![International Trade Centre logo]

Emissions Reduction Strategy

An ITC strategy to deliver measures to reduce greenhouse gas emissions in a way that is effective and efficient

15th August 2011

Prepared by ITC's Trade, Climate Change and Environment Programme (TCCEP) in coordination with the Division for Programme Support (DPS)

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Background

UN's Greening the Blue

In view of the challenges posed by climate change, the Secretary General of the UN has asked all UN agencies to "walk the talk" and to "lead by example". In 2007, the UN Chief Executive Board adopted a Climate Neutral Strategy, committing all UN organisations, funds and programmes to move towards climate neutrality. This is to be achieved through three courses of action under the umbrella programme Greening the Blue:

1. Prepare annual greenhouse gas (GHG) inventories for each organization.
2. Reduce GHG emissions from each organization.
3. Consider purchasing offsets to compensate for emissions which cannot be avoided.

ITC is therefore obliged to provide data annually on its GHG emissions from travel and buildings. It is also required to prepare an Emission Reduction Strategy by the end of July 2011 and submit to the UN Issue Management Group on Sustainability Management (IMG).

The ITC Emissions Reduction Strategy document

This document describes the carbon footprint of ITC (Section 1) and what actions ITC is taking to reduce its emissions (Section 2). Section 3 sets out issues for discussion when considering further actions in 2012 for reducing ITC's carbon footprint.

The report does not discuss carbon offsetting as ITC is not yet in a position to buy carbon offsets.

The guiding principle of this ERS is that measures should be effective (they actually result in emissions) and are efficient (with low administrative/transaction costs).

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The authors gratefully acknowledge the comments on earlier drafts from Amanda McKee, the WTO's ERS coordinator during 2011.

Acronyms

CO_2eq	CO_2 equivalent, usually measured in tonnes or kilograms
CSR	Corporate Social Responsibility
CSS	Central Services Support
ERS	Emissions Reduction Strategy
FAO	Food and Agriculture Organisation
FSC	Forest Stewardship Council
GEF	Global Environment Facility
GHG	Greenhouse gas
ICF	Internal Clearance Form used at ITC
IFC	International Finance Corporation
ILO	International Labour Organisation
IMG	Issue Management Group on Sustainability Management
ICAO	International Civil Aviation Organisation
IOG	International Organisations Geneva
IPCC	Intergovernmental Panel on Climate Change
ISDR	International Strategy for Disaster Reduction
MT	Metric Tonne
TCCEP	Trade, Climate Change and Environment Programme
SBC	Secretariat of the Basel Convention
SCBD	Secretariat of the Convention on Biological Diversity
SUN	Sustainable United Nations
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organisation
UNITAR	United Nations Institute for Training and Research
UNOPS	United Nations Office for Project Services
UNV	United Nations Volunteers
UPU	Universal Postal Union

Executive Summary

E.1 ITC's Emissions of Greenhouse Gases

ITC emitted 3,328 MT of CO_2 equivalent emissions in 2009, up from 2,912 MT in 2008. This was the 13th highest of all 50 UN agencies[1].

Over the two-year period, the *carbon intensity of ITC's delivery*, i.e. the amount of CO_2 equivalent emitted per USD delivery, remained the same. This was despite improvements in the energy efficiency of building and IT use.

Travel constituted the vast proportion of emissions, making up 85% with the remaining 15% from buildings use (8%) and commuting (7%).

65% of km travelled is in business class. The SUN group (responsible for sustainability issues in the UN) and IATA estimates that travelling economy results in 50% less emissions because of the less space taken up in the plane.

E.2 ITC's mitigation actions to date and ongoing

Travel
ITC has:

- Introduced videoconferencing as an alternative to travelling to meeting.
- Instructed travel agents to provide information on the carbon emissions from each journey.

The impact these measures have had on emissions reductions has not been evaluated.

Facilities management
Between 2003 and 2009, investments have been made in energy efficiency in both buildings and IT. These measures have resulted in a 13% drop in emissions from 319 MT to 276 MT.

It is straightforward to predict and monitor the impact of investments in energy efficiency in facilities and IT. These have resulted in reductions to date.

There is scope for continued investments in energy saving measures, in particular those with a short payback period, for example, the installation of technologies to switch off electronic devices (computers) at night and increased efficiency in the server room.

Staff Commuting and ITC vehicle fleet
ITC has:

- Increased the number of bicycle parking spaces available.
- Replaced one official vehicle by a hybrid vehicle.

The UN provides a 10% subsidy on TPG annual public transport passes.

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[1] In 2010, ITC recorded its highest ever km travelled by air.

The cost of ITC parking is considerably lower than the market rate due in part to UN subsidizing the full cost of staff parking.

CSS/IT services

The Information Technology and Systems (ITS) section is implementing or considering several measures to optimize the Management Office Printing Services (MOPS) and thus reduce its energy use. These include:

- Reduce by 50% the number of small standalone printers.
- Induce a change in behavior towards printing by the implementation of a "swipe card" practice.
- Konica printers are already configured for a two-sided and gray scale print to mitigate paper waste and the use of color print.
- Consideration is given to a "cost recovery" system.

CSS/Procurement

Measures taken to date include:

- Negotiations with the suppliers to have a broader offer of green materials.
- Encourage purchase of FSC certified paper.
- Encourage purchase of green office supplies.
- Contract for printing publications in Europe and respect EU environmental standards.
- Furniture built from recycled materials.
- Recycling or donating the old equipment.

E.3 Issues to discuss for mitigation for 2012 and beyond

Business and moral case

From a business point of view, there is a strong case for cutting emissions, both in terms of positioning the organization as a "green leader" but also reducing operational costs (and thus increasing cost effectiveness of delivery).

