UNEP

MOVING TOWARDS A CLIMATE NEUTRAL UN

The UN system's footprint and efforts to reduce it

2010 edition

This is a UNEP publication, prepared in its capacity as secretariat of the UN Environment Management Group. The publication has been produced with the support of Martineau & Co, Zoï Environment Network and Thad Mermer.

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Foreword

The United Nations has played a key role in elevating the profile of climate change on the international agenda, and continues to support Member States in their efforts to reduce emissions, strengthen adaptation and respond to this immense global challenge. Such work has a natural complement in our in-house drive to reduce the UN's own carbon footprint. What we demand of others, we must do ourselves.

From the *Cool UN* initiative that reduces summer energy use at UN Headquarters, to promoting paperless information management in Vienna and greening our peacekeeping operations – which account for more than half of all UN greenhouse gas emissions – we have embarked on a journey whose final destination is climate neutrality and an environmentally friendly UN. This report helps to chart that path.

Early in 2010, we made a commitment to move beyond an exclusive focus on carbon management to address the full range of sustainability issues. In June, we launched *Greening the Blue*, a UN-wide communications campaign. In August, we published the first-ever guide to sustainable travel in the UN, an area of significant opportunity given the considerable movement of people and goods entailed in the UN's day-to-day work. And throughout the year, individual UN entities have been developing Emission Reduction Strategies – road maps for climate neutrality informed by the greenhouse gas emission inventories.

The United Nations is strongly committed to doing its part to adapt to a changing world. Sustainability can make us a better organization – more efficient, more effective and less exposed to risk. Looking forward, I am determined to see sustainability embedded throughout our operations – in how we procure and use energy and other resources; in our modes of transport, our buildings and our waste disposal.

I thank the Heads of UN Agencies and their staff for working as "one UN" to move the system towards sustainability. In particular, I would like to recognize the United Nations Environment Programme, which has coordinated the work of the Environment Management Group, the Sustainable United Nations facility and the Issue Management Group on Sustainability Management.

I commend this publication to all in the UN family and beyond who want to travel the path towards a truly sustainable world for all.

New York, January 2011

Ban Ki-moon
United Nations Secretary General

Preface

Climate change, environmental degradation and the wasteful use of finite natural resources are among the over-arching challenges for this generation.

Decoupling economic growth from fossil fuel use and greenhouse emissions is central, and a key component to realizing a transition towards a global Green Economy as a way of catalyzing sustainable development for close to seven billion people.

The UN must lead both intellectually and practically on these issues and demonstrate leadership in the wider world but also at home.

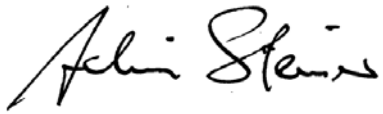
Organizational change is central to making this transition, which is why UNEP has continued throughout 2010 to lead the work of transitioning the UN system towards greater sustainability – so that we can show what a more sustainable organization looks like, and share our learning with governments and public sector organizations around the world.

The achievements so far – including measuring and reducing the UN's environmental impacts – are a credit to the commitment and dedication of staff across the UN system. However, this work would not have been possible without the work of the UN Environment Management Group, the Issue Management Group on Sustainability Management and the Sustainable United Nations facility.

As well as coordinating the work across the UN system through these groups, UNEP has also led by example. In 2010 we published our Climate Neutral Strategy, we offset our emissions for 2008 and 2009, and we made preparations for moving our headquarters in Nairobi into a new building, which is the first climate neutral building of its kind on the African continent. These experiences have assisted other organizations grappling with the same issues, and I know from speaking with colleagues across the UN system that our work in this area is appreciated.

This is the second year that the UN has published its greenhouse gas emissions. In 2009 our emissions were 1.7 million tonnes CO_2eq in total and 8.3 tonnes CO_2eq per staff capita. Efforts to reduce these emissions are underway, and further actions are being plotted via the first generation of Emission Reduction Strategies, which will be published this year.

The work towards adapting the institution is in its early phases, but a solid foundation has been laid and I look forward to seeing the work progress in coming years.



Achim Steiner
Under-Secretary General
Executive Director, UNEP, and
Chair, UN Environment Management Group

Acknowledgements

This report results from cooperative efforts by staff across the UN system to measure and report the UN's greenhouse gas emissions for 2009, and identify opportunities to reduce them in the future. Particular thanks are due to the Focal Points of the Issue Management Group on Sustainability Management who are responsible for compiling the greenhouse gas inventories for their organizations. Their patience and determination makes them a pleasure to work with individually, and their teamwork is a model for interagency cooperation within the UN:

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Highlights of 2010

- The UN system measured its greenhouse gas emissions for the second year running. The emissions for 2009 were 1.7 million tonnes CO_2eq in total and 8 tonnes CO_2eq per staff capita.
- A new website, *Greening the Blue* (www.greeningtheblue.org), was launched by the UN Secretary General in June to highlight work that is underway to make the UN more sustainable. In September, *Greening the Blue* won the Best Website category at the IVCA Clarion Awards.
- UNEP became the first UN organization to publish an Emission Reduction Strategy. The strategy sets a target of reducing UNEP's emissions by 3% per annum in 2010-2012 (from 2009 emission levels).
- The UN Secretariat's Umoja project seeks to reform and modernize the UN's administrative system by introducing a new enterprise-resource planning system. Umoja established a 'community of practice for sustainability' to ensure that the new system fully supports the UN's climate neutral and sustainability efforts.
- UN peace operations account for over half of the UN's total greenhouse gas emissions. In 2010, activities were initiated to make these operations greener. These included training sessions for staff, a sustainability assessment of peacekeeping camps in South Sudan and a new contract for field missions to procure solar panels.
- The Joint Inspection Unit released the report *The Environmental Profile of the United Nations System Organizations*, which described the network of Sustainability Management Focal Points as "*a landmark asset for a seminal contribution by the UN system towards the adoption of broader in-house environmental management policies*". It said the work of the UN in this area would "*motivate by example Member States and other stakeholders to undertake more sustainable environmental management*."
- The work of staff-led green groups continued across the UN, with support from over 50 Green Champion volunteers. In Geneva, for example, a new green group committed to promote tap water over bottled water, make staff cafeterias more sustainable and improve access to green transport. In New York, staff worked together to promote more efficient light bulbs. Staff in Beijing started to implement plans for reducing energy consumption in each office.
- UNEP published a new report – *Sustainable Travel in the UN* – that provides advice to organizations on how to reduce emissions from travel. The report adds to existing guidance on sustainable buildings, sustainable procurement and green meetings.
- Most UN agencies are in the process of developing Emission Reduction Strategies and will be getting approval for these in 2011.
- The UN Development Group in Latin America and the Caribbean took a regional approach to its work on sustainability. This included joint trainings, a common inventory exercise including 16 UN agencies in 33 duty stations, and sustainability proofing of the plans for a new UN hub in Panama.
- A number of UN organizations shared their experiences with stakeholders and encouraged them to move towards climate neutrality. The UPU, for example, worked with national postal operators to help them start measuring their greenhouse gas emissions.
- The World Bank launched a new website on its corporate responsibility performance. The website highlights the reductions in resource consumption achieved for their US buildings between 2008-09, including a decrease of 7% in greenhouse gas emissions, 8% in waste to landfill and 15% in paper consumption.

The UN system

Principal Organs

Trusteeship Council

Security Council

Subsidiary Bodies

- Military Staff Committee
- Standing Committee and ad hoc bodies
- Peacekeeping Operations and Missions
- Counter-Terrorism Committee
- International Criminal Tribunal for the former Yugoslavia (ICTY)
- International Criminal Tribunal for Rwanda (ICTR)

General Assembly

Subsidiary Bodies

- Main committees
- Human Rights Council
- Other sessional committees
- Standing committees and ad hoc bodies
- Other subsidiary organs

Advisory Subsidiary Body

United Nations Peacebuilding Commission

Economic and Social Council

Functional Commissions

Commissions on:
- Narcotic Drugs
- Crime Prevention and Criminal Justice
- Science and Technology for Development
- Sustainable Development
- Status of Women
- Population and Development

Commission for Social Development

Statistical Commission

Regional Commissions

- Economic Commission for Africa (ECA)
- Economic Commission for Europe (ECE)
- Economic Commission for Latin America and the Caribbean (ECLAC)
- Economic and Social Commission for Asia and the Pacific (ESCAP)
- Economic and Social Commission for Western Asia (ESCWA)

Other Bodies

- Permanent Forum on Indigenous Issues
- United Nations Forum on Forests
- Sessional and standing committees
- Expert, ad hoc and related bodies

International Court of Justice

Secretariat

Departments and Offices

- OSG [3] Office of the Secretary-General
- OIOS Office of Internal Oversight Services
- OLA Office of Legal Affairs
- DPA Department of Political Affairs
- UNODA Office for Disarmament Affairs
- DPKO Department of Peacekeeping Operations
- DFS [4] Department of Field Support
- OCHA Office for the Coordination of Humanitarian Affairs
- DESA Department of Economic and Social Affairs
- DGACM Department for General Assembly and Conference Management
- DPI Department of Public Information
- DM Department of Management
- UN-OHRLLS Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
- OHCHR Office of the United Nations High Commissioner for Human Rights
- UNODC United Nations Office on Drugs and Crime
- DSS Department of Safety and Security

ab

- UNOG UN Office at Geneva
- UNOV UN Office at Vienna
- UNON UN Office at Nairobi

Programmes and Funds

- UNCTAD United Nations Conference on Trade and Development
- ITC International Trade Centre (UNCTAD/WTO)
- UNDCP [1] United Nations Drug Control Programme
- UNEP United Nations Environment Programme
- UNICEF United Nations Children's Fund
- UNDP United Nations Development Programme
- UNIFEM United Nations Development Fund for Women
- UNV United Nations Volunteers
- UNCDF United Nations Capital Development Fund
- UNFPA United Nations Population Fund
- UNHCR Office of the United Nations High Commissioner for Refugees
- WFP World Food Programme
- UNRWA [2] United Nations Relief and Works Agency for Palestine Refugees in the Near East
- UN-HABITAT United Nations Human Settlements Programme

Research and Training Institutes

- UNICRI United Nations Interregional Crime and Justice Research Institute
- UNITAR United Nations Institute for Training and Research
- UNRISD United Nations Research Institute for Social Development
- UNIDIR [2] United Nations Institute for Disarmament Research
- UN-INSTRAW United Nations International Research and Training Institute for the Advancement of Women

Other UN Entities

- UNOPS United Nations Office for Project Services
- UNU United Nations University
- UNSSC United Nations System Staff College
- UNAIDS Joint United Nations Programme on HIV/AIDS

Other UN Trust Funds [8]

- UNFIP United Nations Fund for International Partnerships
- UNDEF United Nations Democracy Fund

Related Organizations

- WTO World Trade Organization
- IAEA [5] International Atomic Energy Agency
- CTBTO Prep.Com [6] PrepCom for the Nuclear-Test-Ban Treaty Organization
- OPCW [6] Organization for the Prohibition of Chemical Weapons

Specialized Agencies [7]

- ILO International Labour Organization
- FAO Food and Agriculture Organization of the United Nations
- UNESCO United Nations Educational, Scientific and Cultural Organization
- WHO World Health Organization

World Bank Group

- IBRD International Bank for Reconstruction and Development
- IDA International Development Association
- IFC International Finance Corporation
- MIGA Multilateral Investment Guarantee Agency
- ICSID International Centre for Settlement of Investment Disputes

- IMF International Monetary Fund
- ICAO International Civil Aviation Organization
- IMO International Maritime Organization
- ITU International Telecommunication Union
- UPU Universal Postal Union
- WMO World Meteorological Organization
- WIPO World Intellectual Property Organization
- IFAD International Fund for Agricultural Development
- UNIDO United Nations Industrial Development Organization
- UNWTO World Tourism Organization

NOTES: Solid lines from a Principal Organ indicate a direct reporting relationship; dashes indicate a non-subsidiary relationship.

[1] The UN Drug Control Programme is part of the UN Office on Drugs and Crime.

[2] UNRWA and UNIDIR report only to the GA.

[3] The United Nations Ethics Office, the United Nations Ombudsman's Office, and the Chief Information Technology Officer report directly to the Secretary-General.

[4] In an exceptional arrangement, the Under-Secretary-General for Field Support reports directly to the Under-Secretary-General for Peacekeeping Operations.

[5] IAEA reports to the Security Council and the General Assembly (GA).

[6] The CTBTO Prep.Com and OPCW report to the GA.

[7] Specialized agencies are autonomous organizations working with the UN and each other through the coordinating machinery of the ECOSOC at the intergovernmental level, and through the Chief Executives Board for coordination (CEB) at the inter-secretariat level.

