



RESEARCH PROGRAM ON
**Climate Change,
Agriculture and
Food Security**



CCAFS CU CARBON FOOTPRINT REPORT 2014 AND ACTION PLAN 2015

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1. SUMMARY OF DEVELOPMENT OF EMISSIONS 2011-2014

The increase in emissions from the Coordinating Unit that was seen between 2012 and 2013 continues and increases in 2014. Similar to the previous years the increase for 2014 is a result of additional travel activity for both the CU staff and a substantial increase in the sponsored travels both for event and for various other activities. In 2013 the CU staff traveled a total of 77 times (return), which in 2014 increased to 84 times¹. Additionally the total no. of sponsored travels increased from 12 to 34 (both event and other sponsored travelers). Four of the travels in 2014 were on business class, compared to only 2 in 2013, which also adds to the increase in emissions.

The emissions for publications increased substantially between 2013 and 2014, a reversion of the previous decreasing trend, and ended close to the level from 2012. Publications continue to be the smallest emission group, only responsible for 2.3% of total emissions in 2014. Office emission stayed at a level similarly to the two previous years, but this number covers some changes within the group, due partly to different data used for calculation of CPH office energy use. Table 1 shows the development in emission for the main categories between 2011 and 2014.

Table 1. Total Emissions 2011-2014					
<i>Annual Emissions for the years 2011-2014, divided between the four categories office activities, Air Travel, Events and Publications</i>					
	2011	2012	2013	2014	unit
Scope 2					
Office Activities	9.14	13.8	14.0	13.4	tCO ₂ e
Subtotal Scope 2	9.14	13.8	14.0	13.4	tCO₂e
Scope 3					
Air travel CU	88.3	64.9	83.8	111.5	tCO ₂ e
Events without CU travel	9.62	51.8	45.4	74.5	tCO ₂ e
Publications	1.84	5.0	1.4	4.6	tCO ₂ e
Subtotal Scope 3	99.8	122	130.6	190.6	tCO₂e
Total	109	136	144.5	204.0	tCO₂e

The total GHG emission of CCAFS CU activities in 2014 is calculated to be **204 tCO₂e**. Compared to the 2012 emission of 145 tCO₂e it is a **41 % increase**². Air Travel of CU continues to be the largest source of emissions and accounted for 55 % of the total emissions in 2014. Events have increased their relative share to 36 % of total emissions in 2014 (compared to 31 % of emissions in 2013). It is important to note that a large part of the emissions from events (and almost all of the increase

¹ The 84 travels in 2014 are for CU Staff only and is not equal to the category "Air travel CU". "Air travel CU" includes a total of 91 travels; 84 travels for CU staff and 7 CU sponsored travels, not related to events.

² It is assessed that the data included in the 2014 calculations is a little more comprehensive than what was included in 2012 and 2013 (specifically for non-CCAFS staff travelers and no. of events). The actual increase in emissions might therefore be lower than 41 %.

in the event category) is due to air travel for sponsored participants for events. The total emissions for air travel for 2014 (both CU and all sponsored participants) is therefore 161.5 tCO₂e or approx. 80 % of all emissions from CCAFS CU.

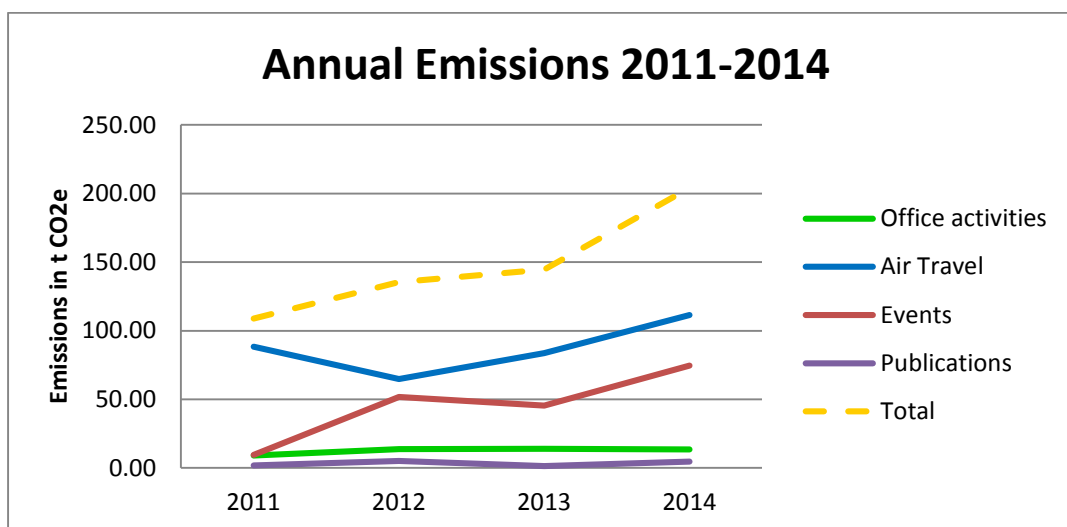


Figure 1. Illustrates the total annual emissions from 2011-2014; for each category (solid lines) and the total annual emissions (dotted line).

Office related activities accounted for a total of 7 % of emissions and emissions related to print and shipping of CCAFS publications accounted for only 2 % of the total emissions.