From a moral point of view, the case for emissions reductions is clear – developing countries are most adversely affected by climate change and have the least capacity to adapt. There is also a negative impact of emissions today on future generations.

Targets

The UN Climate Neutral Initiative has not set a goal for organizations to reduce emissions, but some organisations however have set their own targets to reduce overall emissions. UNEP has set a target of 3% emissions reduction per USD of budget during 2012 and 2013 based on 2007 emissions.

Effectiveness and Efficiency

If ITC adopts targets, it needs to introduce measures that are effective (they result in reductions) and efficient (with low transaction costs). They must also be as predictable as possible and measurable so that reductions can be properly managed.

In general, mandatory measures are more efficient and effective that voluntary measures in reducing emissions. Voluntary measures are also difficult to monitor and thus predict their

effectiveness. Measuring the impact of mandatory measures however is straightforward and thus easy to predict the impact on emissions.

Measures for consideration in 2012

The main potential for emissions reductions at ITC lies in reducing travel. Providing trade-related technical assistance to developing countries currently relies heavily on travel.

Discussion is therefore required in how technical assistance can be delivered in a less carbon intensive way (i.e. with less travelling or at a lower class) and the implications for ITC's (and the UN's) business model that relies heavily on travel.

The most effective and efficient measure to reduce emissions at ITC would be through removing the business class privilege – it would reduce ITC's travel-related emissions by approximately 35%. However, this measures lies beyond the scope of Staff Rules.

Under the current framework of Staff Rules, potential measures include the increased coordination and management of travel plans at divisional level and encouraging economy class of travel.

The travel measures are mainly voluntary and do not involve any changes to Staff Rules. As they are voluntary, it is likely that their impact will be small in terms of emissions reductions and it is difficult to predict the scale of reductions that the measures will achieve.

The ERS will undertake further analysis of travel related measures within the scope offered by Staff Rules. The Team will also explore the scope and budgetary implications for measures in IT, Facilities Management, Procurement and Staff commuting.

1. ITC's Emissions of Greenhouse Gases

1.1 Calculations to date

Aggregate level

The total GHG emissions in 2008 amounted to 2,912 tonnes of CO_2 equivalent (tCO_2eq). Travel constituted the vast proportion of emissions, making up 90% with the remaining 10% from buildings use[2].

In 2009, total GHG emissions amounted to 3,328 tCO_2eq. Travel remained the major source of GHG emissions, making up 85% of total emissions. Buildings and facilities management accounted for 8%, and staff commuting and ITC vehicle fleet for the remaining 7%.

Without staff commuting and ITC vehicle fleet emissions, the total emissions reached 3,121 tCO_2eq in 2009, indicating a 7.2% overall increase in travel and buildings.

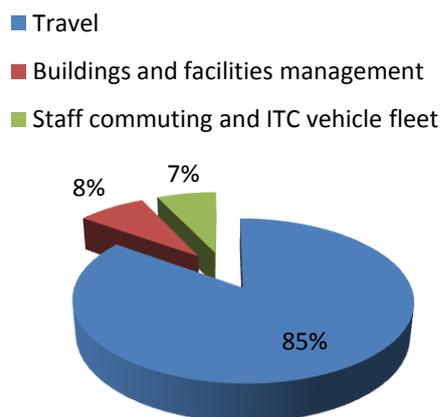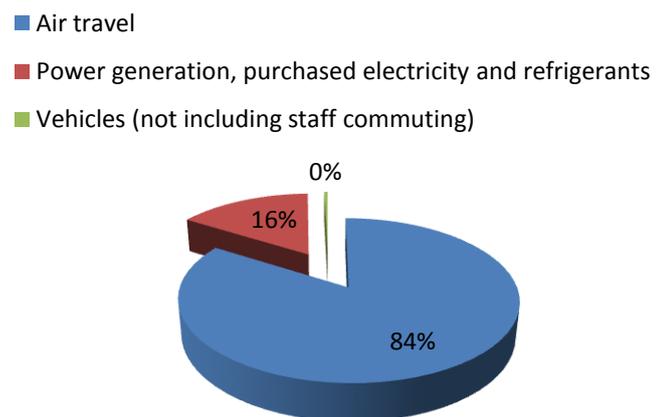**Figure 1: Share of ITC's GHG emissions in 2009**

- Travel
- Buildings and facilities management
- Staff commuting and ITC vehicle fleet

Figure 2: Share of ITC's GHG emissions in 2008

- Air travel
- Power generation, purchased electricity and refrigerants
- Vehicles (not including staff commuting)

Carbon intensity of delivery (CO_2 eq/USD delivery)

The total budget (regular budget and extra budgetary funds) in 2008 was 62.4 million USD, meaning that 0.046 kg CO_2eq per USD was emitted.

In 2009, the total budget was 67.5 million USD. This means that 0.046 kg CO_2eq per USD was emitted (the figure is calculated using total emissions of 3,121 tCO_2eq, i.e. emissions without staff commuting, so that the two figures are comparable).

The carbon intensity therefore stayed the same over the 24 month period 2008-2009:

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[2] ITC has calculated its GHG emissions for 2008 and 2009 from both buildings and travel. Emissions from staff commuting to work have been calculated since 2009.

Figure 3: Carbon intensity of delivery (tCO$_2$ eq/USD delivery)
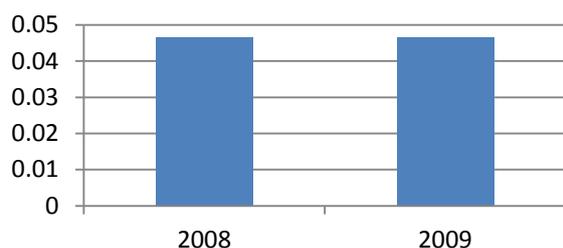
1.2 Travel

In 2008, travel-related emissions amounted to 2,619 tCO$_2$eq.