[8] UNFIP is an autonomous trust fund operating under the leadership of the United Nations Deputy Secretary-General. UNDEF's advisory board recommends funding proposals for approval by the Secretary-General.

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1. Climate neutrality and sustainability within the UN system

In October 2007 the UN Chief Executives Board for Coordination (CEB) approved the UN Climate Neutral Strategy, which committed all UN agencies, funds and programmes to move towards climate neutrality within the wider context of greening the UN. In signing it, the heads of all UN organizations agreed to:

- estimate their greenhouse gas emissions,
- undertake efforts to reduce their greenhouse gas emissions to the greatest extent possible, and
- analyse the cost implications and explore budgetary modalities of purchasing carbon offsets.

As a result, the UN published its first greenhouse gas inventory, *Moving Towards a Climate Neutral UN* in December 2009. In 2009 and 2010 the UN Environment Management Group (EMG) provided further guidance on the implementation of the UN Climate Neutral Strategy, in particular requesting the Issue Management Group (IMG) on Sustainability Management to develop a strategic plan that will include the following:

- An integrated process for producing greenhouse gas inventories and, where possible, sustainability reports, through linkages to enterprise resource planning (ERP) systems.
- A common approach to reducing greenhouse gas emissions in the UN system through the creation of Emission Reduction Strategies by all UN organizations, and by working with relevant interagency networks such as those for travel, facilities management, procurement and ICT. This work would also include identifying policies that may be applied or adapted in support of sustainable management.
- A recommendation for how UN organizations can compensate for greenhouse gas emissions via offsetting.
- Ways of maintaining greenhouse gas inventories, reporting, communication, joint training, resource development and investments in sustainable management.
- Continuing efforts to promote sustainable procurement in the UN system, and documenting the benefits to member states.

Throughout 2010 the work of measuring and reducing the UN's greenhouse gas emissions, and addressing the recommendations of the EMG, was coordinated through the IMG on Sustainability Management. The IMG reports to the EMG and is supported by the Sustainable United Nations (SUN) facility.

2. UN greenhouse gas emissions for 2009

Methodology

For the second year, UN organizations provided data from which an entire UN greenhouse gas inventory could be derived according to the principles of the Greenhouse Gas Protocol developed by the World Resources Institute and the World Business Council for Sustainable Development. The greenhouse gas emissions of 52 UN entities have been accounted for in this inventory.

The October 2007 decision of the CEB limits the boundary of the UN greenhouse gas inventory to emissions from facility operations and travel that can be influenced by management-level decisions. These mainly include emission categories associated with the purchase or production of electricity and heat (such as steam), use of refrigerants (for air-conditioning as well as refrigeration) and transportation. The inventory covers all six greenhouse gases covered by the Kyoto protocol: CO_2, CH_4, N_2O, HFCs, PFCs and SF_6. The emissions are reported both separately for each greenhouse gas in terms of their mass, and as an aggregate using the common comparable unit of carbon dioxide equivalents (CO_2eq). The specific emission categories and the methodologies used have been further described under Annex II.

The common minimum boundary excludes several sources of greenhouse gas emissions that could be said to result from UN activities. Recommended best practice is to voluntarily document all sources of emissions not included in the minimum boundary under an additional category called Optional Emissions. These include:

- emissions associated with decisions for which individual staff members are responsible and that relate to their personal sphere (e.g. emissions from personnel commuting to and from the work place),
- emissions from projects implemented by external entities,
- emissions due to couriers and mails,
- embodied carbon in products and equipment used by the UN, for instance food, beverages, paper and computers, and
- emissions from the decomposition of organic waste and from waste water treatment arising from UN premises.

To facilitate the process of capturing and reporting data, a number of improvements were made to the greenhouse gas reporting system throughout 2010, for example:

- The development of a new office emissions calculator was initiated and is nearing completion. The data collection facilities of the software were used in 2010, while the emission calculator and reporting part of the tool will be deployed in 2011. Coded by the DFS Information and Communications Technology Division and designed by the SUN facility, the new office calculator is smaller and easier to use than its predecessor. Offices away from headquarters as well as field operations have found it easier to enter their data as the system can be accessed from locations where internet access and computer hardware capabilities are limited. In addition, agencies and their reporting offices will be able to generate final emissions results in a summary sheet if they wish.
- ICAO developed an updated air travel emissions calculator with new functions including a proxy indicating the most likely transit routes for flights (where the exact routing was not known), and a greater number of city and airport codes.
- Online training on the use of the tools was provided to the IMG Focal Points.
- The data collection spreadsheets and tools were made available in English, French and Spanish.

Results

For 2009, UN greenhouse gas emissions were 1.7 million tonnes CO_2eq in total and 8.3 tonnes CO_2eq per staff capita. These figures are similar in magnitude to the results for 2008. The per capita emissions show a wide range among the agencies, of between 2.5 and 36 tonnes, as a result of different emission intensities, operations and geographical locations. Outside the common minimum boundary of the UN greenhouse gas inventory, 13,000 tonnes CO_2eq of Optional Emissions and 4,000 tonnes CO_2eq of biomass-related emissions were also reported.

Air travel accounts for half of total emissions. Per capita air travel emissions were 4.1 tonnes CO_2eq, with a few agencies reporting figures over 10 tonnes, especially those with more centralized operations. It is clear that any meaningful reduction of the UN climate footprint will require reducing current air travel, and wherever possible, replacing it with sustainable alternatives.

Building related energy intensity[1] was 117 kWh per m^2. This indicates the efficiency with which energy was produced or used in buildings and facilities, including stationary combustion, purchased steam and electricity. Building

[1] Sum of energy consumed as Purchased Electricity, Purchased Steam and Stationary Consumption, all expressed in kWh

related emissions intensity stood at 87 kg CO_2eq per m^2, which includes leakage of refrigerants, apart from emissions from energy sources used in buildings. Though the quantum of refrigerant leakage is small, they have high Global Warming Potentials (GWP) and are therefore significant.

Completeness

This inventory contains the 2009 data for 52 organisations. Of these, 46 organizations have reported data, directly or indirectly, for 2009 – two of them for the first time. Three organizations have reported their data via other organizations, as detailed below:

- UNCTAD reported its 2009 data within the data for UNOG. UNCTAD has also reported its data separately, but for estimating the totals only UNOG's 2009 data has been used.
- UNECE has reported its 2009 data within UNOG's data. UNECE has not reported its 2009 data separately.
- UNODC and UNOV have jointly reported their 2009 data.

Six organizations reported their greenhouse emissions for 2008 but failed to do so for 2009 due to difficulty in assigning sufficient resources and staff time for this exercise. For these organizations their 2008 emission results have been used to ensure a more complete UN greenhouse gas inventory.

The 2009 inventory includes a large number of field offices in addition to the many headquarter offices that reported their emissions for 2008. The changes made to data collection tools, the ICAO air travel emissions calculator and a few of the methodologies have made data reporting easier. It is expected that the inventory will cover more offices and facilities over time.
Considering their magnitude and significance, a decision was taken by EMG to make the reporting of emissions from air travel and public transportation used for official travel mandatory, though their reporting is optional under the Greenhouse Gas Protocol. Following the guidance of the Greenhouse Gas Protocol, emissions from the combustion of bio-fuels in equipment and vehicles are reported as an information item only. Similar guidance exists for Ozone Depleting Substances controlled by the Montreal Protocol such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), which are mostly used as refrigerants. However, due to their significant presence in UN facilities they have been included under the Optional Emissions category. It was also decided to make the reporting of CFCs and HCFCs mandatory in the future.

As with the 2008 inventory, no provision was made for the non-CO_2 effects of aviation. UNEP, ICAO, IPCC and invited experts held a meeting in 2010 to explore how best to accurately reflect the climate change effects of air travel beyond CO_2 i.e. from high altitude contrails, emissions of sulphur, water vapour and dust. The meeting concluded that the science is not yet conclusive on how to express a Radiative Forcing Index (RFI). The IPCC Assessment Reports may address this issue when the scientific basis for using an RFI is more mature. In this light, no multiplier or RFI was used in calculating emissions from air travel.

Data quality

The 2009 reporting process used several measures to make data collection easier, based on feedback from reporting staff. A decision was taken to simplify a few of the methodologies used in 2008 to suit the capacity and resources available internally, though in some circumstances it would lead to a decrease in the accuracy of the inventory. Such changes have been made in Refrigerants, Purchased Steam and Vehicles (mobile sources). Where data was not readily available, estimates were based on clearly defined assumptions and proxies. A review of the methodologies, data and process is undertaken annually and the IMG is actively involved in this process. More rigorous methods and procedures will be introduced, based on feedback, as resources allow.

Agencies have started to prepare their Inventory Management Plans (IMPs) and many are expected to complete their IMPs in 2011. The IMP is an internal document that records the details of each inventory and helps to institutionalize a process for preparing a high quality inventory. To support data collection and the use of the greenhouse gas inventory tools, an online training was conducted in 2010. Information resources are also being shared with the Focal Points.

Comparability

Though the results show overall emission trends and obvious causes, comparison between years requires more detailed analysis to take into account the changes in coverage and in the methodologies for Purchased Steam, Purchased Electricity and Refrigerants. In addition, there have been rearrangements and changes in the contents of the emission categories that need to be considered when comparing results. In 2008, the total emissions reported included Optional Emissions, while these are excluded from the total for 2009. Where comparisons are made between 2008 and 2009 emissions, the figures for 2008 exclude Optional Emissions. In 2008, the Optional Emissions also covered biomass related emissions. Biomass related emissions are now being reported as an information item only, outside Optional Emissions. The emissions from Refrigerants in 2008 included CFC's and HCFC's, which are now being reported under Optional Emissions.

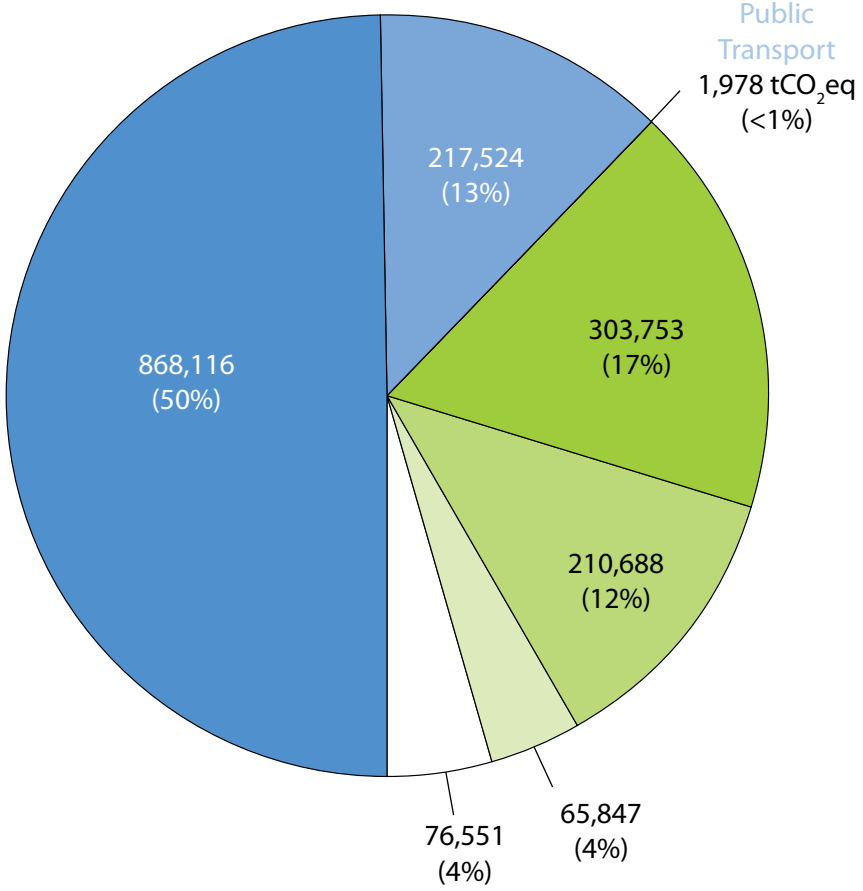
Table 1: Reported 2009 emissions from UN organizations