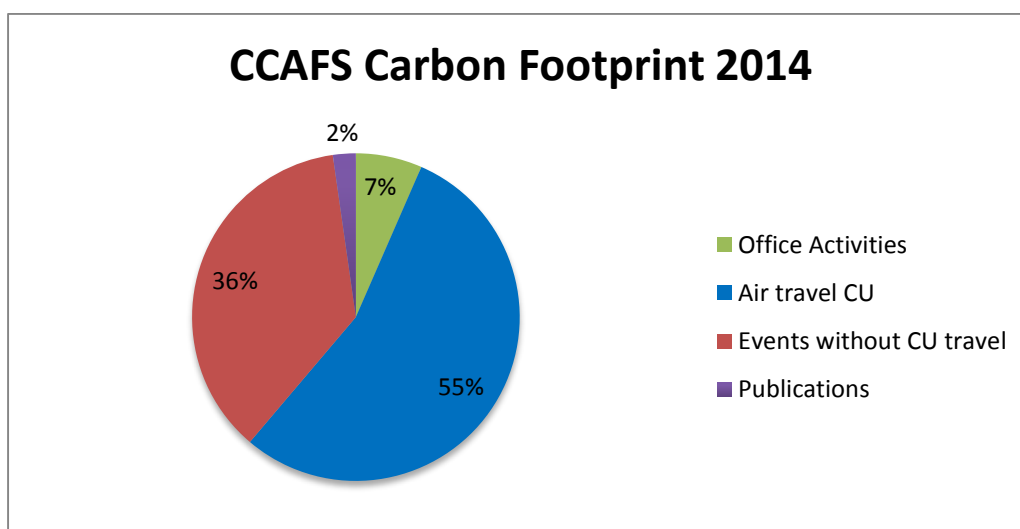


Figure 2; Illustrates the relative size of emission sources for CCAFS CU 2014

2. HISTORY OF CCAFS EMISSIONS CALCULATIONS

In 2011, the CCAFS Coordinating Unit in Copenhagen (CCAFS CU) initiated a carbon footprint plan including emission reduction targets and offsetting. In 2012, the principles of the calculation model applied were reviewed and verified by Grontmij A/S. According to the recommendations given by Grontmij A/S the model was adjusted and an effort put into making the calculations more transparent and to ensure consistency in the production of comparable data over time. It is therefore important to keep in mind when reading the report that only the figures from 2012, 2013 and 2014 are directly comparable³. The 2011 figures serve as a reference calculation to indicate the overall trend in emission development between 2011-2014.

In Figure 3 the Inventory boundary of CCAFS CU carbon calculations for 2012, 2013 and 2014 is illustrated. For an elaborate explanation of the most significant differences in the 2011 calculation model compared to 2012 and 2013, please refer to CCAFS Carbon Report 2012.

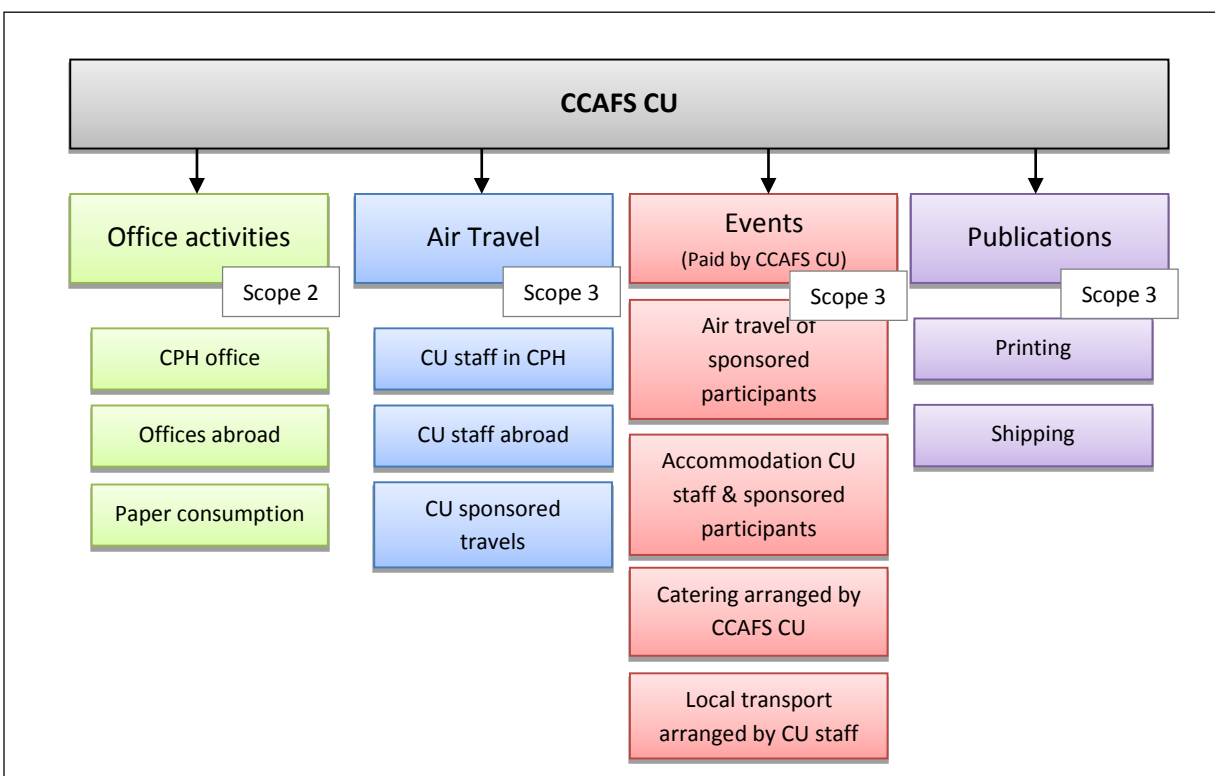


Figure 3; Inventory boundary of CCAFS CU GHG calculations

³ The calculation for 2014 includes some data for specific emission groups that are not directly comparable to 2012 and 2013, but the general method is the same as the one used in 2012 and 2013.