In 2009, emissions from travel therefore increased by 8.6% from 2008 to 2009 (2,845 tCO$_2$eq).

65% of all travel related emissions come from business class, even though business class is only granted when the journey is over 9 hours[3].

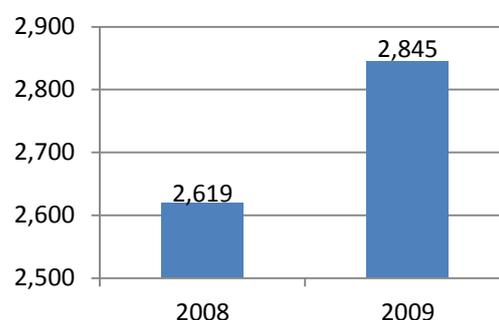**Figure 4: ITC GHG emissions from travel (t CO$_2$eq)**

Table 1 below gives more details on the structure of travel illustrating a number of key facts.

On average in business class 0.16 kg CO$_2$eq/km are emitted and in economy class 0.1 kgCO$_2$eq/km are emitted due to the difference in the space taken up in the plane.

However, it is worth noting that it is a theoretical calculation based on the total number of passengers in a given flight (total CO$_2$ emitted by the flight / total number of passengers in the respective class of travel). It remains difficult to actually prove that GHG footprint for an ITC traveller opting for economy is lesser if we do not know the number of total passengers per class of travel.

Table 1: Structure of ITC travel in 2008 (ITC staff members)

	All travel	Rail travel	Air travel	Business Class travel as % of air travel	Economy Class travel as % of air travel
No. of trips	2567	5% of total trips	95% of total trips	35% of total air trips	65% of total air trips
Distance (Km)	n/a	n/a	18,273,068 km	53% of total air km	47% of total air km
GHG Emissions	2,619 tCO$_2$eq (estimate)	n/a	2,432 tCO$_2$eq	65% of total travel emissions	35% of total travel emissions

Source: ITC own analysis

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[3] On average, 50% of the ITC travel profile is composed of non-ITC staff members (i.e. meeting participants) whose travel entitlement is economy class regardless of the total flying hours.

The carbon footprint of travel related to other ITC activities is illustrated in Figure 5.

Figure 5: Estimated emissions of travel compared to printing paper and lighting offices
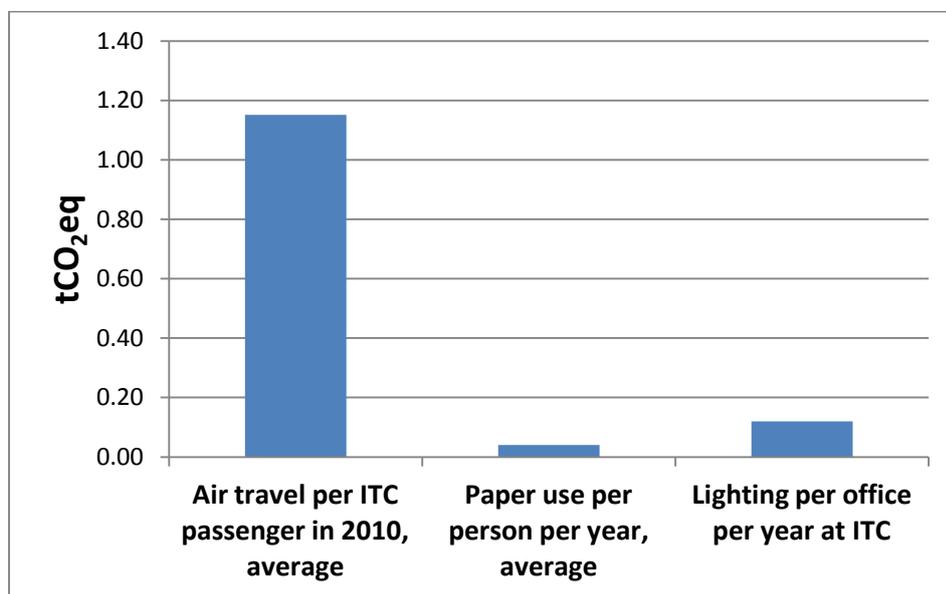
1.3 Facilities management

ITC has measured GHG emissions from buildings (electricity and heating) since 2003, see Figure 6.

They decreased by about 20% from 2005 to 2007, from 384 tCO_2eq to 281 tCO_2eq.

Emissions slightly increased again to 296 tCO_2eq in 2008.

In 2009, emissions amounted to 276 tCO_2, showing a decrease by 7% from 2008.

Figure 6: ITC GHG emissions from buildings (tCO_2 eq)

GHG emissions from electricity (in tCO2eq)

GHG emissions from heating (in tCO2eq)
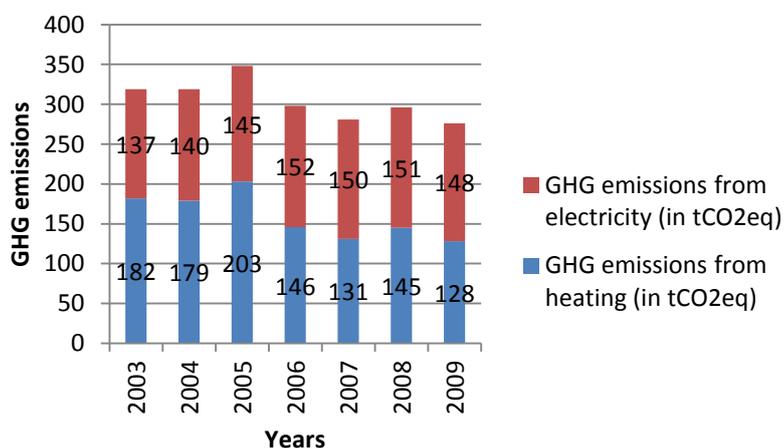
1.4 Staff commuting and ITC vehicle fleet

The IMG does not require UN organizations to measure emissions from staff commuting to work. However, considering that they are a substantial source of emissions, ITC took the initiative to measure them. To this end, a specific calculator was tailored to ITC transportation needs, providing yearly CO_2 data on staff commuting emissions and the ITC vehicle fleet. Every year, a survey will be

conducted to update the data and the CO_2 inventory, and to review appropriate mitigation measures.