Un agency	Number of staff	Total emissions	Emissions per staff	Air travel	Share of air travel	Air travel per staff	Building related emission intensity
		tonnes CO_2eq	*tonnes CO_2eq*	*tonnes CO_2eq*	*% of total emissions*	*tonnes CO_2eq*	*kg CO_2eq/m^2*
CBD*	95	3,426	36.1	1,555	45	16.4	707
CTBTO	346	2,297	6.6	1,744	76	5.0	25
DFS*	500	3,074	6.1	276	9	0.6	45
DPA**	1,339	18,227	13.6	6,289	35	4.7	1445
DPKO*	114,206	966,068	8.5	456,010	47	4.0	246
ECA	1,488	5,701	3.8	4,986	88	3.4	6
ECE * &***	234	1,076	4.6	67	6	3.1	26
ECLAC	700	3,883	5.5	2,772	71	4.0	53
ESCAP	1,100	7,688	7.0	1,244	16	1.1	320
ESCWA	324	4,070	12.6	773	19	2.4	88
FAO	2,800	31,865	11.4	26,066	82	9.3	51
IAEA	2,378	18,924	8.0	12,595	67	5.3	48
ICAO	715	5,692	8.0	2,339	41	3.3	31
IFAD	900	5,089	5.7	3,253	64	3.6	72
ILO	2,979	10,975	3.7	9,244	84	3.1	9
IMO	325	4,193	12.9	968	23	3.0	135
ITC	320	3,328	10.4	2,845	85	8.9	23
ITU	913	3,276	3.6	2,215	68	2.4	18
OHCHR	503	4,464	8.9	4,098	92	8.1	19
OPCW	535	4,914	9.2	3,737	76	7.0	48
UN Geneva	2,762	15,169	5.5	11,587	76	4.2	21
UN Nairobi	707	1,851	2.6	619	33	0.9	29
UN Vienna	950	5,137	5.4	2,532	49	2.7	47
UNAIDS	1,108	7,327	6.6	4,832	66	4.4	60
UNCCD	60	1,246	20.8	1,140	92	19.0	16
UNCTAD***	500	3,381	6.8	3,130	93	6.3	18
UNDP	11,160	55,636	5.0	23,585	42	2.1	120
UNEP	1,185	12,471	10.5	11,435	94	9.7	42
UNESCO	5,056	17,965	3.6	11,871	66	2.3	25
UNFCCC	401	1,363	3.4	1,283	94	3.2	3
UNFPA	3,303	19,669	6.0	9,560	49	2.9	77
UNHABITAT	536	4,057	7.6	3,661	90	6.8	30
UNHCR	1,040	2,593	2.5	2,281	88	2.2	20
UNHQ	8,754	121,003	13.8	40,650	34	4.6	70
UNICEF*	1,197	9,565	8.0	6,316	66	5.3	10
UNIDO	2,019	11,127	5.5	7,015	63	3.5	67
UNIFEM	917	3,599	3.9	2,838	79	3.1	75
UNISDR	45	565	12.6	543	96	12.1	16
UNITAR	39	543	13.9	525	99	13.4	14
UNODC	data is included in UN Vienna						
UNOPS	1,943	9,311	4.8	3,378	36	1.7	67
UNRWA	2,529	9,797	3.9	456	5	0.2	54
UNU*	90	1,321	14.7	406	31	4.5	704
UNV	150	406	2.7	251	62	1.7	13
UNWTO	136	552	4.1	289	52	2.1	39
UPU	250	1,061	4.2	359	34	1.4	70
WFP	12,200	90,522	7.4	31,262	35	2.6	17
WHO	2,596	29,546	11.4	25,926	88	10.0	31
WIPO	1,245	8,095	6.5	4,430	55	3.6	39
WMO	600	3,330	5.5	2,750	83	4.6	21
World Bank Group	14,638	186,775	12.8	108,086	58	7.4	81
WTO	845	5,780	6.6	5,240	91	6.2	16
TOTAL	**210,927**	**1,744,534**	**8.3**	**868,116**	**50**	**4.1**	**87**
TOTAL minus DPKO	**96,721**	**778,466**	**8.0**	**412,107**	**53**	**4.3**	**49**

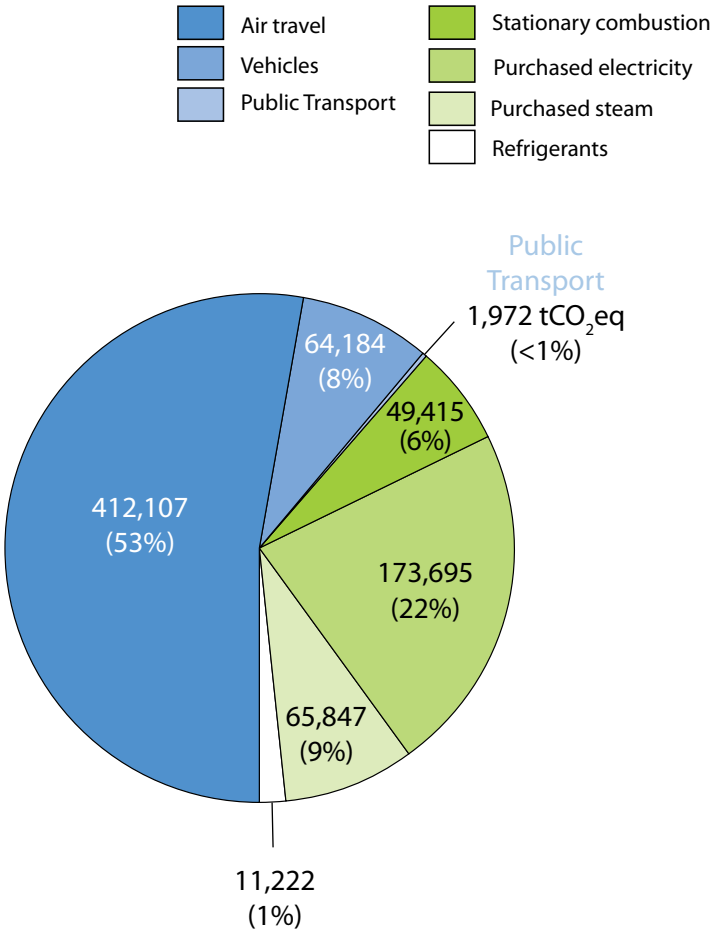
Notes: * 2008 data , ** 2008 data amended for available locations, *** included in UN Geneva

Chart 1: Sources of UN greenhouse gas emissions for 2009

(in tonnes CO_2 equivalent)



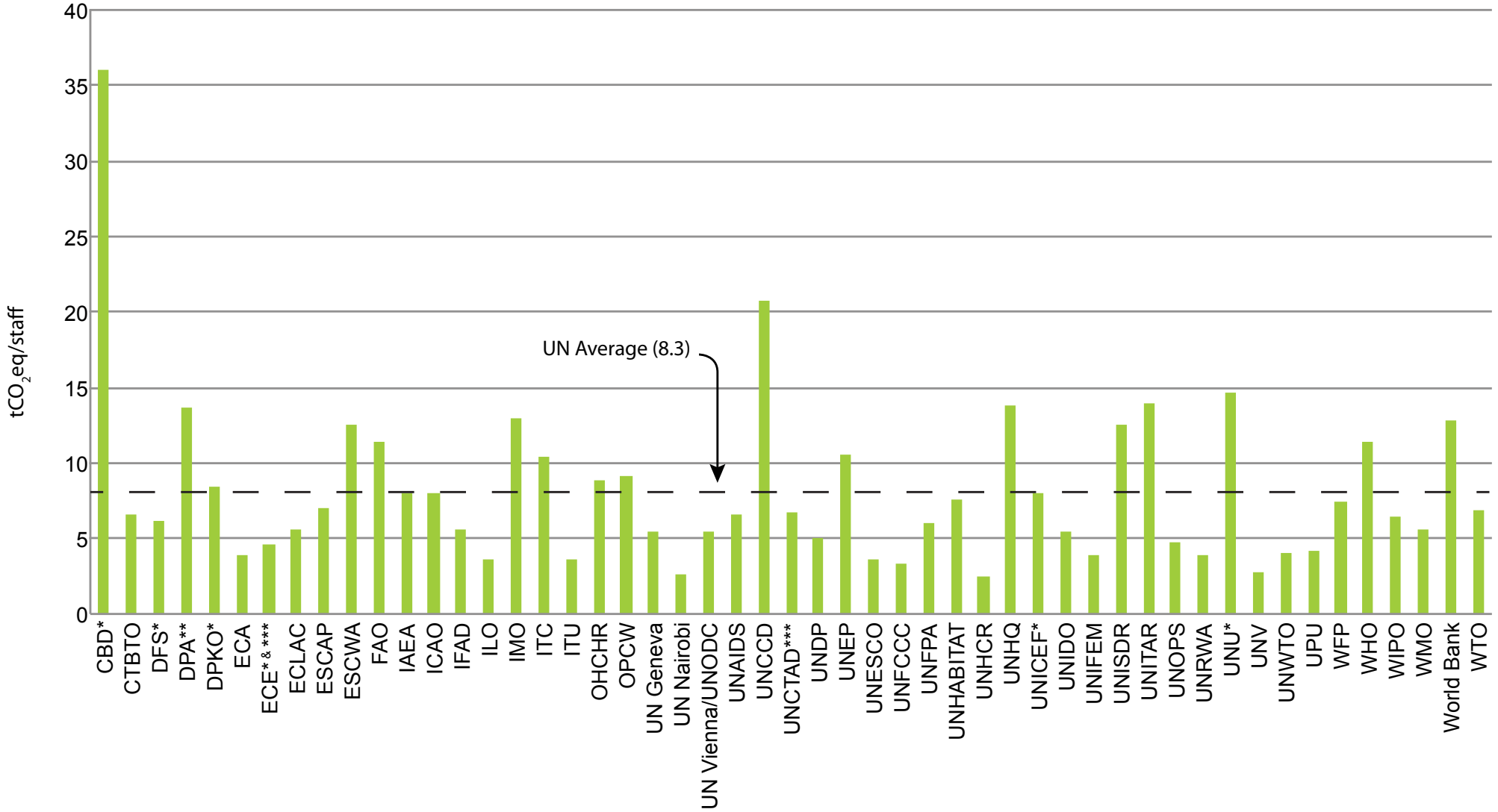
Total emissions by source type
(1,744,534 tCO_2eq)



Total emissions by source type excluding DPKO*
(778,466 tCO_2eq)

* Department of Peacekeeping Operations

Chart 2: 2009 emissions per capita (tonnes CO_2 equivalent)



Notes: * 2008 data , ** 2008 data amended for available locations, *** included in UN Geneva

3. Emission Reduction Strategies: an overview

Significant progress has been made in recent years, not only in measuring the UN's greenhouse gas emissions, but also in reducing them.

In 2009 the EMG asked UN agencies to develop individual Emission Reduction Strategies. The task of developing the strategies was given to the Focal Points of the IMG on Sustainability Management, who received support and guidance from the SUN facility.

In 2010, SUN provided the Focal Points with a template for a template Emission Reduction Strategy to ensure that all strategies are comparable and include common elements. The template suggests headings such as measurable targets over a defined period of time (either per capita or by defining a number of key performance indicators); five priority actions; a summary of financial costs and savings associated with the reduction strategy; other environmental measures such as water consumption and waste, and plans to communicate the strategy internally and externally.

By the end of 2010 SUN had received 16 draft strategies for review. It is expected that these strategies, as well as those of all other UN organizations, will be approved and published in 2011. The following trends have been identified from the draft strategies received:

Targets

All organizations have been invited to define targets for emission reductions. The emission reduction targets range from one-year targets to longer-term targets.

Financing

Many agencies have chosen to calculate the financial implications of emission reduction measures and in most cases net savings can be shown. Most organizations state that investment will be necessary but the payback period is likely to be short. This is most explicit where agencies have chosen to offset the remainder of their emissions, as the cost of an action can be weighted directly against the offsetting cost. Similarly, savings can be made when investments are made in technology. One agency estimated that up-front investment and year-one running costs for video-conferencing equipment would be US$3.3 million, but result in a 10% reduction in air travel, leading to a year-one cost savings of US$4.6 million and a reduction of 1225 tonnes of CO_2.

Travel

Although travel is generally responsible for the largest amount of emissions, most agencies have chosen to reduce their travel emissions using soft measures (incentive schemes, voluntary action) over restrictive ones. One agency has set a target to cut the travel budget by 2%, resulting in an estimated cut in CO_2 emissions of 100 tonnes. Another has decided to cut the number of kilometres travelled by 8%.

Buildings

The most frequent measure proposed in reducing emissions from buildings is a transition to a renewable energy provider. In several agencies building refurbishments or the construction of an entirely new building are planned or underway, resulting in significant improvements in energy efficiency.

Other sustainability issues

The majority of the agencies that submitted draft Emission Reduction Strategies proposed measures to reduce other sustainability impacts beyond greenhouse gas emissions. Examples include incentives for changed staff habits in commuting, waste reduction and separation, using recycled materials and applying sustainability criteria to procurement procedures.

Communications

Most agencies recognize that staff buy-in is necessary for successful implementation of the strategy. One agency has developed support teams at several levels of the organization, with a simultaneous top-down and bottom-up approach, enabling early buy-in from management and increasing the chances of success by motivating and engaging staff.