3. EMISSIONS FROM CCAFS CU ACTIVITIES IN 2014

In this section, each of the four categories is examined more thoroughly and the 2014 figures are compared to the 2013 figures. Reduction targets set for 2014 are evaluated and objectives for 2015 are proposed. The categories will be presented in order of importance for CCAFS total carbon footprint.

3.1. AIR TRAVEL

This category comprises the carbon footprint associated with the air travel activities of CCAFS Coordinating Unit⁴.

In 2014, the total emissions from CCAFS CU air travel were **111.5 tCO₂e**; compared to 2013 when the emissions were 83.8 tCO₂e, hence an increase of **33 %**. The explanation for this increase is predominantly a higher number of air travels performed by CCAFS CU in 2014 (increase from 77 return travels in 2013 to 91 return travels in 2014). Similarly to 2013, a total of two of the travels for CU staff were on business class, accounting for a total of 6.2 tCO₂e extra GHG emission.

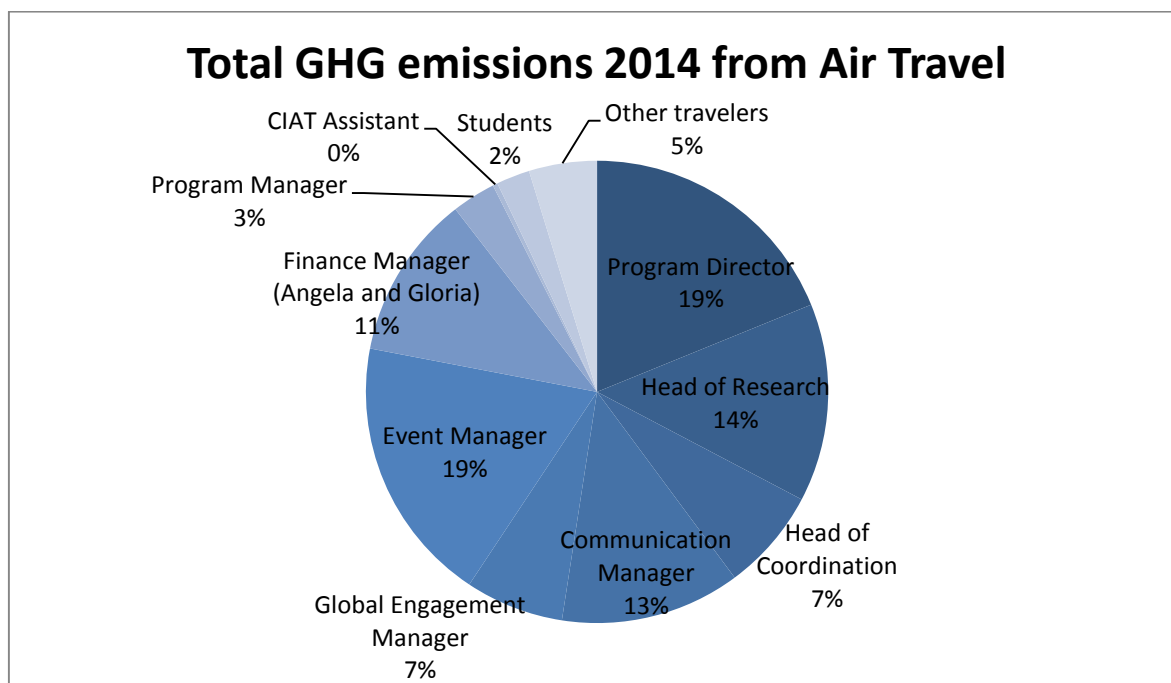


Figure 4; Individual emission shares in the category 'Air travel' by CCAFS CU staff

In addition to the increase in travels by existing CCAFS staff, a part of the increase in this category is due to the creation of a new position (Global Engagement Manager, total of 11 travels and 7 %

⁴ In addition to air travel for CU staff, sponsored travels not related to an event are also included in this, e.g. travels for job interviews with the CU.

of travel emissions) and a substantial no. of travel for persons outside of CCAFS, but not related to specific events (7 travels and 5 % of travel emissions).

The increase in travels due to the new position and the travelers from outside of the CU is responsible for almost half (47 %) of the increase in travel emissions between 2013 and 2014. The remaining increase is due to more travels from existing staff, as shown in figure 5.