From the 2010 survey, it was calculated that 207 tCO_2eq of GHG emissions were emitted from staff commuting and the ITC vehicle fleet in 2009.

2. ITC's mitigation actions to date and ongoing

ITC has undertaken mitigation actions since 2005 with initiatives to reduce travel and buildings related GHG emissions.

2.1 Travel

The following measures have been implemented:

- Installation and usage of video conferencing. To encourage staff's adoption of the new video conferencing facilities, DPS gave a lunch time presentation on its use.

Table 2: Usage of video conference facilities

Year	Number of times
2008 (after installation in Nov 2008)	21
2009	66
2010 (until June 15)	25

- Launch of online platforms (e.g. "ITC's Africa enterprise competitiveness trainers and advisers' network" on LinkedIn) to enable the deployment of experts locally (nationally and regionally) to reproduce ITC knowledge and skills, thus reducing ITC travels from headquarters.

- Instruction of travel agents to report on the CO_2 emissions of the trip on each air ticket to increase awareness among staff.

Impact on emissions

The impact of these measures on GHG emissions is not yet measurable. A way of measuring the impact of the video conferencing room would be to require staff to say if it was a reason for not travelling or not when they sign up for booking the room. Similarly, it is not known if the new measure of putting the CO_2 figure on each air ticket has led to behavioural changes of staff. A staff survey would make it possible.

Impact on emissions (CO_2 avoidance as a result of e-technology usage) could be measured through a modification of the ICF. The total CO_2 avoided would be provided by AMEX and/or any CO_2 calculator.

2.2 Facilities management

1. The measures that have been implemented are:

- Installation of a mixed gas/fuel heating system more environmental-friendly than traditional fuel heating systems
- Installation of a dedicated device for the regulation and optimization of heating during winter time in order both to maintain a constant, comfortable temperature and to reduce energy consumption
- Optimization of the cooling system in offices and the building's ventilation system in order to reduce energy consumption
- Selection through CSS contract with the "Services Industriels de Genève (SIG)" of Hydropower source only
- Systematic replacement of current lighting with low energy light bulbs

- Installation in all floors of recycling bins, purchasing of a compactor for paper recycling and set-up of a centralized recycling point to enable the recycling of 40 tons of paper / year. Establishment through the cleaning contract of recycling solutions/programme for all other waste than paper (Integrated recycling chain)
- Selection of FSC paper (Paper is made with wood from sustainable forests) and 100% recycled paper. Recto/verso printing set-up on copiers. New copiers & consumables in operation since 1st March 2010 responding to the latest ecological & recycling criteria
- Automatic central device for copiers' switch off after working hours in order to reduce energy consumption
- Standardization of office supplies aiming at reducing packaging, post-consumer waste, and save on the cost and environmental impact of transport, water and energy used to make and produce supplies
- Support to IT&S for the installation of videoconferencing
- Communication to ITC staff of energy-savings measures and dissemination of guides in French and English aiming at improving comfort in offices during the hot season with do's and don'ts contributing to a better working environment and reduced energy consumption
- In order to promote good environmental practices from ITC suppliers and contractors, all Request for Proposals (RFP) include environmental factors/requirements, i.e. how the supplier integrates in his products / services or policy, the compliance to environmental objectives and the evaluation of technical offers are made with specific weightings for suppliers demonstrating pro-active policies in this area.

Impact on emissions

GHG emissions decreased from 2005 to 2007 suggesting that the measures taken were effective. The first three measures were the most important in terms of emission reduction. However, emissions slightly increased again in 2008 due to a very cold winter in 2008.

2.3 CSS/IT services

To date, several initiatives are being implemented or are under consideration in order to optimize the Management Office Printing Services (MOPS) and thus reduce its energy use:

- Reduce by 50% the number of small standalone printers, which are very energy-costing due to an inefficient paper and tuner management system, and promote the use of Konica printers, which have a lower cost per print. This is a substantial investment (CHF 139,400 over the next 4 years) being implemented by CSS.
- Induce a change in behavior towards printing by the implementation of a "swipe card" practice. Now staff have to physically go to the Konica printer to swipe their personal card and thus allow the printing. The implementation started in November 2010, and pursues in 2011.

Finally, in 2010 the ITS section participated in a workshop organized by Gartner, the world's leading information technology research and advisory company, about green information technologies.

2.4 CSS/Procurement

The United Nations provide organizations with advices and tools to make their procurement more sustainable[4]. Moreover, UN organizations have to report each year to the UN Global Market Place on their proportion of green activities and products.

ITC Procurement Services integrate as much as possible considerations on sustainability, but are bound by budget and market considerations.