Draft Emission Reduction Strategies

It is important to remember that the draft Emission Reduction Strategies are more than just documents. Each one represents the conclusion of an intra-organizational dialogue about what targets to set for emissions reductions, where emission reductions might be achieved and how these will be financed. The process has been different in each organization. Some have engaged staff in developing the strategy. Others have tasked a member of staff with developing a strategy that is then approved by management. Experience shows that dialogue with concerned staff and management early in the process of drafting the strategy facilitates acceptance and approval of the strategy at later stages.

The table below provides an overview of the draft Emission Reductions Strategies received by the SUN facility by the end of 2010. Organization names have been omitted to reflect the draft status of the majority of strategies. It is hoped that the strategies will be finalized, approved and adopted by the end of 2011.

Table 2: Summary of the Emission Reduction Strategies received in 2010

	Overall targets	Reductions from travel	Reductions from building	Offsetting	Other actions
1			• Installing micro aeolians on roof* • Lighting equipped with sensors	• Trialed offsetting for a meeting in 2009	• Focus on energy, water, CO2 emissions, waste, waste water, paper, ozone depleting substances and procurement
2	• 15-20% reduction by 2020 from 2008 levels		• Zero-energy building	• Offsetting emissions from air travel	• Tips for reducing emissions while in office, at home or travelling are being projected in the agency intranet each time a staff member accesses it
3	• 35% reduction by 2013 from 2008 levels • 50-85% reduction by 2050 from 1990 levels	• Revising travel policy	• Switching to a renewable energy supplier • Energy efficiency measures	• Aims to be climate neutral by 2012	• Waste management and cleaning • Procurement • Meetings • Staff commuting
4	• 3% reduction per year between 2010 and 2012 and a 50-85% reduction by 2050 from 2009 levels	• 5% voluntary shift from business to economy travel • 3% reduction of travel emissions	• Individual building-related audits and emission reduction plans per location	• Offsetting emissions from air travel	• All service contracts will be environmentally screened when renewed • Awareness raising campaign
5	• Around a 10% reduction by 2013 from 2008 levels	• 2% reduction in travel budget	• Switching to a CO_2 neutral electricity supplier		• Office IT equipment at the end of its life should be subject to proper recycling
6	• 20% reduction by 2013 and 80% by 2050 from 2003 levels	• 15% reduction by 2013 to 7,546 tonnes 20% reduction per kilometer travelled • 15% reduction in number of trips per staff per year • 18% emissions reductions from vehicles	• 30% emission reductions by 2013 • Supplying at least 50% of all offices with energy efficient dishwashers and reusable kitchenware	• Exploring options for offsetting of greenhouse gas emissions in the future, but currently focused on reductions	• Establishing a going green Intranet site • 20% reduction in waste generation • 30% reduction in water use • Attain green building certification for all applicable offices • 10% reduction in environmental impact from official meetings • 30% of office supplies procured sustainably
7	• 2.5% reduction per year for 2011 and 2012 (from 2008 levels) and a 50% reduction by 2050	• 2.5% annual reduction of per capita emissions	• 3% annual per capita reduction of emissions from electricity consumption		• Aiming at ISO 14001 certification for environmental management system • Water savings, rainwater harvesting, waste separation
8	• 20% reduction by 2013 from 2008 levels	• 8% reduction in number of kilometres travelled • New policy on commuting and travel (video conferencing).	• 58% reduction in energy consumption or 20-25% reduction in CO_2 emissions through building façade renovation, upgrading IT system	• Not concretely, but follow common approach	• Staff commuting, recycled paper
9		• 5% reduction by 2013 from 2009 levels	• 20% reduction by 2013 from 2009 levels		• Established a task force in 2008
10	• 80% reduction by 2050 from 2008 levels • Intermediate target of 20% reduction by 2013, averaging a 5-7% reduction per year	• Ambitions to travel less, and emit less Includes a travel scenario with 10% of journeys replaced by videoconferencing and virtual meeting technology	• Switching from high emission fuels to renewable energies • Upgrading power generation systems with control systems • Improving insulation in building shells and lighting efficiency • Reducing use of refrigerants • Installing energy efficient IT systems	• Offsetting is being discussed in a non-committing way	• Encouraging biking, car pooling, and the use of public transportation

	Overall targets	Reductions from travel	Reductions from building	Offsetting	Other actions
11	• 22% reduction from headquarters in 2015 from 2008 levels • 2% reduction in 2012 and 2013 • 20% overall reduction in 2014 and 2015	• 3% reduction in km travelled by 2013 • 5% shift from business to economy class travel	• Building-related emissions to be reduced through move to energy-efficient building: estimated reduction 30% of total emissions • Staff involvement to reduce building-related emissions further	• Further clarification on modalities and baseline • Ready to comply with common UN guidelines	• Internal training on sustainable procurement • 100% recycled paper used in HQ • Flex-policy to improve work-life balance • To come: waste management, paperless policy, parking privileges for hybrid and electric cars • Including a session on sustainable behaviour in the office in staff induction training
12	• 7% reduction in scope1 and 2-related emissions by 2011 from 2006 levels		• 10% reduction in building-related electricity consumption in HQ by 2013; • Recent computer procurement will save 2.5 million kWh of electricity per year	• Offsetting ongoing	• Waste, water, commuting, paper, food • "10-Minute Tune Up", sharing simple ways staff could use resources more efficiently while at work
13	• 15% reduction by 2013 (5 % per year) from 2008 levels	• Reductions in number of flights and share of business class flights for remaining flights • Greater use of teleconferencing, substitution by local staff where possible, bundling of missions			• Develop sustainable procurement policies • Energy audit
14	• 10% reduction by 2013 • Intermediate target of 24% reduction by 2020 with annual reduction of 2%. • Long-term: 80% reduction by 2050. • Baseline of 2008	• 8 -10% reduction in annual air travel.	• Linear cuts of all sources		• Financial savings of reductions calculated • Reducing the amount paper used • Encouraging tele-working from home or a satellite site • Increasing staff awareness through training and education
15		• Considering a 10% reduction in travel and replacing with teleconferencing system	• 10% reduction in energy use through replacement of façade with solar panels • 5% reduction by cutting temperature by 1 degree in winter	• Considering offsetting as an option	• Emissions management/reduction is part of the PAS system for the General Support Section • Staff training sessions on environment management
16		• 3% reduction in travel resulting in a 3-4 % annual reduction of emissions (from 2008)	• Reduce share of emissions from refrigerants from 34% in 2008 to 12% by 2013 • 33% reduction of HVAC-related emissions by 20, from 2008; • 55% reduction in energy consumption by reducing amount of servers	• Priority on reductions, aiming at 2013 for offsetting of travel-related emissions • Costs to be covered by savings from reduced travel activity	• Other measures related to reductions of the environmental footprint from processes related to IT, printing and conferencing

Emission reduction targets from selected agencies. In some cases targets are more recommendations or estimated results of proposed measures.

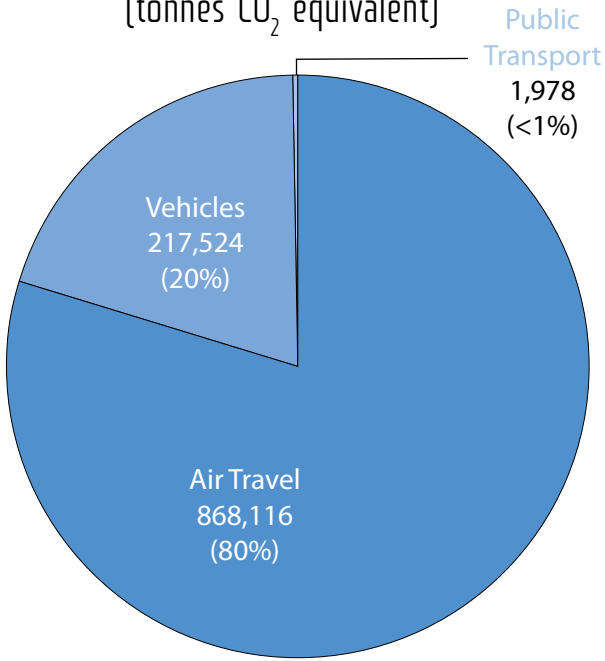
4. Emissions from travel and efforts to reduce them

There is no doubt that travel – particularly air travel – is essential in delivering the UN's mandate. The travel of staff, experts, consultants and meeting participants all contribute to the total.

Travel also accounts for approximately 63% of the UN systems' greenhouse gas emissions and costs the UN over US$1 billion per year. Air travel alone accounts for over 50% of total emissions, and is therefore a key challenge for the UN in reducing its carbon footprint.

Chart 3: Travel-related emissions*

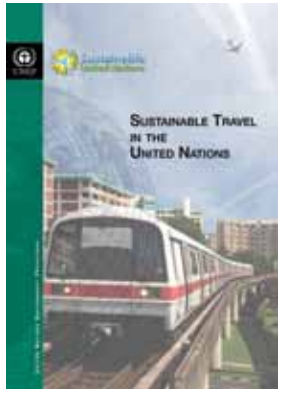
(tonnes CO_2 equivalent)



(1,087,618 tCO_2eq) *including DPKO

In some UN organizations travel is responsible for over 90% of the total climate footprint of the organization. This means that UN organizations must find ways of reducing their emissions without affecting their ability to fulfill their mandate. The resulting cost savings are likely to play a key role in shifting to more sustainable travel.

Many organizations are already developing sustainable travel plans in conjunction with their emissions reduction strategies. To assist them in this, a new report *Sustainable Travel in the United Nations* was launched in 2010 by the IMG, SUN and ICAO in cooperation with the Inter-Agency Travel Network (IATN). The report provides guidance on how the climate footprint from travel can be reduced – for example by travelling less, travelling more efficiently and by offsetting – and provides blueprint sustainable travel strategies as well as advice on how to monitor and report progress on implementation by using 'travel metrics'.



UNFCCC: Video conferencing at COP15

Over 30,000 participants poured into Copenhagen from 192 countries to attend the UN's 2009 Climate Change Conference (UNFCCC COP15). Tens of thousands more, however, did not need to go there in person – or add thousands of tonnes to the meeting's travel-related greenhouse gas emissions. For them, the best way to 'be there' was to link up from afar, via some impressively cutting edge virtual conference facilities.

This was the thinking behind what came to be called the Global Climate Change Meeting Platform Exchange. The system was set up, and paid for, by the Danish Ministry of Foreign Affairs in partnership with Cisco Systems. At its heart were four 'Cisco TelePresence' rooms in the Bella Centre, specifically designed to make local and remote meeting participants feel as if they were in the same room. Their equipment cost around US$90,000 each, but conference participants could use them free of charge, interfacing in real time with any of 77 remote Telepresence suites around the world, including in 20 Danish embassies and in UN buildings in Bonn, Nairobi, Geneva and New York. The system also offered interoperability with traditional videoconferencing systems, and Cisco Systems also provided the conference with LAN and Wi-Fi network facilities.

The virtual conference network was used intensively throughout the two weeks of COP15. It racked up a total of 149 sessions and more than 250 hours of TelePresence meetings. A virtual theatre was also created so that presenters from 14 countries could interact with delegates at the conference. Delegations gave daily updates to their heads of state, and heads of state at the meeting reached journalists in their own country. Non Governmental Organizations conducted meetings with supporters and donors, and media organizations brought together experts, government officials and business executives to debate key issues around climate change.