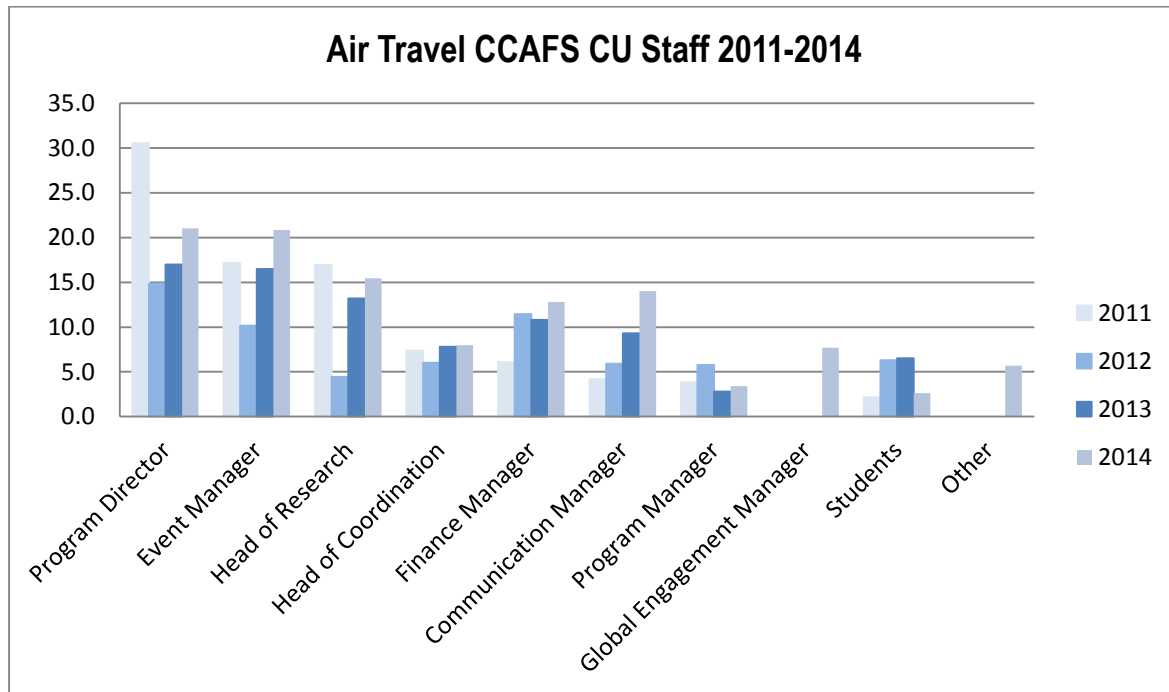


Figure 5 illustrates the annual emissions 2011-2014 related to air travel for each CCAFS CU staff.

As illustrated in Figure 1 and Figure 5, the total annual emission related to air travel by CCAFS CU has increased compared to 2013. Looking at the emissions for each of the staff members, the most significant increases are for Program Director, Communication Manager and Event Manager but increase is also noted for Head of Research, Head of Coordination, Finance Manager (Angela and Gloria combined) and for the Program Manager. The only category to decrease is the students' travel, which is a result of only two student travels in 2014, compared to 12 in 2013.

Evaluation of 2014 objectives

The overall objective for 2014 related to air travel by CCAFS CU was reducing the total emissions from flights. This objective was not reached and instead 2014 had a large increase both in no. of flights and in emissions from these. In table 2 each objective is evaluated.

Table 2. Evaluation of 2014 objectives

Objectives/actions for 2014	Evaluation of 2014 objectives
Keep encouraging staff to prioritize trips and critically assess if physical presence is required	<u>Partially successful</u> . It is not assessed if staff take unnecessary travels, but focus on this could be increased and little discussion on this has taken place.
Continue to investigate other possibilities for event participation, e.g. video	<u>Partially successful</u> . The debate about improving video meeting is ongoing and work has been done on finding better video setups.
Whenever possible and economically viable choose long-haul flight (more than 2000km) to minimize the number of transits	<u>Partially successful</u> . Generally the most direct flights are chosen for travel, but other factors are taken into account, mostly travel time and price.
Choose economy flights	<u>Partially successful</u> . As a policy economy flights are chosen for most travels, but there continue to be a policy of choosing business class if deemed necessary due to e.g. meeting times or similar. Such travels are subject to approval by the Program Director.
The aim for 2014 is to reduce the total emissions related to air travel by encouraging each staff member to perform one travel less in 2014 compared to 2013. The total emissions related to air travel activities should in 2014 not exceed the 2012 level	<u>Not successful</u> . Air travel emissions in 2014 substantially exceeded both 2011 and 2013 levels. Some of this increase is natural, due to increase in staff, but most staff were also responsible for an increase in individual emissions.

Proposed actions for 2015

Looking at the evaluation for the 2014 objectives and the distribution of emission sources related to air travel, the following actions for 2015 are proposed:

3.2. EVENTS

This category comprises the emissions from events hosted or financed by CCAFS CU. The total emission from this theme is calculated from five sub-themes: 1) Air travel of sponsored participants, 2) Accommodation of CCAFS CU staff and sponsored participants, 3) Catering arranged and/or paid by CCAFS CU, 4) inside transport of CCAFS staff and arranged group transport and 5) emissions for heat and electricity use for rented venues⁵. To avoid double-counting, air travel by CCAFS CU staff is not included.

In 2014, the total emissions related to CCAFS events were **74.5 tCO₂e**; compared to 2013 when emissions were estimated to be 45.4 tCO₂e, this is a substantially **increase of 64 %**. This increase can partly be explained by an increase in the amount of major events included in the calculations (9 events have been included in 2014 calculations, compared to 5 in 2013). It can be discussed what constitutes a major event and where the division between events should be⁶, but the aim in the calculations for 2014 has been to include all events directly arranged by CCAFS CU (including internal CCAFS events, e.g. CU retreat). It is therefore possible that part of the increase in emissions is due to more activities being included in the 2014 calculations. The average emission per event is smaller in 2014 compared to 2013 (8.3 tCO₂e compares to 9.1 tCO₂e).