However, measures taken to date include:

- Negotiations with the suppliers to have a broader offer of green materials
- Encourage purchase of FSC paper
- Encourage purchase of green office supplies
- Contract for Printing publication in Europe and respect EU environmental standards
- Furniture built from recycled materials
- Recycling or donating the old equipment

2.5 Staff commuting and ITC vehicle fleet

Staff commuting lies outside the boundaries of what the UN IMG is reporting on emissions reductions. However, it is worth noting that measures taken to date include:

- Execution of a staff survey on staff commuting to work to identify mitigation measures
- Development of a GHG emissions calculator for emissions from staff commuting and ITC vehicles
- Replacement of one official vehicle by a hybrid vehicle, overall strategy of replacing by hybrid vehicles or 100% electric whenever possible
- Increased capacity for bikes' parking made available in ITC garage

3. Issues to discuss for mitigation for 2012 and beyond

This section presents issues to consider for reducing emissions in 2012. It sets out the business and moral case for a reduction strategy, the issue of setting targets and the importance of basing a strategy on effectiveness and efficiency. Whilst continued (cost effective) investments can be made to reduce costs and emissions from buildings, IT and procurement, the vast majority of emissions comes from travel. Travel should therefore be the key area of focus for emissions reductions.

The ERS team proposes to conduct further consultation with staff and management on measures in travel. The scope for these measures is outlined below. This consultation will be necessary in order to assess further the resources needed for their implementation and their workability in terms of management and administrative processes. At the end of 2011, the ERS team will report its finding to the SMC.

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[4] Procurement is called sustainable when it integrates requirements, specifications and criteria that are compatible and in favor 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.

3.1 Business and moral case

There is a strong business case for reducing GHG emissions. Many corporations and government departments are already taking measures to reduce emissions in their operations, principally through energy efficiency measures. Such measures serve both to cut costs but also give CEOs the opportunity to strengthen their CSR profile.

Moving early to make emissions reductions also makes strategic sense, as it would give ITC sufficient time to reposition itself in the market before carbon regulations are introduced in the future.

Delaying emissions reductions risks leaving the organization stranded with a high carbon business model in the face of likely future stricter regulations within the UN on travel. Minimizing risk of stranded carbon assets is becoming a major focus in the field of private investment.

Similarly for ITC, there is both a strong moral case to take strong measures to reduce emissions. Reducing emissions will contribute to a safer ecological future and show leadership within the UN system. It is likely to allow high profile positioning within the UN system, something otherwise difficult to do for a small agency.

3.2 Targets

The UN Climate Neutral Initiative has set a goal for organizations to reduce emissions, but has not specified targets.

Some organisations however have set their own targets to reduce overall emissions. For example, UNEP has set a target of 3% emission reduction per year during 2010, 2011, 2012 compared to 2007. Others have set emissions reduction targets to reduce emissions from travel by a certain percentage.

> ***The corporate perspective on reducing emissions***
> *"We at PUMA constantly strive to make our contribution to environmental protection and mitigate PUMA's negative impact on our planet. PUMA's strategy to reduce its carbon footprint is a significant milestone within our sustainability concept PUMAVision that looks ahead to a world that is safer, more peaceful and more creative for the generations to come." (Jochen Zeitz, CEO of PUMA, when PUMA joined the Climate Neutral Network of the UN in November 2009)*

Table 4: UN agency targets on emissions reductions

Organization	Target	To be reached by
UNAIDS	Reduce travel by 25%	2012
UNIDO	All directors to reduce their travel by 30%	2009
UNESCO	Reduce their travel budget by 10%	2010
UNEP	Annual 3% reduction in emissions	2012

3.3 Effectiveness and Efficiency

If ITC adopts targets, it needs to introduce measures that are effective (they result in reductions) and efficient (with low transaction costs). They must also be as predictable as possible and measurable so that reductions can be properly managed.

"The first step towards managing carbon emissions is to measure them because in business what gets measured gets managed." (Lord Adair Turner, Chairman, UK Financial Services Authority)

In general, *mandatory* measures are more efficient and effective that *voluntary* measures in reducing emissions. Voluntary measures are also difficult to monitor and thus predict their effectiveness. Measuring the impact of mandatory measures, however is straightforward and thus easy to predict the impact on emissions.

For example, as cited above in Section 1, all things being equal, moving from business class to economy class travel, would reduce ITC's travel-related emissions by up to 35% in the first year. Such a measure is not currently feasible given that staff are afforded the privilege to travel in business class under the Staff Rules.

Similarly, it is straightforward to measure the impact of energy efficiency investments in buildings as there is a clear relationship between the new technologies installed and the reduced amount of emissions per unit of energy used.

3.4 Measures for consideration in 2012

3.4.1 Travel

The main potential for emissions reductions at ITC lies in reducing travel. Providing trade-related technical assistance to developing countries currently relies heavily on travel.

Discussion is therefore required in how technical assistance can be delivered in a less carbon intensive way (i.e. with less travelling or at a lower class) and the implications for ITC's (and the UN's) business model that relies heavily on travel.

If project managers are unable to travel as freely as in the past, ITC will have to offer more internet-based services and/or develop regional presence, either by creating regional offices or hiring more local staff. Further consideration on these implications is recommended.

The most effective and efficient measure to reduce emissions at ITC would be through removing the business class. However, this measures lies beyond the scope of Staff Rules.

Under the current framework of Staff Rules, potential measures include the increased coordination and management of travel plans at divisional level and encouraging economy class of travel.

First and foremost, it would mean Directors and Chiefs **questioning the purpose of travel** and proposing alternative arrangements.

1. **Establish divisional travel plans and an increased coordination of events management** by Division Directors. The aims of the travel plan and events management system are:

    a.   Combination of travel within the same region (bundling) which reduces the number of trips and the number of participants to each meeting.

    b.   Careful selection of travel hubs for events/meetings locations in order to reduce flights and increase air safety as well as air service options.

In the longer term, programme planning and implementation could go beyond a division-wide approach to reach an ITC global approach, on an advance one-year basis. It would minimize ad-hoc interventions and pool together initiatives.