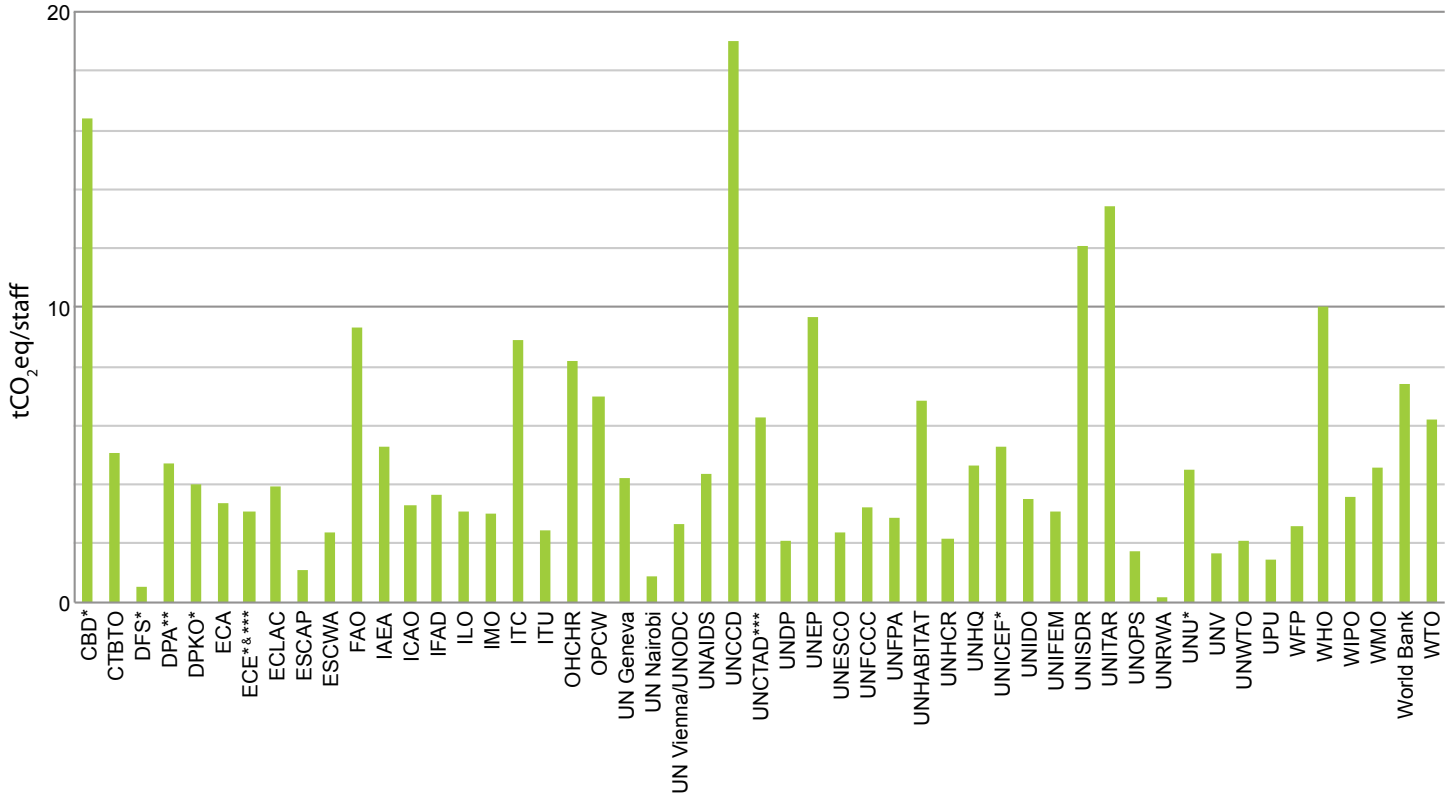
Finally, the report provides examples of what some UN organizations are already doing to reduce their emissions from travel. This includes bundling missions and using the train on certain routes (ICAO), adopting goals to reduce travel volume and limiting the number of days of travel per staff member (UNAIDS), and disclosing the personal climate footprint of each staff member on tickets and travel approvals (UNIDO).

An important measure in reducing travel is to provide alternative modes of communication. The IMG, through SUN, is therefore working with the ICT network of the High Level Committee on Management (HLCM) to develop best practice guidelines for providing on-line communication options such as high quality video conferencing facilities ("Virtual Presence") and computer-to-computer conferencing software such as Skype or Webex to UN staff.

Another key area of focus for reducing travel-related emissions is meetings. The UN organizes meetings every day – some with tens of thousands of participants, and more frequent meetings with only a handful of participants. The *Green Meeting Guide* provides guidance to UN organizations on how they can reduce the environmental impact from their meetings, and includes a section on reducing the impacts of travel to and from such meetings. The guide has now been adopted as policy by several organizations, and SUN is working in close collaboration with the International Annual Meeting on Language Arrangements, Documentation and Publications (IAMLADP) and UNON to further promote sustainable meetings through the IAMLADP Task Force for Sustainable Meetings.

There are some barriers to sustainable travel that are beyond the scope of individual UN agencies to address. These include cases where the common travel policies of the UN unintentionally restrict or discourage staff from choosing more sustainable travel options i.e. travelling by train instead of flying on short distances, or travelling economy class instead of business class when flying. Seeking to remove policy-related barriers is an important task for the IMG, SUN and relevant UN bodies.

Chart 4: Travel-related emissions per staff capita (tonnes CO_2 equivalent)



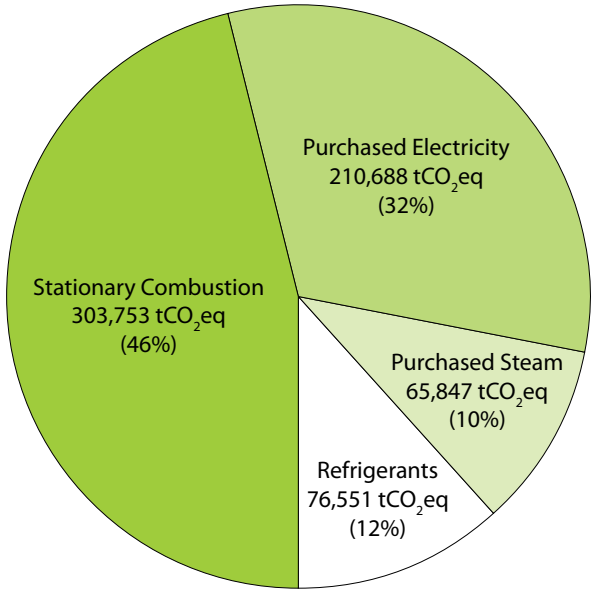
Notes: * 2008 data , ** 2008 data amended for available locations, *** included in UN Geneva

5. Emissions from buildings and efforts to reduce them

Buildings are responsible for over 40% of global energy consumed. It is therefore hardly surprising that buildings are responsible for 37% of total UN emissions and are the largest source of greenhouse gas emissions after travel. The largest source of building-related emissions is stationary combustion (46%) - which relates to heating and electricity generation - whilst 32% comes from purchased electricity.

With thousands of premises worldwide, buildings represent a significant opportunity for the UN in reducing its greenhouse gas emissions - through better use of technologies and better staff engagement. The SUN facility assists UN organizations in doing this through one-to-one support and general guidance. In 2010 SUN published *Climate Friendly Buildings and Offices: A Practical Guide*, which provides guidance for facility managers on reducing energy consumption and improving the efficiency of buildings. The guide was developed with support from Environmental Resources Management, IMG and the UN Inter-Agency Network of Facility Managers (INFM), and includes case studies from across the UN system.

Chart 5: Building-related emissions*
(tonnes CO_2 equivalent)



(656,839 tCO_2eq) *including DPKO

Many of the Emission Reduction Strategies received from UN organizations reveal ambitions to reduce emissions from buildings. Interventions in both new and existing buildings to improve energy usage and reduce carbon emissions are also expected to deliver cost savings. The following are common features of the buildings sections of the strategies:

Audits and management plans

Agencies are conducting building audits and developing action plans. One organization has mandated that all offices with 10 or more staff should undertake an emission reduction audit based on the SUN Guide. The head of office is responsible for conducting the assessment, developing an emission reduction plan, and reporting back to the climate neutral officer.

Sustainable procurement

Some agencies request that service contracts – for energy, cleaning, waste management etc – are screened from an environmental perspective before renewal. One organization incorporates environmental considerations into the procurement process for building refurbishments and the construction of new buildings. Sustainable procurement is also being practiced in the purchase of office materials.

Energy sourcing

Some agencies are choosing renewable energy sources or fuel with lower carbon content:

- In Geneva, local energy suppliers offer combinations of renewable energy and low carbon sources – natural gas, hydro, solar and wind.
- One agency switched to a gas and heating oil dual system, allowing them to use natural gas, which has significantly lower emissions than fuel oil. Fuel oil is only used when there is a shortage of gas.
- Other organizations are investigating switching to suppliers offering carbon neutral or renewable energy.

Energy consumption

Reducing energy consumption is key to reducing emissions from buildings. Specific examples of this include:

- **Heating, ventilation and cooling:** Facility managers are improving the building core and envelope through upgrades (e.g. double-glazed, thermally-insulated windows, louvers, shades) and more efficient equipment (e.g. boilers, chillers, variable speed motors, heat exchangers). Green architecture is reducing energy consumption with measures such as the ground-coupled heat exchanger (which takes advantage of the earth's constant temperature to warm/cool incoming air), green roofs (to mitigate the urban heat island effect and enhance storm-water management) and better building orientation and

office configuration (to optimize solar and daylight access and ventilation strategies suited for the climate). These and other green interventions, such as timers (e.g. automatic shut off after work hours and weekends), are resulting in cost and carbon savings. In one organization, lake water is being used to cool the buildings and reduced energy use by 215,000 kWh per year. Another organization, by modifying the summer indoor temperature by two degrees, achieved a reduction of 16% in energy use, saved around US$50,000 in costs and approximately 75 tonnes CO_2eq between June and September 2009.

- **Staff engagement:** Many organizations are using staff engagement and training to highlight behaviors that can reduce the use of paper, water and electricity. Staff are forming green groups to share lessons and develop joint projects to take advantage of economies of scale. One agency embraced paper-free communication and formed a 'Paperless Action Team' resulting in a 33% reduction in paper consumption.

- **Computers and servers efficiency upgrades:** Some organizations have set targets to reduce energy use per workstation. Others are investigating the use of pooled server stations and virtualization. One agency achieved their goal of a 10% reduction two years early, and workstation use is now at 6394 kWh per annum (down from 7093) – a reduction of 1 million kWh per annum. Another agency procured more efficient computers and saved 2.5 million kWh of electricity per year.

- **Lighting:** Technologies include lighting retrofit and controls (e.g. motion sensors, timers and dimmers), LED lights, daylight harvesting, task lighting, and removing excess lighting in open and low-use areas. One organization is using daylight sensors in office areas, enabling two-thirds of lights to be turned off automatically when there is sufficient daylight. This resulted in savings of 62% in electricity used for lighting, around US$55,000 in costs, and 93 tonnes of CO_2eq over four months. Improved lighting has helped other organizations save 33-70% in associated costs. Some agencies are using passive design features that lower the need for artificial light by maximizing natural light (e.g. building orientation, light wells, translucent roofing materials)

- **Water:** Energy is used for pumping, heating and treating water. Organizations are improving water efficiency with updated plumbing fixtures (e.g. faucet aerators, dual flush toilets, push taps), solar water heating panels, rainwater, gray-water and sewage recuperation systems for irrigation, and by reporting leaks and drips to engineering. One agency installed a water flow reduction system and expects to save 16,000m^3 of water and avoid 1.8 tonnes CO_2 per year - with an attractive payback period of only six months.

As well as focusing on individual UN agency efforts, SUN and IMG are also working with regional hubs where UN facilities occupy large areas of building space. In Geneva the UN occupies 17 offices covering 550,000 square meters, making it one of the largest users of utilities in the city. In 2010 a memorandum of understanding was signed between SUN and the Canton of Geneva to improve the energy efficiency of UN buildings. In 2011 efforts will be focused on another regional hub of the UN – New York – with the aim of improving the environmental considerations of leased space via the piloting of a green lease model.

In 2010 INFM established a working group, supported by SUN, to develop best practice guidance on energy efficiency and other sustainability aspects of building management. The results will be delivered in 2011/2012.

UNDP: Greening the Bratislava office top to bottom

In a proactive sustainability initiative that UNDP is keen to see emulated elsewhere, the organization's Bratislava Regional Centre now feeds enough green renewable electricity into the grid to meet the needs of 11 Slovak households. Its rooftop photovoltaic system is the latest and most dramatic in a series of steps stretching back over a six-year period to reduce the office's environmental impact.

Windows have been replaced, lights switched over to more energy-efficient technology and a raft of office policies have been introduced. These include recycling, turning off computers every evening, reducing the consumption of water, electricity, heating and paper and raising staff awareness of the benefits of good green practice.

The public can even monitor the performance of the solar panels over the internet via a real time data display which shows the current and cumulative carbon dioxide savings, as well as the cash value of the electricity they are generating.

The solar power project cost 50,000 Euros, required nine licenses for approval, and took four months to implement. UNDP now earns 45 cents per kWh for the 'green power' the panels generate, thanks to the Slovak feed-in tariff for solar electricity entering the grid. To date, the solar panel station has generated 10,000 kWh of power, 4500 Euros in income and has saved 5.5 tonnes of carbon dioxide. At current rates the installation will pay for itself in 10 years, as well as delivering a significant reduction in greenhouse gas emissions. Additional green measures in the Bratislava office have resulted in a 6% reduction in electricity consumption, a 1.7% saving on water and a 5% cut in paper usage from 2008 to 2009, with recycled paper now the norm.

6. Staff engagement and Greening the Blue

Engaging staff is critical if efforts to make the UN more sustainable are to succeed. The UN employs over 210,000 staff members, all of whom consume resources, create waste and emit carbon dioxide through their day-to-day work.

Greening the Blue (www.greeningtheblue.org) is a new website that aims to engage UN staff and external stakeholders in what's happening to make the UN more sustainable. The website includes campaign details of the emissions of each UN agency, guidance documents and news stories from across the UN system and materials for UN staff with details of how to get involved. It also features an animation showing Flip and Norma – two UN staffers – being green, often with hilarious consequences.