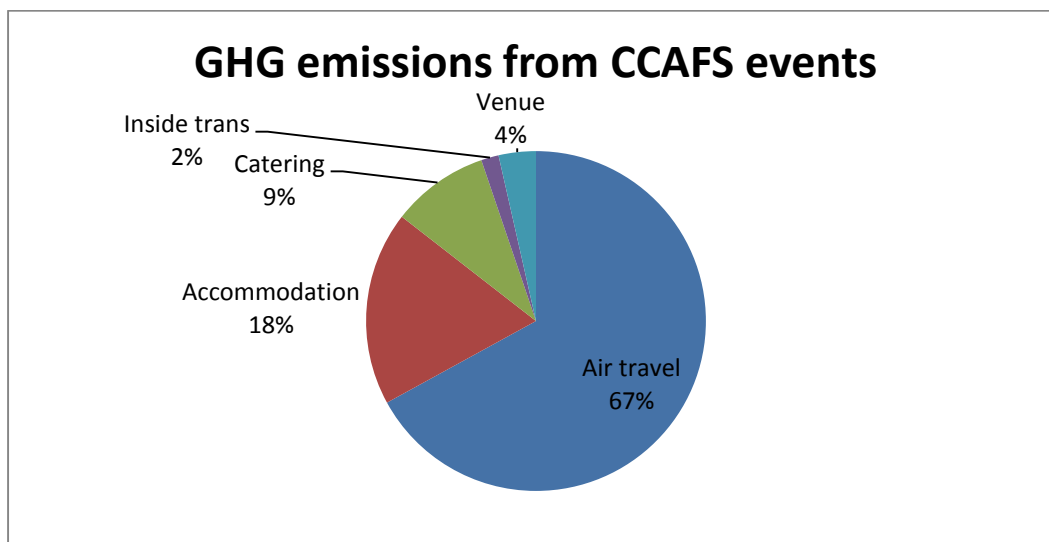


Figure 6 illustrates the contribution of each event activity to the total event related emissions in 2014.

⁵ Note that only one rented venue was included in 2013 calculations, but it was decided to also include estimates of venue emissions in the 2014 calculations. These estimates are somewhat uncertain because the size of the venues was estimated, since data was not available.

⁶ For instance, the FP4 workshop has been calculated as a separate event from the Science meeting and contact point meeting in Spain, but COP20 activities have all been counted as one event. Changing these divisions would not change total emissions from events, but just the total no. of events.

The large increase is also indicative of a substantial increase in the number of sponsored participants for various activities in 2014. A total of 27 participants' air travel was paid by CCAFS in 2014 for 4 different events, compared to only 11 sponsored travels in 2013 for 2 events (an increase in emissions from air travel for sponsored participants of 200%). As shown in figure 7, the increase in emissions from events is solely due to emissions from air travel and emissions from other sources have gone down for 2014.

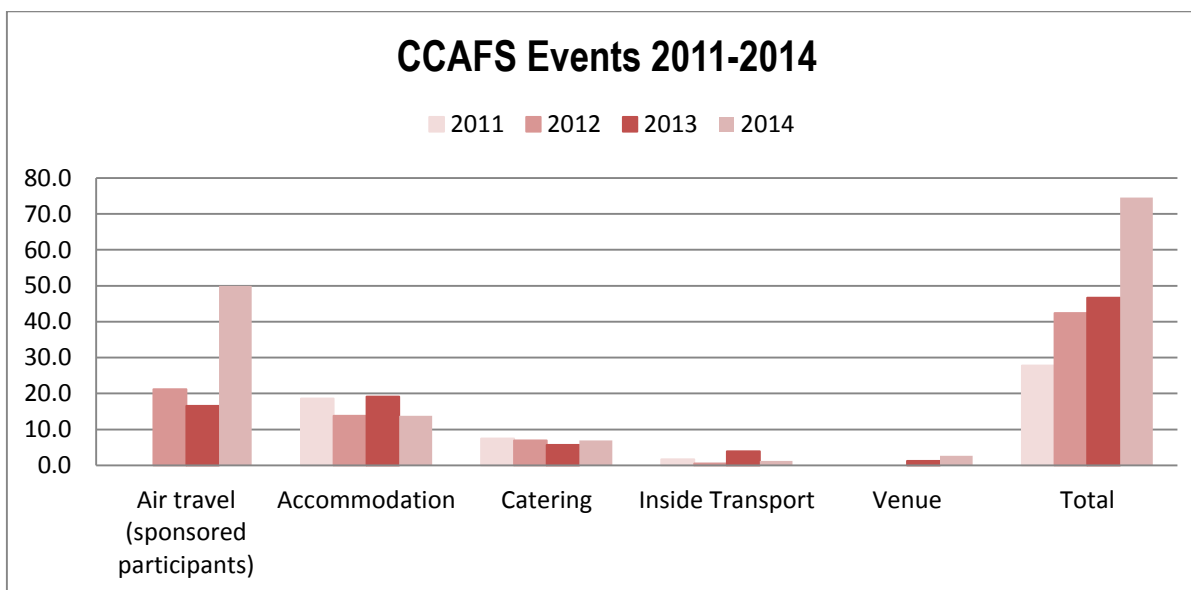


Figure 7 illustrating the sources of event-related emissions in the years 2011-2014.

The reduction in emissions from accommodation can to a certain degree be explained by choosing of Green certificate hotels, but is also to a certain degree a result of some events taking place in countries with low conversion factors (e.g. in Latin America).

Divided by events, COP20 by far accounts for the largest share of emissions in the event category⁷. Following the NY meetings in September⁸, the Science meeting and contacts point meeting in Spain and the Food Systems Workshop in Copenhagen. The division between all events in 2014 is shown in figure 8.

⁷ Note that COP20 includes sponsored participants for Global Landscapes Forum.

⁸ For the purpose of this calculation the GACSA Inaugural Meeting, the NY Climate Week and the CGIAR Development Dialogues meeting all taking place in New York at the end of September have been collected into one event/group.

