

Greenhouse gas emissions caused by the international climate negotiations

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Abstract: One and a half decades of climate negotiations have directly caused greenhouse gas emissions of about 150,000 t CO₂. At prevailing market prices, making the full process greenhouse gas neutral ex post would cost about 0.5 million \$, a fraction of the cost of the conferences.

Key words: Climate negotiations, emissions, transport

1. THE CLIMATE NEGOTIATION PROCESS

The international negotiations on measures to combat anthropogenic climate change now enter their second decade. The remarkable achievements of the Kyoto Protocol and the Bonn Agreement show that this process has not been in vain. However, it builds upon a continuous series of conferences with thousands of participants from all over the world. We evaluate the greenhouse gas emissions caused by the conferences and the transport of delegates. The negotiations could be made greenhouse gas neutral by investing in a emission reduction project. The first attempt was made at COP 6 bis in Bonn 2001 where renewable electricity was provided.

2. OVERALL DATA ON CLIMATE NEGOTIATIONS

The climate negotiation process had 36 official, contiguous sessions in the period 1991-2004, including 10 sessions of the Conference of the Parties (COP) and the UNCED conference in Rio. Traditionally, a session lasts for 2 weeks. Until entry into force of the convention, most sessions of the “Intergovernmental Negotiating Committee” INC attracted around 500 participants. Attendance of the most important COP meetings reached more than 7000 (COP 3, COP 6 I in The Hague) but consolidated at about 4-5000 afterwards. The interim meetings usually attract between 1000 and 2000 people.

The UNFCCC Secretariat publishes a participants list for every session for country delegates and observers. These are the sources for the following calculations¹. Many participants do not stay for the full time, so the estimates are on the high side.

3. EMISSIONS DURING THE CONFERENCES

We calculate emissions at the conference venue by calculating the product of the stay duration times per capita emissions of the host country. Per capita emissions data are taken from IEA

¹ We thank UNFCCC library staff for providing us with the participants lists of the sessions up to 1995 that are not available on the UNFCCC website.

(2003). This is likely to be on the low side as “lifestyles” of conference participants living in hotels and travelling by taxi are certainly more energy-intensive than those of the average citizen of the host country, particularly if a developing country is concerned.

Table 1: Attendance of COP meetings and related emissions

Name	Year	Country	Number of delegates	Number of journalists	Per capita emission factor of host country (t CO ₂ eq. p.a.)	Overall emissions (t CO ₂ eq.)
UNCED	1992	Brazil	3000	8000	1.5	635
COP 1	1995	Germany	1925	2044	13.0	1984
COP 2	1996	Switzerland	1363	0	6.9	362
COP 3	1997	Japan	5936	3712	9.5	3525
COP 4	1998	Argentina	4058	883	3.8	722
COP 5	1999	Germany	3654	534	12.0	1933
COP 6 I	2000	Netherlands	6050	944	15.5	4169
COP 6 II	2001	Germany	3229	572	12.0	1754
COP 7	2001	Morocco	4001	459	1.0	172
COP 8	2002	India	3557	795	0.9	150
COP 9	2003	Italy	4645	506	7.3	1445
Sum			41418	18449		16851

Table 2: Attendance of other meetings and related emissions

Name	Year	Country	Number of delegates	Number of journalists	Per capita emission factor of host country (t CO ₂ eq. p.a.)	Overall emissions (t CO ₂ eq.)
INC 1	1991	USA	625		18.7	450
INC 2	1991	Switzerland	556		7.4	158
INC 3	1991	Kenya	425		0.3	2
INC 4	1992	Switzerland	497		7.4	141
INC 5-I	1992	USA	760		18.8	550
INC 5-II	1992	USA	745		18.8	539
INC 6	1992	Switzerland	312		7.4	89
INC 7	1993	Switzerland	455		6.8	119
INC 8	1993	Switzerland	559		6.8	146
INC 9	1994	Switzerland	534		6.7	138
INC 10	1994	Switzerland	634		6.7	163
INC 11	1995	USA	940		19.0	687
AGBM 1	1995	Switzerland	501		6.7	129
AGBM 2	1995	Switzerland	371		6.7	96
SB 2	1996	Switzerland	852		6.7	220
SB 4	1996	Switzerland	709		6.7	183
SB 6	1997	Germany	827		12.2	388
SB 7	1997	Germany	1119		12.2	525
SB 8	1998	Germany	758		12.0	350
SB 10	1999	Germany	1278	68	12.0	621
SB 12	2000	Germany	1622	52	12.0	773
SB 13	2000	France	1896	140	8.2	642
SB 16	2002	Germany	1126	4	12.0	522
SB 18	2003	Germany	1273	15	12.0	595
SB 20	2004	Germany	1348	3	12.0	400
Sum	-		20722	282		8626

Total emissions at the venues amount to about 25,000 t CO₂.

