don't measure"

Monitoring, analysing and reporting resource consumption are essential elements of an effective GHG management strategy for ECLAC-POS. To establish proper control over energy use and GHG emissions, it is necessary to have information on energy consumption and inputs across the office. This report thus presents the first attempt to capture that information and offers a benchmark for further action. By identifying the key energy spent and consumption items of the carbon footprint of the office, it has been possible to focus attention on where the greatest opportunity for GHG reduction exists. These results can be used as a basis for setting a series of targets, which are to be met through the implementation of action points identified above. It is recommended that data be collected on an annual basis from 2010 onwards to establish trends in the carbon footprint and monitor any changes that may occur. This will allow an opportunity for any adjustments to be made to the implementation measures of the Greening initiative for ECLAC-POS, thereby ensuring successful reduction in GHG emissions.

3. Staff engagement and awareness raising

An important component of implementing a greening initiative in the office will involve regular staff engagement, awareness-raising of the action points being implemented and their impact. Although the working environment committee will undertake much groundwork to set mechanisms in place, success ultimately lies in the willingness of staff to adopt and implement the green measures. Changing the way we use and consume resources in our daily work will require adjusting our behaviour to one that is driven by sustainable and climate-neutral principles. In this regard, a Staff Implementation Guide to Greening ECLAC-POS has been prepared. The guide not only presents some simple tips to incorporating environmentally-friendly behaviour into our work life, but also contains a "Green Charter", which staff is encouraged to sign in order to prove their commitment to reducing GHG emissions in ECLAC-POS.

Continued awareness-raising of the benefits of the greening initiatives, along with much encouragement and mutual support will be fundamental in establishing a genuine green culture in ECLAC-POS.

4. Useful resources

(a) An overview: United Nations climate neutrality offers links to various publications providing guidance on the United Nations greenhouse gas emissions and efforts to reduce them.

(b) Visit Greening the Blue: the environmental awareness raising portal of the United Nations.

(c) Find out how to become a green champion.

(d) Learn more about the work undertaken to create a more sustainable United Nations by the:

- Issue Management Group on Sustainability Management
- Sustainable United Nations Facility
- Environment Management Group

Annex 1

Goods and services included in carbon footprint analysis[17]

	Goods and Services - Categories
1	Agriculture products
2	Air transport
3	Ancillary transport services
4	Banking and finance
5	Computer services
6	Construction
7	Education
8	Electrical machinery
9	Food and drink products
10	Forestry products
11	Furniture, other manufactured goods, recycling services
12	Health and social work
13	Hotels, catering, pubs etc
14	Industrial gases and dyes
15	Insurance and pension funds
16	Legal, consultancy and other business activities
17	Man-made fibres
18	Medical and precision instruments
19	Metal products
20	Motor vehicle distribution and repair, automotive fuel retail
21	Office machinery and computers
22	Other chemical products
23	Other service activities
24	Paints, varnishes, printing ink etc
25	Pesticides
26	Plastic products
27	Plastics & synthetic resins etc
28	Post and telecommunications
29	Printing and publishing
30	Public administration and defence
31	Pulp and paper products
32	Radio, television and communications
33	Real estate activities
34	Recreational services
35	Renting of machinery etc
36	Research and development
37	Road transport
38	Rubber products
39	Sewage and refuse services
40	Soap and toilet preparations
41	Textiles
42	Water transport
43	Wood and wood products

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[17] For more detailed information on the goods and services categories see:
http://www.defra.gov.uk/publications/files/pb13773-ghg-conversionfactors2012.xls

Annex 2

Staff commuting questionnaire

TRAVEL CARBON FOOTPRINT SURVEY
FOR ECLAC-POS

The Working Environment Committee has prepared a short survey to collect data on the commuting patterns of staff so that a Travel Carbon footprint Analysis of ECLAC-POS can be conducted. The results of this analysis will help to identify specific action points to help reduce the carbon emissions associated with ECLAC-POS and contribute to the creation of a more sustainable United Nations.

NAME:

DISTANCE & MODE OF TRANSPORT

1.   What neighbourhood or city do you commute to the office from on a daily basis?

2.   Please indicate your mode of transport: Other

        If "other" please explain:

3.   Do you use the same mode of transport every day?
        ☐   YES   ☐   NO   Please explain the difference:

TRAVEL BY CAR

4.   If you travel by car please indicate:

(a)   The year in which the car was manufactured;

(b)   The manufacturer of the car (e.g. Toyota,Nissan etc);

(c)   The model of your car (e.g. Yaris, Tiida etc);

(d)   The total number of people travelling in the car (including yourself and other friends or family members):

RETURN JOURNEY HOME

5.   Is your commute from the office back home at the end of the day undertaken in the same way (i.e. same mode of transport and same number of people in car)?

☐ YES   ☐   NO   Please explain:

THANK YOU!