2. **Promote e-communication tools such as video or net conferencing in place of air travel.** Encourage staff to use the existing video-conferencing facility more and invest in new technology

   Design more online training workshops and self-study modules. However, attention needs to be paid to those who may have restricted access to online resources and connectivity in beneficiary countries (in this case, CDs and DVDs could be distributed).

3. **Encourage staff to travel by train** for official trips below 4 hours.

4. **Encourage staff to use their own frequent flyer miles in offsetting projects** using the available online airlines' tools.

5. **Encourage staff to travel economy class instead of business**. Indeed, travel economy is already a practice followed by some ITC travellers for either budgetary or personal reasons.

See Table 1 in Annex I for details. To implement these measures, consideration should be given to modification of the ICF and a more rigorous application of its use. The necessary modifications are outlined in Annex II.

Table 5: Travel - Possible mitigation measures

Measure	Required steps for implementation	Monitoring and Reporting, Costs	Financial and ecological benefits	Impact on emissions
1. Modify ICF to include questions on travel	1.1. Modify Internal Clearance Form (ICF) and make it obligatory 1.2. Train certifying officers/ support staff 1.3. Use travel plan as advanced approval tool 1.4. Increase coordination within divisions	• Admin. costs (time and efforts) for checking ICF by directors and negotiating with staff in some cases • Writing divisional reports • Coordination cost (time)	Cost savings if trips are not undertaken because of the measure CO_2 avoidance	Impact calculated yearly thanks to the CO_2 avoidance calculator
2. Establish divisional travel plans and increased coordination of events management	2.1. Establish a corporate travel plan and events management system 2.2. Increase coordination within divisions 2.3. Reduce the number of participants to same meeting 2.4. Include environmental considerations such as accessibility by air plane in choice of location	• Admin. costs to develop a new corporate travel plan and events management system together with C&E • Coordination cost (time)	Cost savings if trips are bundled/not taken because of the measure; Reduced costs for accommodation CO_2 avoidance	Impact measurable by comparing the CO_2 emissions between two locations
3. Promote e- communication tools in replacement of airline travel	3.1. Increase use of teleconferencing, videoconferencing, net conferencing 3.2. Modify ICF and make it obligatory 3.3. Install new net conferencing facilities	• Admin. costs for filling out the ICF, including emissions calculations • Cost of new technical equipment	Cost savings if trips are not undertaken because of the measure CO_2 avoidance	Impact calculated yearly thanks to the CO_2 avoidance calculator

4. Encourage staff to travel by train	4.1. Modify ICF and make it obligatory	• Admin. costs for filling out the ICF, including emissions calculations	CO_2 avoidance	Impact calculated yearly thanks to the CO_2 avoidance calculator Ratio to be applied: *waiting for UNEP/SUN guideline*
5. Encourage staff to use their own frequent flyer miles in offsetting projects	5.1. Modify ICF and make it obligatory	• Admin. costs for filling out the ICF, including emissions calculations		Impact calculated yearly thanks to the CO_2 avoidance calculator
6. Promote Economy class air travel	6.1. Modify ICF and make it obligatory 6.2. Promote reasons for economy class travel	• Admin. costs for filling out the ICF, including emissions calculations • Management time and expense in promoting economy	Cost savings to projects if flights are shifted to economy class (economy class travel is usually half, or less, as expensive as business class) CO_2 avoidance	Impact calculated yearly thanks to the CO_2 avoidance calculator; High if business class travel is shifted to economy (economy class travel emissions about half of business)

In addition, a monitoring and reporting system by division would be required to assess the impact of these measures. This is discussed below.

Impact on emissions

A monitoring and evaluation system would be necessary to assess the success of these voluntary measures in terms of emissions reductions.

Measures 1 and 2 combined with a systematic questioning of the purpose of travel could lead to a reduction in the number of travels.

Measure 3 is expected to result in small emissions reduction as it would have an impact on only a small portion of travel. In 2008, 17 flights, accounting for 1 tCO_2eq, could have been replaced by train with a travel time of less than 4 hours.

Apart from a change in the number of flights, it is likely that the promotion of economy class travel would result in the most emissions reductions.

Financial costs and benefits

All the proposed measures require start up and ongoing administrative costs for example in the use of the ICF, Director/Chiefs' time in negotiating with staff and monitoring and evaluation.

Measure 2 requires investment in technology if facilities other than the existing video conferencing facilities are to be put in place, e.g. net conferencing.

Measure 3 lies on the idea that it is not worth travelling by air for trips below 4 hours. Implementing it would mean waiving ITC travel policy based on the staff rules (Chapter VII, Travel Entitlements) through the issuance of an IC: even if train cost is higher than air travel, train travel would be authorized for ecological reasons.

Savings result from either less travelling or shifting business class travel to economy class travel.

On average, economy class flights are at least 50% less expensive than business class flights. However, it is difficult to predict a clear figure as prices change frequently and costs vary significantly across destinations. They also depend on negotiations between the airlines and the travel agency.

According to the staff, the most questionable recommendation is flying economy instead of business. Since it lies on a voluntary basis, people will have to be convinced that travelling economy can really make a difference in terms of emissions.

A monitoring and reporting system would be necessary to assess the impact of the above measures. A modification of the ICF would be needed in order to report and consolidate the total amount of CO_2 avoided due to the measures.

A focal point in each Division could collect and report back the yearly total GHG avoidance (with an estimated limited workload) to the suitably resourced TCCEP unit in charge of the management of ITC's carbon footprint.

3.4.2 Facilities Management

The measures that are under implementation in 2011 and will continue in 2012 subject to budget availability) are:

1. **Switch off all electronic devices (computers) during night completely**. This requires the installation of the "Ecoman-PC" or "ePowerSwitch" system to eliminate all residual consumption of electricity at PCs when switched off (IT&S).