However, for the net impact on global emissions one would have to subtract the emissions that would have been caused by the delegates had they remained in their home countries. Given that

most delegates belong to the upper classes, their emissions are likely to be not much lower than those generated at the conference venue. Thus net emissions of the conferences are relatively low.

4. TRANSPORT EMISSIONS

The main impact of climate negotiations on emissions is air travel of delegates to the conference venue. This travel would not have happened otherwise and thus is directly attributable to the meetings. A rough estimate for air emissions per capita and 1000 km is 0.1 t CO₂ (Bach 2000, p. 458). Average flight distances per delegate depend on the venues – they are high when non-European destinations are chosen as most delegates come from Europe and North America. Using rough estimates, Table 3 calculates transport emissions for the COPs, Table 4 for the other meetings.

Table 3: Transport-related emissions for the COP meetings

Name	Year	Country	Number of delegates	Number of journalists	Average flight distance (one way, km)	Overall emissions (t CO ₂ eq.)
UNCED	1992	Brazil	3000	8000	12000	26400
COP 1	1995	Germany	1925	2044	5000	3870
COP 2	1996	Switzerland	1363	n.a.	5000	1264
COP 3	1997	Japan	5964	3712	10000	19352
COP 4	1998	Argentina	4058	883	15000	14824
COP 5	1999	Germany	3654	534	5000	4188
COP 6 I	2000	Netherlands	6050	944	5000	6994
COP 6 II	2001	Germany	3229	572	5000	3801
COP 7	2001	Morocco	4001	459	7000	6244
COP 8	2001	India	3557	795	7000	6093
COP 9	2003	Italy	4645	506	5000	5151
Sum	-		41446	8405		98181

Table 4: Transport-related emissions for the other meetings

Name	Year	Country	Number of delegates	Number of journalists	Average flight distance (one way, km).	Overall emissions (t CO ₂ eq.)
INC 1	1991	USA	625		8000	1000
INC 2	1991	Switzerland	556		5000	556
INC 3	1991	Kenya	425		10000	850
INC 4	1992	Switzerland	497		5000	497
INC 5-I	1992	USA	760		8000	1216
INC 5-II	1992	USA	745		8000	1192
INC 6	1992	Switzerland	312		5000	312
INC 7	1993	Switzerland	455		5000	455
INC 8	1993	Switzerland	559		5000	559
INC 9	1994	Switzerland	534		5000	534
INC 10	1994	Switzerland	634		5000	634
INC 11	1995	USA	940		8000	1504
AGBM 1	1995	Switzerland	501		5000	501
AGBM 2	1995	Switzerland	371		5000	371
SB 2	1996	Switzerland	852		5000	852
SB 4	1996	Switzerland	709		5000	709
SB 6	1997	Germany	827		5000	827
SB 7	1997	Germany	1119		5000	1119
SB 8	1998	Germany	758		5000	758
SB 10	1999	Germany	1278	68	5000	1346

SB 12	2000	Germany	1622	52	5000	1674
SB 13	2000	France	1896	140	5000	2036
SB 16	2002	Germany	1126	4	5000	1130
SB 18	2003	Germany	1273	15	5000	1288
SB 20	2004	Germany	1348	3	5000	1351
Sum			20722	282		23271

Total emissions from travel thus amount to about 120,000 t CO₂. If one takes into account that the radiative forcing of aircraft emissions is about two times higher than the one of CO₂ emitted on the surface (IPCC 1999 p. 9), the transport effects have to be multiplied by 2.

5. CONCLUSIONS

The “climate conference caravan” is responsible for greenhouse gas emissions which however are dwarfed by emissions from other sources. A big COP may be responsible for 5000 to 15,000 t of CO₂ eq. emissions, the smaller interim meetings for 1000 to 2000 t. One and a half decades of climate policy have emitted just 150,000 t CO₂. At prevailing market prices, it would thus be possible to buy emission reduction credits from CDM projects to achieve an ex-post greenhouse gas neutral climate negotiation process by investing less than 500,000 \$. Compared to the cost of the conferences which amounts to several million \$ per conference, this amount is “peanuts”.

6. REFERENCES

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