Greening the Blue has done much to raise the profile of sustainability within the UN system. The launch of the website was actively supported by 24 UN organizations, 40 staff have signed up to become Green Champions, and the UN Communications Group has committed to support *Greening the Blue* and include sustainability pages on every UN organization and specialized agency website.

Greening the Blue has also gained recognition beyond the UN system. In the first six months the website was visited by more than 30,000 people from 189 countries, and over 450 people signed up to the Facebook page, with 330 following on Twitter. The website has been reported in mainstream media including La Stampa and USA Today, and has been discussed in the blogosphere thanks to articles on The Huffington Post and Triple Pundit.

In September 2010 *Greening the Blue* won the award for Best Website at the International IVCA Clarion Awards.

"Today, in conjunction with this year's observance of World Environment Day, we take another step forward with the launch of a new website, www.greeningtheblue.org. The site brings together the latest information about what the UN system is doing and offers suggestions for individuals and organizations to get involved."

UN Secretary General Ban Ki-moon
- 4 June 2010

UNHQ: Illuminating ideas from New York

In October 2010 hundreds of UN staff from different Departments took action in New York as part of a global campaign called 350. The organizing team swapped 350 incandescent light bulbs for compact fluorescent bulbs that are 75% more energy efficient and last up to six times longer. It is anticipated that the change will save around 93 tonnes of CO2 throughout the lifetime of the 350 compact fluorescent lamp bulbs.

In order to further limit waste, the redundant incandescent bulbs were used to build a huge '350' sign that was displayed around the New York offices to build more staff awareness of this issue.

7. Procurement

Embedding social and environmental considerations into procurement practices is essential if the UN system is to make its operations more sustainable.

The HLCM Procurement Network defines sustainable procurement as "*practices that integrate requirements, specifications and criteria that are compatible and in favour of the protection of the environment, of social progress and in support of economic development, namely by seeking resource efficiency, improving the quality of products and services and ultimately optimizing costs.*"

The EMG and SUN, in collaboration with the Procurement Network, are engaged in various activities to support sustainable procurement including the development of practical tools and the provision of advice and training to procurers and requisitioners. Achievements in 2010 included:

- More than 230 UN staff developed their skills in sustainable procurement as a result of 11 training sessions in Rome, Panama, Bangkok, Berne, Geneva, Copenhagen and Lima. 87% of participants said the training helped them put sustainable procurement into practice in their organization.
- A growing collection of best practice was made available on *Greening the Blue*.
- Guidelines on sustainable procurement were developed for lighting, furniture, paper and stationary, vehicles, ICT, cleaning products, catering and offsets.
- UNOPS published a *Guide to Environmental Labels: For Procurement Practitioners of the United Nations System*

The number of Procurement Network members actively participating in developing tools for sustainable procurement increased from 4 in 2008 to 20 in 2010. Furthermore, 15 out of the 16 draft emissions reduction strategies, received by the end of 2010, identify sustainable procurement as a means of meeting sustainability commitments in their respective organizations.

Sustainable procurement is not without its critics and remains a controversial issue. The UN General Assembly is still divided between supporters of the concept and those who have concerns that, if not appropriately applied, sustainable procurement could threaten access by developing country suppliers to UN markets. A final discussion on these issues is planned for 2013.

FAO, IFAD and WFP: Powering ahead together

In a true example of collaborative working, the three Rome-based UN agencies (FAO, IFAD and WFP) have been working together to develop joint purchasing of electricity for their offices based entirely on the Renewable Energy Certificate System (RECS).

The project was started five years ago by the three organizations with a test run of 25% of total electricity based on RECS. All other criteria, for example compliance with technical requirements and cost, remained standard for electricity tenders.

Purchasing electricity through RECS proved to be not much more expensive and, in 2008, the agencies went for 100% of their electricity purchased through RECS at the additional cost of 10,000 Euros on a bid of 1,880,000 Euros: only 0.5% more. Had the organizations decided to purchase energy from non-renewable sources and then buy carbon credits to offset the emissions, their costs would have been far greater. In 2010, for example, they would have had to pay more than 163,000 Euros (assuming US$30 per tonne), making offsetting almost 16 times more expensive than purchasing RECS.

All electricity tenders since 2008 have stipulated the 100% RECS requirement and Biodiversity International joined the tender process for the 2011 contract, which is likely to be in excess of 2.27 million euros for the four agencies, based on previous consumption patterns.

The experience proves that additional criteria do not necessarily pose problems for electricity providers, though time is required to adapt the UN's tendering procedures and reconcile the rules of different organizations. That said, once the procedures have been established, the hardest part is done and the tenders are easier in subsequent years: a proof (if needed) that doing things together delivers economies of scale and that sustainable choices don't necessarily require huge extra upfront costs.

In a joint statement, facility managers from the three UN agencies showed their support for the scheme saying: "Investing in renewable energy drives the market toward developing sustainable energy sources, reducing emissions and our need to purchase offsets. It's a better solution environmentally – and it is clearly preferable financially as well."

8. Offsets

The UN Climate Neutral Strategy calls upon all UN organizations to 'consider the implications and explore budgetary modalities of purchasing carbon offsets so as to eventually reach climate neutrality'. The IMG on Sustainable Management, with support from the SUN facility, was therefore tasked with providing a recommendation to EMG on how the UN system should proceed with offsetting.

Early in 2011 the IMG will publish a new document – *Carbon Credits: Recommendations for Selection and Procurement* – that will outline the criteria that any offsets under the UN Climate Neutral Strategy should adhere to (for example, all carbon credits should be issued under the Kyoto Protocol mechanism or similar UNFCCC mechanisms after 2012) – and also propose to EMG a process for deciding whether offsets should be procured by an organization. The final decision will vary from organization to organization and will be subject to how financing is organized and what mandates the executive office has been given by the governing body in each organization. A deadline for taking the decision will also be proposed.

The IMG supports offsetting as a complementary measure to reducing emissions for organizations wishing to become truly climate neutral. Offsetting is, however, still an issue under discussion and one that will be tackled in different manners on account of the costs it will impose on agencies and the uncertainty over whether the governing body would endorse it.

Accompanying the document will be the *Guide for UN Organizations on How to Identify and Procure Carbon Offsets* which will provide detailed explanations about the different types of carbon credits, carbon markets and trading mechanisms, and what process and financing options may be considered to identify and procure offsets for the UN. The Guide also highlights a few lessons learned from offset procurement in different UN organizations.

In 2010 several UN organizations procured offsets for specific activities or events. These included the travel of the Secretary General, the UNFCCC COP16 meeting in Cancun and the second session of the Global Platform for Disaster Risk Reduction meeting of UNISDR. Other organizations have adopted policies to become climate neutral by certain dates, including ILO and UNEP.

On course with offsetting

When a UN organization decides to become climate neutral it has to engage in both reducing emissions and offsetting. It might not be feasible to reduce all emissions: some will remain. The remaining emissions can be 'offset'. Carbon offsetting is based on the fact that the impacts of greenhouse gases are not local, but global. Hence greenhouse gas reduction measures taken in different parts of the world will have similar climatic benefits. An entity can therefore support emission reduction initiatives elsewhere to 'offset' the emissions that it could not avoid.

Offsetting is done by purchasing carbon credits. Carbon credits are generated when projects that avoid the generation of new emissions or reduce existing emissions receive certification for the amount of emissions avoided or reduced. Any activity which reduces greenhouse gas emissions can be registered as a carbon offset project, for example energy efficiency measures, renewable energy production, carbon sequestration and methane capture. Carbon offsets are measured in tonnes CO_2eq. Offsets under the Kyoto Protocol mechanisms are required to also support sustainable development in the countries where the carbon credits are generated.

As an example, in 2008 UNEP adopted an ambitious Emission Reduction Strategy that targeted emissions in several areas and prescribed procurement of offsets to compensate for any remaining emissions. Emissions for 2008 amounted to 11,508 tonnes CO_2eq. These were compensated through procurement of carbon credits from two Clean Development Mechanism projects: one wind power project in India and one bio-energy project in Nicaragua. Both projects contributed to local employment, business development and improved local air quality. The total cost of offsetting was US$225,796 – less than 2% of the travel costs for UNEP in 2008.

9. Sustainability Management Systems

The UN Climate Neutral Strategy was adopted in the wider context of moving the UN system towards more sustainable operations, as announced by the Secretary General on World Environment Day 2007. In addition to delivering the commitments of the Strategy, the EMG has asked the IMG to develop a Strategic Plan for sustainable management in the UN. This should include:

- A mechanism for annual reporting on core sustainability indicators, including greenhouse gas inventories.
- A common Sustainability Management System that will support organizations in addressing key sustainability issues, including greenhouse gas emission reductions and offsetting.
- Coordination of work to address common sustainability issues such as training, procurement, budgeting, and support to common UN networks.
- Internal and external communication.

The IMG has established a Working Group on Sustainability Management in the UN to look into this, and will propose a strategic plan to the EMG in the second half of 2011. In 2010 the Working Group focused on developing a Sustainability Management System that would prescribe a small number of compulsory issues to be managed (including the climate footprint) by each organization, with a range of additional voluntary indicators to be adopted subject to each organization's priorities and capacity to address them. The Emission Reduction Strategies provide a useful starting point for UN organizations in identifying factors to be considered. Examples include energy use, water use, waste generation, training of staff on environmental, social and labour issues, and financial indicators for lifecycle investment.

An important partner to the IMG and SUN facility in developing a Sustainability Management System is the Umoja project, which is mandated to introduce a new Enterprise Resource Planning (ERP) system within the UN by 2013, thereby replacing hundreds of separate administrative applications with one solution. The objective of the cooperation between IMG, SUN and Umoja is to ensure that this new ERP system will also support the proposed Sustainability Management System.

The new ERP system will affect all UN offices connected to the UN Secretariat, but a number of UN organizations will continue using their own ERP systems. For this reason, the IMG Working Group on Sustainability Management is undertaking a review of renewal schedules for all ERP systems across the UN system, and is also preparing - as part of the Strategic Plan - a reference on minimum sustainable management support that new ERP systems should meet.

The IMG Working Group is also working closely with the EMG Consultative Process on Environmental and Social Safeguards in the UN system. The EMG process is mandated to propose a common approach for UN organizations in establishing safeguards to guarantee that social and environmental issues are considered in their external operations (as opposed to the IMG on Sustainability Management, which focuses on the UN's internal operations). The IMG and EMG have adopted a common approach to managing these issues and will continue to work together in the future.

10. Agency focus

Each UN organization is finding its own approach to sustainability. Below are two examples of how UN organizations are tackling the issue of in-house sustainability.

1. UNFPA

UNFPA – the United Nations Population Fund – is an international development agency that promotes the right of every woman, man and child to enjoy a life of health and equal opportunity.

In 2009 the Facilities and Administrative Services Branch established an initiative to coordinate and implement environmental activities. They completed a global greenhouse gas emissions inventory and used this data to identify emission reduction opportunities.

The UNFPA Climate Neutral Strategy, published in 2010, is based on an integrated Environmental Management System (EMS). The strategy includes measurable targets and goals, lines of responsibility for meeting those goals, individual action plans for each office location and a communications plan – including training – to improve employee engagement.

The strategy focuses on the areas that emit the greatest amount of greenhouse gas emissions. In each area targets have been set and activities listed to achieve the targets. On travel, for example, a target of reducing staff trips by 15% will be achieved by making better use of local staff, bundling missions and better use of e-communications. For facilities, a target of 40% reduction in greenhouse gases will be achieved, in part, by using renewable energy instead of fossil fuels.

Another target is to ensure at least 30% of procurement is done sustainably – for example by purchasing recycled paper, energy efficient equipment, non-toxic and biodegradable cleaning supplies.

Environmental training will be made compulsory for current staff and included in the induction training for all new staff. The intent is to convey to staff how daily activities relate to reducing greenhouse gases and that the topic is an important commitment of the organization.

2. UNEP

The United Nations Environment Programme (UNEP) is the voice of the environment within the UN system and has been climate neutral since 2008. In September 2010 UNEP published an ambitious new strategy to reduce its carbon footprint and pave the way towards a zero emissions future.

Headquartered in Nairobi, Kenya, UNEP committed to reduce its greenhouse gas emissions by 3% each year.

The Strategy emphasizes four outputs:

- An annual greenhouse gas inventory
- Reduced emissions & improved environmental performance in the following areas: travel; facilities; staff communication, awareness, incentives; procurement of products and services; environmental and social safeguards
- An Environmental Management System
- Annual procurement of offsets

One of the key targets is work-related travel. At present, air travel is responsible for over 85% of UNEP's carbon emissions. To reduce travel, more journeys will be taken by train and there will be a greater investment in e-conference technology.