2. **Replacement of the ITC light bulbs by a new lighting system / motion detector in offices.**

3. **Increase efficiency of the server room**. This requires moving the server room to the basement and installing a system to use the evolving heat from the server to heat the building and to use the outside cold to cool the server.

4. **Replace ITC entrance door with a new entrance system** ("Porte-tambour") allowing to reduce cooling in summer season and heating in winter season.

5. **Fine-tuning of ITC lifts**. Introduction of a new technology allowing a better management of the ratio between the total lift load and power used.

See Table 1 in Annex I for details on these measures. Some additional measures are included in larger projects such as the library project and are not reported here. The measures are recommendations from the "Analyse de l'enveloppe et de la technique du bâtiment (Estia, Avril/Dec 2008)" and the "Analyse des consommations d'énergie pour l'année 2008 (Estia, 2008)".

Table 6 describes the financial costs and benefits, payback periods and impact on emissions for each measure.

Table 6: Buildings-related mitigation measures

Measure - Buildings	Costs	Benefits	Payback period	Impact on emissions (tCO$_2$eq/year)	% of total ITC emissions (2009)
1. Switch off all electronic devices during night completely	30,000 CHF	20,000 CHF/year	1.5 years	3.1	0.1%
2. Exchange light bulbs in offices	Paid by building owner	20,000 CHF/year	-	5.3	0.15%
3. Increase efficiency of the server room	100,000 CHF	25,000 CHF/year	4 years	Not estimated but considered significant by buildings manager	< 3%
4. Replace ITC entrance door with a new entrance system ("Porte-tambour")	Paid by building owner	Not estimated yet	-	Not estimated but considered significant by buildings manager	< 3%
5. Fine-tuning of ITC lifts	Paid by building owner	Not estimated yet	-	Not estimated but considered significant by buildings manager	< 3%

These measures in the area of building are measurable and thus emissions reductions for buildings are relatively straightforward to manage. However, GHG emissions from building account only for less than 10% of the overall ITC GHG emissions. These measures only result in relatively low emission reductions compared to the reductions that can result in the area of travel.

Savings/Return on investment

Implementing the suggested measures in the area of building would require 130,000 CHF of investment.
Estimated savings and payback periods are also presented in the Table 3. For measures 1-3, 65,000 CHF per year are saved, i.e. the overall payback period of the investments is 2 years.

3.4.3   CSS/IT Services

IT Services will continue to make improvements as being implemented in 2011. Other initiatives under consideration include the following:

- Konica printers are already configured for a two-sided and gray scale print to mitigate paper waste and the use of color print. The ITS section is currently exploring further options for parameters with the printer supplier. For example, beyond a certain number of pages (e.g. if people want to print a book), the print would not be allowed and people would have to go to ITC Print Shop on the ground floor, because the cost per print is even lower.
- Continuation of a "cost recovery" system in which extra budgetary funded projects would integrate the cost of printing in their budget and would not be "subsidized" by the regular budget anymore. Indeed, the cost of printing is quite significant; for example in September 2010, it amounted to CHF 3,639.61 only in DBIS.
- The purchase of Small Form Facters (SFF) computers - which are smaller than traditional mini-towers or desktops - is also considered as a green initiative insofar as they are proven to consume less energy.

3.4.4 CSS/ Procurement

Procurement will continue the roll out of measures discussed in Section 2 and undertake consideration of new measures in the context of ERS discussions.

3.4.5 Staff commuting and ITC vehicle fleet

Having made calculations of emissions on staff commuting and ITC's vehicle fleet, DPS is preparing an action plan for reducing emissions in this area, taking into account complex parameters and constraints. Among the measures under consideration are:

1. **Encourage telecommuting (work away from the office) and any other options to reduce commuting.**

2**. Promote soft commuting**, i.e. alternative transports that may replace cars, such as public transports or bikes.

ITC could also organize "no car days" to communicate on this matter and gain support from staff.

Impact on emissions

According to the staff survey conducted on commuting (Estia, March 2010), a majority of respondents (55%) declared they would be interested in telecommuting. If this majority was working at home one day per week, emissions would be reduced by 10 tCO_2eq per year, i.e. 5% of the total

amount of emissions from commuting in 2009 and almost 15% if we extrapolate these figures to the whole staff.

Working from home is already a possibility included in the staff rules: "*Where the nature of the work permits, staff members may spend up to two days per week working from an alternative work site*" (Circular ITC/IC/2005/51). Nevertheless it is not effectively used. So it would be necessary to set up a HR Task Force to discuss the modalities of implementation. In particular, it is expected by DPS/ITS that it would be challenging in terms of electronic equipment (i.e. internet connection and PC) as ITC would not support the costs associated with it.

ITC should also explore the other possibilities offered by the circular, notably the compressed work schedule (10 working days in 9) which could reduce the emissions from commuting by 10%.

Annex I – Buildings mitigation measures for discussion for 2012

Table 1: Buildings - Mitigation measures

Measure	Required steps for implementation	Financial costs	Financial benefits	Payback period	Impact on emissions
1. Switch off all electronic devices during night completely	1.1. Install system "Ecoman-PC" or "ePowerSwitch" to elimit all residual consumption of electricity at PCs when switched off	30,000 CHF	20,000 CHF/year	1.5 years	3.1 tCO$_2$eq/year (0.1% of 2009 total emissions)
2. Exchange light bulbs in offices	2.1. Exchange 1150 light bulbs of 92 W with 1110 light bulbs of 62 W (with motion detector)	Paid by building owner	20,000 CHF/year	-	5.3 tCO$_2$eq/year (0.15% of 2009 total ITC emissions)
3. Increase efficiency of the server room	3.1. Relocate the server room to the basement	100,000 CHF	25,000 CHF/year	4 years	Not estimated but considered significant by buildings manager
	3.2. Install a system to use the evolving heat from servers to heat the building and to use the outside cool air to cool the server room				
4. Replace ITC entrance door with a new entrance system		Paid by building owner	Not estimated yet	-	Not estimated but considered significant by buildings manager
5. Fine-tuning of ITC lifts	5.1. Introduce a new technology allowing a better management of the ratio between the total lift load and power used	Paid by building owner	Not estimated yet	-	Not estimated but considered significant by buildings manager