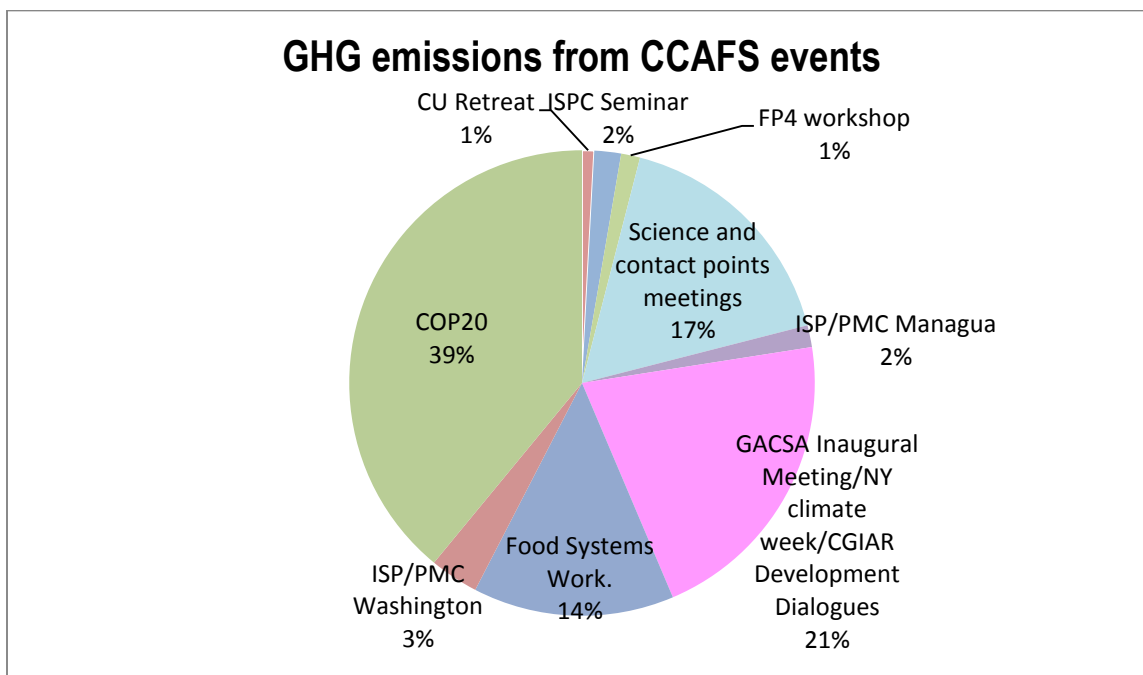


Figure 8 illustrating sources of emissions for each of the major events in 2014.

As shown in figure 9, the by far largest source of emissions from three of the four most emitting events is air travel for sponsored participants. It is noted that the especially high emissions from sponsored participants for COP20 can to a certain degree be explained by the long travel distance for many of the travelers. Compared to GLF in 2013, the travel distance for several of the sponsored participants were twice the longest travel distance to GLF. The relatively low emission for accommodation for COP20 is mostly due to low conversion factor for energy use for Peru.

The large emissions for travel for NY meetings at the end of September is solely due to two business class tickets for high level speakers to CGIAR Development Dialogues. These two tickets had a combined emission of close to 13 tCO₂e and counted for a total of 17% of all emissions from events in 2014.

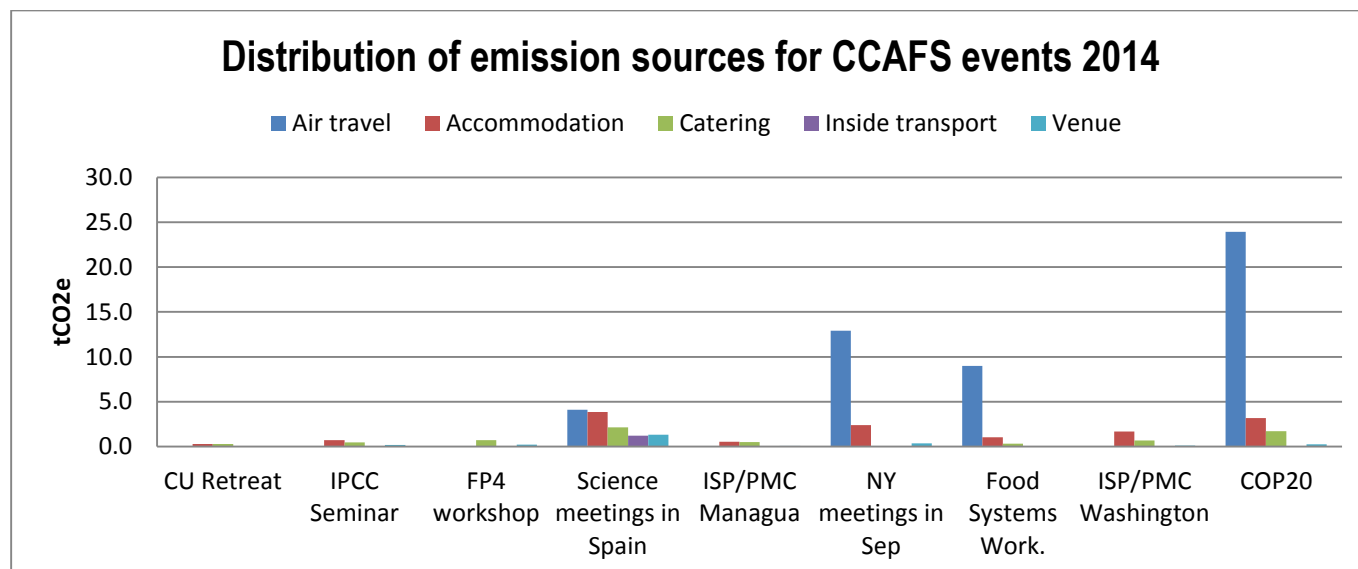


Figure 9 illustrating sources of emissions for each of the major events in 2014.