Other commitments include: energy audits in offices with 10 or more staff; UNEP's Green Meeting Guide used as criteria for all meetings; adoption of a paperless policy for in-office communications; and staff shall undergo training on sustainable behaviours, including travel, office habits, procurement, and environmental safeguards.

Implementing the efficiency measures could save the organization an estimated US$800,000 per year.

Introducing the new strategy, UNEP's Executive Director, Achim Steiner, said:

"*These are bold ambitions for any organization with a workforce of over 1000, offices across the world and a busy international calendar involving implementing projects and policies and working with governments and other partners across Continents. But we have a responsibility to lead by example, and all UNEP staff are aware that becoming more sustainable today is the only way we can protect tomorrow – and if we can get this right it should generate economic savings too.*"

11. Challenges

Moving any organization towards sustainability is not without challenges. It typically requires vision, leadership and commitment from all staff. The UN shares the challenges faced by most international organizations, and has some that are specific, reflecting its unique mandate and structure. These are summarized below:

Mandate

The mandate for moving UN organizations towards climate neutrality and beyond – towards sustainability – is clearly established by the CEB adoption of the UN Climate Neutral Strategy, but is not always well expressed or reflected by Member States. This challenge could be overcome in part through the approval of the Emission Reduction Strategies that are to be discussed and endorsed by each organization's senior management team and, often, their governing body. In addition the Joint Inspection Unit (JIU) report Environmental Profile of the UN System Organizations calls on the Secretary General and the General Assembly to provide more explicit and formal support to the work of moving the UN system towards sustainability.

Leadership

Embedding sustainability into an organization is far easier when the work has the support of both senior and middle managers. Some Sustainability Management Focal Points are able to proceed with the full support of managers who recognize the benefits of their work. They are well resourced and have access to senior decision makers. Others find that they have to spend much of their time explaining the importance of sustainability to the organization and the benefits associated with it. These Focal Points find it difficult to get access to decision makers and resources. The support provided by the IMG and SUN to individual organizations, and the dialogues taking place through the EMG, the High Level Committee on Management and the High Level Committee on Programmes, will hopefully raise awareness and increase support at all levels.

Conflicting priorities

Although all UN organizations are committed to the UN Climate Neutral Strategy, it remains one of many competing priorities. Where resources are lacking – staff time in particular – it is more difficult for Focal Points to develop the greenhouse gas inventories, draft Emission Reduction Strategies, and engage the interest and support of colleagues. The measures mentioned above – to gain more explicit mandates and increase awareness about the importance of this work, will strengthen the case for assigning sufficient resources to the climate neutral and sustainability effort.

Budgeting

Standard UN financial systems do not recognize return on investments, especially beyond the bi-annual budgeting cycle, meaning that the cost savings resulting from many sustainability investments over time are not captured. Furthermore, the UN's accounting rules restrict the financing of costs in one area from relevant savings in another. An example of this would be financing investments in improved video-conference equipment in order to reduce costs from travel. SUN has conducted an initial study to collect examples of where sustainability investments have been made successfully, and will seek advice on the extent to which this issue can be addressed. In addition the JIU recommended in 2010 that common guidelines be established to record expenses incurred in implementing the UN Climate Neutral Strategy (through reducing CO_2 emissions and purchasing carbon offsets) in the proper budget lines.

12. Next steps

There is still a long way to go before the UN Climate Neutral Strategy is fully implemented. Whilst the first years focused on setting up a system for developing consistent greenhouse gas inventories, the next years will be primarily concerned with reducing emissions and broadening the scope of the work to include other sustainability issues relating to the UN's operations.

The next immediate step for all UN organizations is to develop and adopt Emission Reduction Strategies. Based on their greenhouse gas inventories and coupled with internal priorities, the Emission Reduction Strategies will provide road maps for UN organizations in becoming more sustainable and efficient in their operations.

Complementing the work on the UN's in-house sustainability management is the parallel effort by the UN Environment Management Group to develop ways of embedding sustainability into the UN's external work (e.g. in projects and missions) by applying environmental and social safeguards to relevant decision-making processes.

Meanwhile the Issue Management Group on Sustainability Management and the Sustainable United Nations facility will continue to work with various interagency networks to review common policies for travel and facilities management. They will provide guidance on how these can be adapted to be more sustainable, and seek out examples of where this is already happening.

Another key focus for the coming years is identifying ways of integrating sustainability into daily operations. Sustainability management in the UN should no longer be treated as an individual project with temporarily assigned staff, but should be recognized as a permanent function, fully supported by management and administrative systems. The Issue Management Group's work to develop a strategic plan for sustainability management in the UN, and Umoja's work to integrate sustainability functions with the new enterprise resource planning system, are both contributing to this end.

Arguably more important than any of the above, however, is the work to truly cement the understanding of, and support for, the climate neutral effort among all UN staff and other stakeholders. Without this support, the chances of success are slim. Climate neutrality and sustainability are not only about doing the right thing, but – as Secretary General Ban Ki-moon has repeatedly pointed out – are ultimately about the UN's credibility as an organization in the twenty-first Century.

Annexes

Annex I: Statement adopted by the UN System Chief Executives Board for Coordination (CEB) at its October 2007 session

Moving towards a climate-neutral UN

Having taken note of the report entitled "Strategy for a climate-neutral UN" prepared by the Environment Management Group;

Conscious of the need for our broader engagement to integrate the principles of sustainable development into our daily work routines and activities;

Recognizing that leading by example will contribute to the ability of the UN to better support developing countries – those most vulnerable to climate change;

Commending efforts by those who have already taken initiatives to offset their emissions before the adoption of this common approach; and

Noting that there can be significant cost savings to the UN from energy efficiency and other mitigation measures;

We, the Heads of the UN agencies, funds and programmes, hereby *commit* ourselves to moving our respective organizations towards climate neutrality in our headquarters and UN centres for our facility operations and travel.

In particular, by the end of 2009 we will:

- Estimate our greenhouse gas emissions consistent with accepted international standards;
- Undertake efforts to reduce our greenhouse gas emissions to the extent possible;
- Analyse the cost implications and explore budgetary modalities – including consulting with governing bodies as needed – of purchasing carbon offsets to eventually reach climate neutrality.

We make this commitment with a view to achieving the goal of climate neutrality at a date to be set in the future, by reducing emissions first and then offsetting the remainder through the purchase of offsets from the Clean Development Mechanism, that meet high international standards of additionality, transparency and verification and which promote sustainable development in developing countries.

We support the further development and implementation of a UN system-wide strategy for reaching climate neutrality; for monitoring our collective efforts; and for reporting back on progress made and difficulties encountered.

- October 2007, New York

Annex II: Greenhouse gas inventory methodology

1. General approach

The UN greenhouse gas inventory is compiled and reported using a suite of tools, databases and guidelines, following internationally recognised standards, but altered to suit UN specific needs. Structured spreadsheets in English, French and Spanish are used to collect data.

The methodologies and databases are based on guidance from the Greenhouse Gas Protocol, the IPCC, the US Environmental Protection Agency, the International Energy Agency and a range of other internationally recognized sources. Energy content of fuels or energy-based emission factors[2] are based on Lower Heating Values (LHVs) or net calorific values of the fuel[3]. Locally available Emission Factors are more accurate and representative of reality, than more generic national or international averages. Hence, wherever they were available, local Emission Factors were given preference.

The general method used, with a few exceptions, is:

Mass of GHG emitted = Activity Rate x Emission Factor

Emission estimates of individual gases are multiplied by their Global Warming Potential (GWP) values, to create common comparable units – CO_2eq (e.g, kg or tonnes CO_2eq of CH_4). The total climate impact from an emission category or a reporting office or facility is thus measured as CO_2eq.

For each emission category, the CO_2eq of all relevant greenhouse gases (GHGs) are summed up, to find the total emissions. For example, in the case of stationary combustion in a boiler, the CO_2eq of CO_2, CH_4 and N_2O emissions are summed up to find its total emissions.

The values for all emission categories are aggregated to the UN organization level to determine the total emissions of each UN organization, and further to the UN level to find the overall impact of the UN system.

2. Emission sources

The section below describes the steps used to estimate the mass of relevant GHGs emitted from the various categories. The conversion to CO_2eq and their aggregation uses general procedures described above.

2.1 Purchased electricity

Emissions of CO_2, CH_4 and N_2O from electricity purchased from external sources are calculated using annual purchase quantity and country-specific emission factors based on average mix of fuels used in electricity production. The method should be implemented separately for CO_2, CH_4 and N_2O.

GHG emissions (e.g, kg of CH_4 emissions) = Amount of electricity purchased (e.g., kWh) X Country-specific emission factor (e.g, kg of CH_4 per kWh)

Where reporting offices do not have access to electricity consumption data, proxies are used. For example, when an office shares space in a building which only meters electricity overall but not for individual offices, the proportion of the building that is occupied by the reporting entity is used as a proxy for the proportion of the total electricity used by that entity.

2.2 Stationary combustion

This refers to emissions from the combustion of fuels in boilers, diesel generators and other fuel technologies based in a fixed location. Emissions are estimated by multiplying annual consumption of fuel with default emission factors for CO_2, N_2O and CH_4. The method should be implemented separately for CO_2, CH_4 and N_2O.

GHG emissions = Amount of fuel combusted • Fuel- and GHG-specific emission factor

For example, kg of N_2O emissions from a diesel generator = litres of diesel combusted per year x kg of N_2O/litre of diesel

2.3 Refrigerants

Refrigeration and Air-Conditioning (RAC) equipment, such as refrigerators, freezers, cold storages and air conditioners, leak refrigerants during installation, maintenance, operation and disposal. While the amounts are generally small, the GWPs of these gases are high, and therefore their influence on climate change cannot be ignored. Perfluorocarbons (PFCs) and hydrofluorocarbons (HFCs) are two classes of refrigerants with high GWPs that are covered by the Kyoto Protocol and come within the common minimum boundary of the UN GHG Inventory. Annual purchase quantity of the refrigerants (HFCs and PFCs) is assumed to be equal to annual leakage quantity of the refrigerants and used as its proxy.

GHG emissions per year from a refrigerant (e.g, HFC) = Annual purchase quantity of the refrigerant (e.g, HFC)

In cases where the refrigerant type is unknown, it is assumed to be HFC. If the refrigerant quantity purchased is unknown, an area-based standard leakage factor has been applied (e.g, mass of HFC leaked per square metre of air-conditioned area). Refrigerants that are Ozone Depleting Substances and have significant GWPs, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), do not come under the common minimum boundary of the UN GHG Inventory and are reported under Optional Emissions.

[2] 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.

[3] Heating values measure the energy content of fuels and are expressed using either Higher Heating Values (HHVs), also known as Gross Calorific Values, or Lower Heating Values (LHVs), also known as Net Calorific Values. Before emissions can be calculated properly, the fuel consumption data and corresponding emission factors must be expressed in the same way, that is, either in HHV units or in LHV units, but not both.

2.4 Purchased steam

Emissions of CO_2, CH_4 and N_2O due to steam purchased from external suppliers are estimated by converting the annual steam purchase quantity into equivalent fuel quantity consumed in the boiler at the supplier's premises. The methodology is a simplified version of that used the previous year. The method should be implemented separately for CO_2, CH_4 and N_2O.

Annual GHG Emissions = (Annual steam consumption in energy terms/0.8) x Fuel and GHG specific Emission factor

Here, 0.8 refers to the default fuel to steam conversion efficiency of 80% assumed. Wherever the fuel type was not known, natural gas was assumed.

For example, tonnes of CO_2 emitted due to purchased steam per year = (giga joules of steam consumed per year/0.8) x (tonnes of CO_2/giga joules of natural gas)

2.5 Air travel

The ICAO Carbon Emissions Calculator is used to calculate CO_2eq emissions from air travel. The calculator uses the best publicly available industry data and takes into account factors such as aircraft types, route specific data, passenger load factors, cargo carried and class of travel. Travel in premium class is assumed to emit double the emissions emitted for travel in economy class

2.6 Public transport

Emissions of CO_2, CH_4 and N_2O are estimated from the use of public transport such as passenger trains, buses, cars, ferry by personnel on official travel. Vehicle type and distance (km) traveled on a per passenger basis are used along with default vehicle specific emission factors, to calculate emissions.

CH_4 and N_2O emissions depend on combustion and emission control technologies, amongst other factors, apart from fuel characteristics. The CH_4 and N_2O emissions are calculated separately following:

Annual GHG emissions = Distance traveled by passenger per year • Vehicle- and GHG-specific emission factor

For example, tonnes of CH_4/year from travel by train = passenger km traveled on train/year x grams of CH_4/ passenger km travelled by train

2.7 Vehicles (mobile sources)

GHG emissions from vehicles (mobile sources) include CO_2, CH_4 and N_2O from UN-owned or leased vehicles such as cars, trucks, buses, trains, marine vessels and airplanes. The annual consumption of fuel and/or distance travelled, as well as the vehicle type/transport mode are used to estimate emissions. The emissions from vehicle air conditioning units are also estimated and reported as HFC, under Refrigerants.