Annex II – ITC Internal Clearance Form

Section to be included:

| GHG EMISSION AVOIDANCE		
	Yes/No	
This travel is essential and cannot be avoided		
	Yes/No	*Estimated avoided emissions (tCO$_2$ eq)*
This travel could be avoided by replacing it by e-communications		

This travel could not be avoided but the following mitigation measures are taken:
  • Use frequent flyer miles on offsetting projects
  • Fly economy class instead of business class (50% of CO$_2$ emissions of flight in business class)
  • Train instead of air (10% of CO$_2$ emissions of flight in economy class)		

TOTAL		

Lunchtime Presentation – ITC's carbon footprint: How to reduce it?

21st October 2010, 12:00-13:00, room 6-40

1/ Staff evaluation of the quality of the presentation in terms of clarity and information provided

Number of participants to the presentation: 25-30
Number of respondents to the survey: 15

Scale (1=poor; 5=excellent)	1	2	3	4	5
Number of respondents	0	0	2	9	4
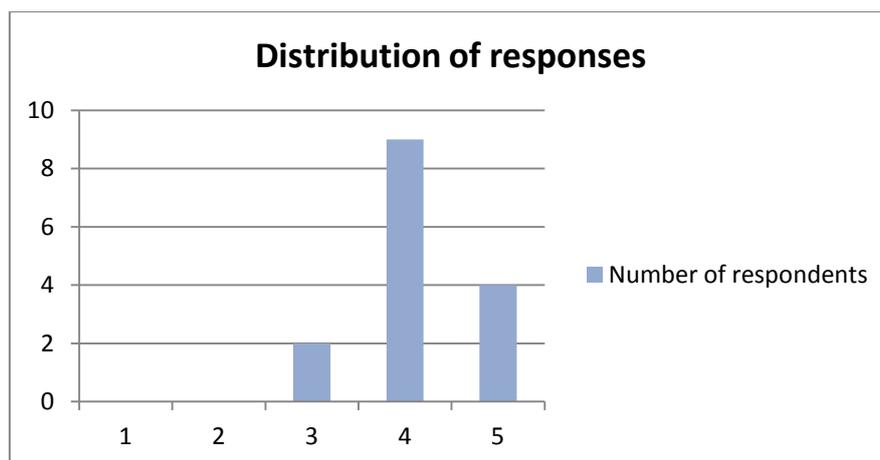
2/ Measures proposed and comments made by staff (survey and remarks following the presentation)

Travels:

- Allow event's participants to travel with airlines that are allowed by UNDP agencies of their own countries and not following the EU blacklisted airline list
- Advice Travel (AMEX) not to impose business class on us instead of economy (they always tell that you are entitled to business class if the travel is more than 8 hours)
- Arrange more video conferences instead of travel
- Use train on business trip when travel in Europe

- Should be integrated some other options than flight (e.g. from Geneva to Italy there is no need to use a flight, the train takes 4 hours directly to city centre and no stress with security checking)
- Go beyond the debate on business/economy class and be much more radical: flying or not flying; because as long as airline companies do not arrange spaces in planes, a given flight discharges the same amount of carbon emissions
- Limit the stopovers and incongruous travel plans
- Automatically setting skype in offices because e-conference is more difficult to organize
- Staff should have the right to travel economy and use the money saved to environmentally-friendly activities
- Set a level playing field/ rules on travel to avoid people to feel penalized (e.g. if in a same group some people travel business class and others travel economy)

ITC TRTA:

- Develop more online training programmes as an option to current training workshops
- Develop an online system/ portal on green technologies, environmental issues
- Connect providers of clean technologies from developing countries with enterprises in the same area
- Look at ITC mandate: exports in themselves imply an increasing carbon footprint. So we should develop projects/programmes that help beneficiaries to export in a low-carbon way
- Integrate the environmental issue/impact in project planning and design and favour low-carbon intensity projects
- Design projects that don't necessitate a lot of travels
- As the core of ITC business implies travelling, we should think about a change in business model (e.g. set up regional offices, …)
- Encourage the country we assist to export product that do not cause too much garbage (Methane)

Buildings and waste:

- Forbid plastic glasses at cafeteria and take-away plates
- Avoid staff having 500 watt lamps in their office, and leave them on when they are gone at night
- Use green paper because people keep printing anyway
- Follow the example of UNDP office in Mexico which is an environmental building
- Instead of recycling paper right away, give it a second life by gathering the blank non-used "verso" and make notebooks

Commuting:

- Remove subsidies for parking
- Promote teleworking

Staff involvement:

- More awareness sessions for ITC and beneficiaries
- In general ask staff to switch off lights when they are not in the office (day and night)
- Start with very simple habits such as switching off the lights and use properly the wasted paper
- In terms of carbon offsetting, a voluntary scheme would be helpful to raise awareness and to guide staff in choosing different service provider
- Printing paper should not be considered only as CO_2 emissions issue but also environmental issue
- Many organizations and global stage consider and focus on CO_2 as the cause of climate change and global warming. CH4 (Methane) is one of the main causes of climate change also, especially from the garbage. So we should encourage ITC staff to reduce the garbage in our own building since only few colleagues select their own garbage in the special recycle box.

Further Annexes

The annexes are provided on request, from TCCEP (MAR).