Evaluation of 2014 objectives

In Table 3, the 2014 objectives are listed and evaluated. The aim of reducing the total event related emissions can be said to have succeeded. However, there is still room for improvement especially for the emissions related to accommodation and air travel by sponsored participants.

Table 3. Evaluation 2014 objectives - Events

Objectives/actions for 2014	Evaluation of 2014 objectives
Fully implementation of the updated greening event planning tool	Actions that were implemented successfully in 2014: ✓ eco-friendly hotel/venue criterion: We always ask the hotel whether they have a certified Environmental Management System/Green certificate (e.g. Green Hospitality Award, Green Tourism Business Scheme, ISO 14001, BS 8901 etc) and use this as one priority criterion when shortlisting options for meeting venues ✓ Effort to reduce red meat meals: In 2013, we managed to implement our objective to reduce red meat meals and instead provide white meat meals at hosted CCAFS dinners. In 2014, we continued doing this and managed to provide only white meat meals during the hosted Science Meeting dinner and also the ISP dinners both in Managua and Washington D.C. ✓ Provide only tea, coffee and local fruits for the coffee breaks: This effort continues to be successfully implemented in most of the CCAFS internal staff meetings. Mostly, we ask the hotel to provide cookies and fruits, instead of cakes.

Whenever possible good practice hotels should be chosen.	Good practice hotels chosen 3 out of 9 times and the possibility have been evaluated for all major events. A number of hotels used, although not entirely considered good practice hotels (e.g. Possess a Green Hospitality Award, Green Tourism Business Scheme, ISO 14001, BS 8901 etc) also implements green initiatives (categorized as regular hotels).
Choose an event hotel/venue which is located relatively close to the main airport used by the participants or/and with good access to public transport	This has not been very successful for the meetings and events in 2014 as one of the selection criterion was to either hold it in a retreat-style venue (e.g. Science Meeting) or to hold the meeting relatively close to the location of our partner organization offices (e.g. PMC & ISP meeting Washington D.C.). However, in the former case, we did arrange for group transportation to and from the hotel and in the latter case, we could all walk to WB offices for the Seminar.
Encourage the use of public transportation or try to provide shuttles/ group transportation for locations where public transportation is not feasible	In countries where it is easy to access public transportation, we encouraged participants to use public transportation by giving them instructions and guidance on the event guide. In El Escorial, for the Science meeting and Contact Point meeting, we provided group shuttles from airport to the hotel. However, in most developing countries (e.g. Nicaragua), it was not possible for participants to take public transport due to security measures and group transport was also not an option due to different arrival and departure times.
When reasonable, encourage participants to offset their individual carbon emissions when using transport to attend any of CCAFS related.	For CCAFS internal meetings (PMC & ISP meetings), we assume that CCAFS staff members will/have taken action measures to offset their carbon footprints. For events targeted to external partners, we encouraged participants to offset their carbon emissions by suggesting a few certified Plan Vivo certified services (e.g. We sent recommendations in the logistics email for the Science Meeting participants).
Keep investigating new opportunities and tools for reducing event related carbon emissions	In the past year – 2014, we have been trying to cut paper waste from undistributed publications by providing USB sticks with a compilation of CCAFS and partners publications. In an effort to enable remote participation for our outreach events, we have conducted live-streaming in order to reach out to more audience so that they can still participate, without them having to travel.

Proposed actions for 2015

Looking at the evaluation of the 2014 objectives and the distribution of emission sources related to events, the following actions for 2015 are proposed:

3.3 OFFICE

This category covers carbon emissions associated with CCAFS CU office related activities. The total emission is divided in three sub-categories: 1) energy consumption from CPH Office, 2) energy consumption from CCAFS CU offices abroad and 3) paper consumption at CPH office.

In 2014, the total emissions from office activities were **13.4 tCO₂e**; compared to the office related emissions in 2013 being 14.0 tCO₂e, this is a **slight decrease of 4 %**. The explanation for this change is a combination of a reduction in the energy consumption in the CPH office and an increase in emission for offices outside of Denmark. Se figure 10 for the development in emissions from office related activities.

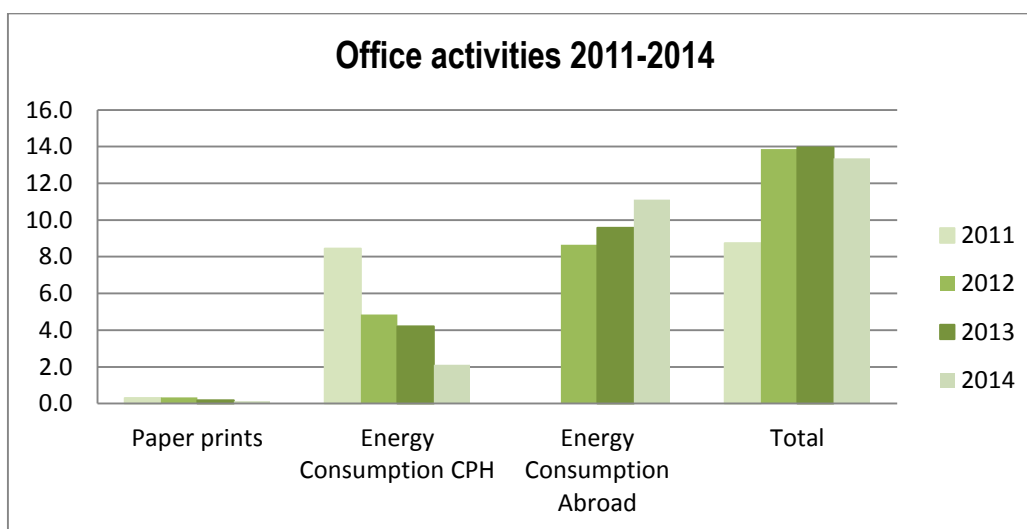


Figure 10 illustrates the office related sources of emissions 2011-2014.