<u>For agencies/vehicles that reported fuel consumption data</u>

Annual GHG emissions = Amount of fuel combusted per year • Fuel and GHG-specific emission factor

This method is implemented separately for CO_2, CH_4 and N_2O.

For example, tonnes of CO_2 emissions per year = giga joule of diesel combusted per year • tonnes of CO_2/giga joule of diesel

<u>If Distance traveled data is provided</u>

Annual GHG emissions = Distance traveled by vehicle per year • Fuel economy factor • Fuel-specific emission factor

This method is implemented separately for CO_2, CH_4 and N_2O.

For example, kg of CH_4 emissions per year = km travelled by vehicle per year • standard litres/km data for the vehicle • kg of CH_4/litre of diesel.

<u>If the reported data covers both fuel consumption and distance travelled</u>

The methodology based on fuel consumption figures is used

2.8 Process

Process-related emissions include those from physical or chemical processes, as opposed to emissions from fuel combustion or fugitive emissions of refrigerants. Annual releases of the six Kyoto Protocol gases (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6) are accounted for.

2.9 Optional emissions

These include emissions from sources outside the common minimum boundary of the UN GHG inventory. As well as the six Kyoto Protocol gases, this includes ozone depleting refrigerants with significant global warming potential such as CFCs and HCFCs. As these emissions could be from various sources, no specific methodology is prescribed. The quantity of the GHGs is reported directly.

Annex III: Acronyms

CEB	UN Chief Executives Board for Coordination
CFC	Chlorofluorocarbon
CH_4	Methane
CO_2	Carbon dioxide
CO_2eq	Carbon dioxide equivalent
EMG	Environment Management Group
ERP	Enterprise Resource Planning
GHG	Greenhouse Gas
GWP	Global Warming Potential
HCFC	Hydrochlorofluorocarbons
HFC	Hydrofluorocarbon
HHV	Higher Heating Value
HLCM	High Level Committee on Management
HLCP	High Level Committee on Programmes
IATN	Inter-agency Travel Network
IMG	Issue Management Group
INFM	Inter-agency Network of Facilities Managers
IPCC	Intergovernmental Panel on Climate Change
IVCA	International Visual Communications Association
JIU	Joint Inspection Unit
kg	Kilogram
km	Kilometre
kW	Kilowatt
kWh	Kilowatt-hour
LHV	Lower Heating Value
N_2O	Nitrous Oxide
PFC	Perfluorocarbon
RAC	Refrigeration and Air-Conditioning
RFI	Radiative Forcing Index
SF_6	Sulfur hexafluoride
SUN	Sustainable United Nations
US$	United States Dollar

UN entities

CBD	Secretariat of the Convention on Biological Diversity
CTBTO	Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization
DFS	Department of Field Support
DPA	Department of Political Affairs
DPKO	Department of Peacekeeping Operations
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	The Food and Agricultural Organization of the United Nations
IAEA	International Atomic Energy Agency
ICAO	International Civil Aviation Organization
IFAD	International Fund for Agricultural Development
ILO	International Labour Organization
IMO	International Maritime Organization
ITC	International Trade Centre
ITU	International Telecommunication Union
OHCHR	Office of the High Commissioner for Human Rights
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNCCD	United Nations Convention to Combat Desertification
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UN-HABITAT	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
UNHQ	United Nations Headquarters
UNICEF	United Nations Childrens Fund
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women
UNISDR	United Nations International Strategy for Disaster Reduction
UNITAR	United Nations Institute for Training and Research
UNODC	United Nations Office on Drugs & Crime
UNOG	United Nations Office in Geneva
UNON	United Nations Office in Nairobi
UNOV	United Nations Office in Vienna
UNOPS	United Nations Office for Project Services
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
UNU	United Nations University
UNV	United Nations Volunteers
UNWTO	World Tourism Organization
UPU	Universal Postal Union
WBG	World Bank Group
WFP	World Food Programme
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WTO	World Trade Organization

Annex IV: Who's who

The Environment Management Group (EMG)

EMG is a UN system-wide coordination body. Its membership consists of the specialized agencies, programmes and organs of the UN, including the secretariats of the Multilateral Environmental Agreements plus the Bretton Woods institutions and the World Trade Organization. It is chaired by the Executive Director of UNEP and is supported by a secretariat hosted by UNEP in Geneva.

The Issue Management Group (IMG) on Sustainability Management

The IMG on Sustainability Management includes representatives from most UN organizations, each nominated by their Head of Organization. These IMG focal points meet several times a year to agree on UN-wide processes for improving the sustainability performance of the UN. You can find out more about the IMG here.

The Sustainable United Nations (SUN) facility

The SUN facility was established in 2008 with the aim of supporting UN organizations, as well as organizations outside the UN system to move towards climate neutrality. Today, SUN supports the IMG on Sustainability Management and leads the UN's efforts to measure and reduce its environmental impacts in cooperation with the EMG. SUN also manages the *Greening the Blue* website. The SUN team sits within UNEP and is based in Paris.

The High Level Committee on Programmes (HLCP)

HLCP is the principle mechanism for system-wide coordination in the programme area in the UN system. It is responsible to the UN Chief Executive Board for Coordination (CEB) for fostering coherence, cooperation and coordination on the programme dimensions of strategic issues for the UN System.

High Level Committee on Management (HLCM)

HLCM promotes harmonization of business practices across the UN system including general management issues, to ensure management coherence from global to country level. It is charged with identifying and analysing administrative management issues of common concern, which require a system-wide response and is authorised to take decisions on behalf of the Executive Heads and to identify, promote and coordinate management reforms that will improve services, achieve productivity improvements and increase efficiency and effectiveness across the UN system.

Inter-agency networks

A number of inter-agency groups exist to bring together experts from different UN organizations to share their experiences. These include networks for procurement, travel, communications and facilities management. The status of these networks varies. The procurement network for example, reports to the HLCM, while the travel network is more loosely connected to the formal structures in UN.

Annex V - Detailed emissions table

	Vehicles (mobile sources)	Stationary combustion	Refrigerants	Purchased electricity	Purchased steam	Air travel	Public transport	Process	Optional emissions
UN Agency	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq
CBD*	2.8	0.0	0.0	152.7	1709.9	1,555	4.8	0.0	79.0
CTBTO	11.7	1.0	69.4	44.4	394.1	1,744	32.9	0.0	13.0
DFS*	172.3	237.4	88.3	2300.1	0.0	276	0.0	0.0	0.0
DPA**	4936.9	6031.2	459.6	509.9	0.1	6,289	0.0	0.0	919.9
DPKO*	153339.4	254338.3	65329.2	36992.8	0.0	456,010	6.5	0.0	7017.333
ECA	181.5	29.8	33.8	75.6	394.1	4,986	0.0	0.0	162.0
ECE*&***	0.0	0.0	0.0	0.0	0.0	725	0.0	0.0	0.0
ECLAC	25.7	259.2	0.0	826.3	0.0	2,772	0.2	0.0	96.1
ESCAP	16.1	18.8	13.0	6396.0	0.0	1,244	0.0	0.0	0.0
ESCWA	35.5	28.6	57.2	3152.1	0.0	773	23.9	0.0	0.0
FAO	0.0	564.6	389.4	4844.7	0.0	26,066	0.0	0.0	86.8
IAEA	129.9	6.3	177.0	3518.8	2495.0	12,595	2.2	0.0	117.3
ICAO	62.9	822.8	3.3	2412.1	0.0	2,339	51.6	0.0	185.1
IFAD	21.4	277.5	21.2	1515.8	0.0	3,253	0.0	0.0	0.0
ILO	426.4	21.0	0.0	1283.7	0.0	9,244	0.0	0.0	0.0
IMO	5.7	0.0	75.1	2336.3	790.0	968	17.9	0.0	0.0
ITC	207.0	128.0	0.0	148.0	0.0	2,845	0.0	0.0	0.0
ITU	14.9	0.0	11.7	210.6	810.4	2,215	13.2	0.0	0.0
OHCHR	12.1	296.2	1.6	56.0	0.0	4,098	0.0	0.0	0.0
OPCW	43.2	0.3	10.4	1017.5	101.7	3,737	3.5	0.0	8.9
UN Geneva	61.1	3318.8	0.0	169.5	0.0	11,587	32.5	0.0	0.0
UN Nairobi	186.0	77.8	9.2	957.9	0.0	619	0.7	0.0	0.0
UN Vienna/UNODC	5.3	0.6	75.8	1450.4	1072.8	2,532	0.1	0.0	49.8
UNAIDS	649.1	641.6	72.3	1058.5	45.4	4,832	32.1	0.0	2.9
UNCCD	5.0	0.0	19.2	0.0	78.9	1,140	2.4	0.0	0.0

	Vehicles (mobile sources)	Stationary combustion	Refrigerants	Purchased electricity	Purchased steam	Air travel	Public transport	Process	Optional emissions
UN Agency	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq	tonnes CO_2eq
UNCTAD***	0.0	202.4	34.1	14.4	0.0	3,130	0.0	0.0	13.4
UNDP	7475.0	5625.0	2116.0	14683.0	1729.0	23,585	423.0	0.0	0.0
UNEP	119.4	36.5	60.2	766.0	16.7	11,435	36.2	0.0	0.0
UNESCO	675.8	2041.5	196.3	2560.3	347.3	11,871	244.1	28.5	101.7
UNFCCC	2.8	0.0	35.9	0.0	6.3	1,283	35.4	0.0	278.5
UNFPA	4420.5	1715.9	513.2	3057.7	319.3	9,560	81.9	0.0	0.0
UNHABITAT	189.6	13.0	12.5	172.6	0.0	3,661	8.6	0.0	0.0
UNHCR	9.3	193.5	20.9	88.1	0.0	2,281	0.0	0.0	0.0
UNHQ	209.5	25.5	2064.4	24768.9	52950.2	40,650	334.4	0.0	1413.3
UNICEF*	3.6	0.0	0.0	3244.7	0.0	6,316	0.0	0.0	0.0
UNIDO	1540.7	342.1	96.8	1506.7	584.9	7,015	40.5	0.0	67.3
UNIFEM	9.6	8.3	32.1	710.5	0.0	2,838	0.4	0.0	0.0
UNISDR	0.0	20.8	0.0	1.3	0.0	543	0.0	0.0	0.0
UNITAR	0.0	11.2	4.2	2.9	0.0	525	0.0	0.0	0.0
UNOPS	2531.2	1959.6	64.3	1170.7	138.1	3,378	68.7	0.0	361.4
UNRWA	4691.4	1968.5	79.4	2601.8	0.0	456	0.0	0.0	345.0
UNU*	0.0	0.0	0.0	907.4	7.9	406	0.0	0.0	0.0
UNV	1.7	0.0	0.0	0.0	141.9	251	11.0	0.0	0.0
UNWTO	15.1	102.5	0.0	143.7	0.0	289	1.3	0.0	0.0
UPU	6.4	640.7	22.0	26.2	0.0	359	7.0	0.0	355.0
WFP	33043.1	15360.9	1006.5	9505.5	0.0	31,262	343.9	0.0	1086.6
WHO	13.7	2270.7	87.2	914.1	237.5	25,926	97.5	0.0	60.5
WIPO	322.2	144.9	289.7	1416.9	1475.0	4,430	16.6	0.0	66.0
WMO	1.5	522.9	0.0	55.6	0.0	2,750	0.0	0.0	0.0
World Bank	1677.0	3225.0	2933.0	70854.0	0.0	108,086	0.0	0.0	0.0
WTO	12.6	424.2	0.0	99.9	0.0	5,240	3.0	0.0	0.0
TOTAL	**217523.8**	**303752.9**	**76551.4**	**210688.1**	**65846.7**	**868,116.2**	**1978.0**	**28.5**	**12873.4**
TOTAL minus DPKO	**64184.4**	**49414.7**	**11222.2**	**173695.4**	**65847**	**412,106.5**	**1971.6**	**28.5**	**5856.1**

Notes: * 2008 data , ** 2008 data amended for available locations, *** included in UN Geneva
The value 0.0 indicates either of the following: no emissions, data not reported, data is not available

In October 2007 the UN Chief Executives Board approved the UN Climate Neutral Strategy, which committed all UN agencies, funds and programmes to move towards climate neutrality within the wider context of greening the UN.

This report provides a progress update on implementation of the strategy. It includes details of the greenhouse gas emissions of 52 UN organizations, total emissions from the UN system in 2009, and details of plans to reduce them.

With a Foreword from Secretary General Ban Ki-moon, and a Preface from the UNEP Executive Director, Achim Steiner *Moving Towards a Climate Neutral UN* provides the latest information on sustainability within the UN.

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