It is important to note that the reduction in energy consumption for the office in CPH (reduction of 50%) is due to a change in the data that was available to calculate the energy use. The numbers for 2014 are more precise in regards to energy use, but the reduction is not due to any changes made by CCAFS.

The increase in energy consumption from offices abroad (increase of 16%) is the result of additional hiring (Global Engagement Manager) and the increase in office space as a result of this. Without this extra hiring the energy consumption for abroad offices would have stayed the same.

Emissions from paper prints continue to be minimal compared to other sources.

Evaluation of 2014 objectives

In Table 4 the 2014 objectives are listed and evaluated.

Table 4.

Objectives/actions for 2014	Evaluation of 2014 objectives
Continue to encourage eco-friendly office behavior	<u>Partially succeeded.</u> Ecofriendly behavior is generally discussed in regards to various uses in the office, incl. day to day buying etc. But no concrete initiatives have been promoted.
Continue collaboration with Department and Green Campus	<u>Not succeeded.</u> Discussions with Green Campus have not continued and there is still no meter in the CPH office. Limited insulation was done by UCPH in the beginning of 2015.
Continue to look into paper-smart solutions	<u>Succeeded,</u> 43% reduction in prints in office

Proposed actions for 2015

Looking at the evaluation for the 2014 objectives and the distribution of emission sources related to office activities, the following actions for 2015 are proposed:

3.4. PUBLICATIONS

This section calculates CCAFS carbon footprint associated with printing and shipping CCAFS publications.

In 2014, the total emissions from CCAFS publications were **4.6 tCO₂e**; compared to 2013 where emissions were estimated to be 1.4 tCO₂e, this is an **increase of 234 %**. This significant increase should be seen in context of the impressively low emissions for 2013 and is closer to a reversion to the emission level for 2012, as illustrated in Figure 11.

The increase is mostly due to a large increase in the amount shipped (from approx. 450 kg. in 2013 to approx. 1100 kg in 2014) and also in the distance for some shipments, including numerous shipments to various CCAFS centers and to COP20 in Lima.

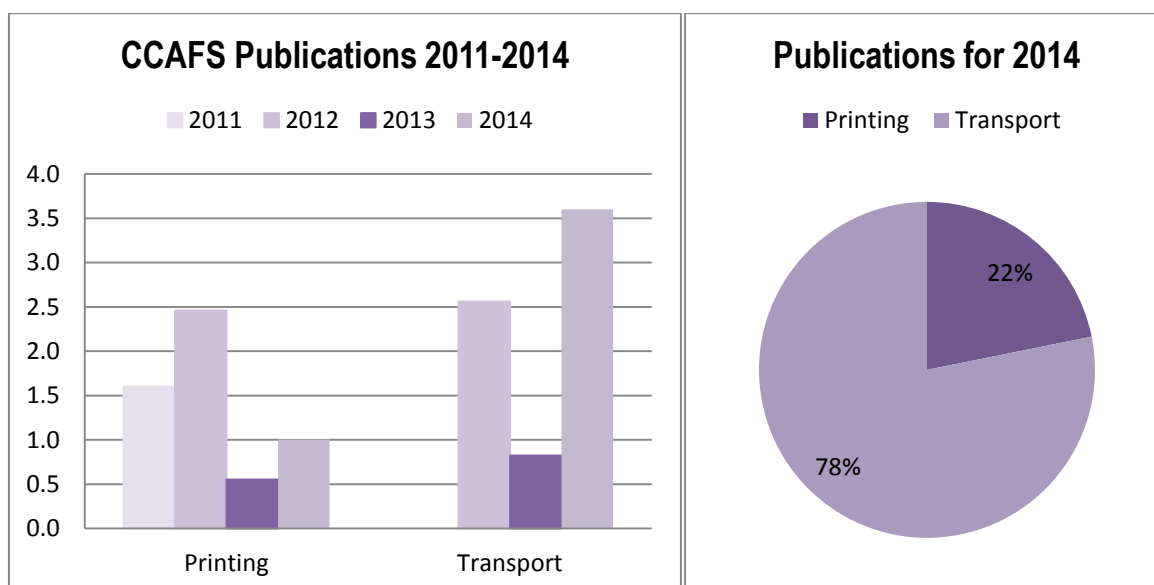


Figure 11 illustrates the sources of publication related emissions: development from 2011-2014 (left) and the percentage distribution 2014 (right)

Evaluation of 2014 objectives

In Table 5, the 2014 objectives are listed and evaluated.

Table 5. 2014 objectives

Objectives/actions for 2014	Evaluation of 2014 objectives
Continue to implement and improve on the initiatives implemented in 2013 including printing in host countries, printing on recycled/eco certified paper	??? Vanessa



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Reduce the number of printed publications for events and increase the number of USBs. In anticipation of this, we have already manufactured 1000 CCAFS branded USB sticks for future events

??? Vanessa

Proposed actions for 2015

Looking at the evaluation for the 2014 objectives and the distribution of emission sources related to printing and shipping CCAFS publications, the following actions for 2015 are proposed:

4. CCAFS CARBON FOOTPRINT ACTION PLAN 2015

	Objectives	Actions	Costs	Responsible
Scope 3				
Air Travel	To reduce emissions generated by CU travel			
Events	To reduce emissions generated by CU events			
Publications	Reduce emissions generated by transport and shipping of publications			
Scope 2				
Office	To reduce emissions generated by CU CPH office			