



Corrigendum to

“Global and regional emission estimates for HCFC-22”, Atmos. Chem. Phys., 12, 10033–10050, 2012

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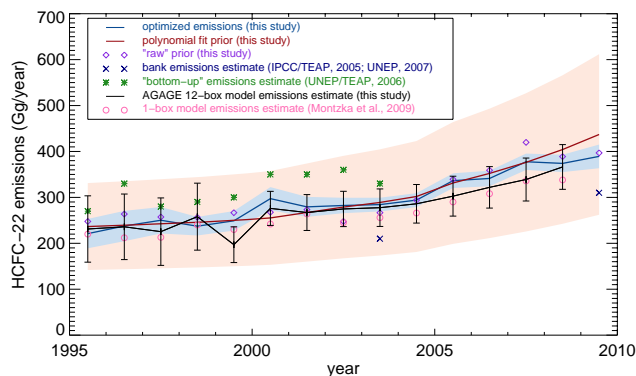
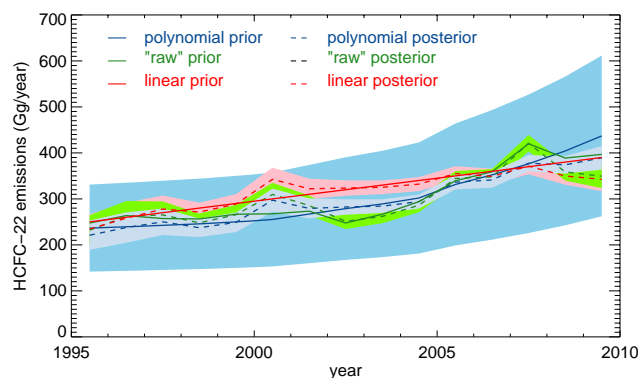
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We have recently found a numerical error in our MOZART coarse-resolution simulation and we have rerun and recalculated the optimized emissions for the global inversion. While the changes are small, we are replacing Figs. 3 and 4 as well as Table 2 published in Atmos. Chem. Phys. The values that have changed are optimized emissions (blue line and the blue-shaded area) in Fig. 3, three posterior values and their shaded areas in Fig. 4, and posterior global emissions in the global inversion (Table 2, 3rd column from the left).

Table 2. Prior and Posterior Global Total Emissions and Annual Global/Regional Consumption of HCFC-22 (Gg yr^{-1}). Consumption data is taken from UNEP (2011).

| Year | Prior Global emissions | Posterior Global emissions (Global inversion) | Posterior Global emissions (Regional inversion) | Global consumption | Regional consumption | | | | | | | | |
|------|------------------------|-----------------------------------------------|-------------------------------------------------|--------------------|----------------------|------|----------------|---------|---------------|-----------------|------------|---------------|---------|
| | | | | | Asia | Asia | Central Africa | America | North America | Central America | Latin East | Middle Europe | Oceania |
| 1990 | 217 | | | | | | | | | | | | |
| 1991 | 227 | | | | | | | | | | | | |
| 1992 | 235 | | | | | | | | | | | | |
| 1993 | 236 | | | | | | | | | | | | |
| 1994 | 241 | | | | | | | | | | | | |
| 1995 | 237 | 221 ± 31.9 | | | | | | | | | | | |
| 1996 | 239 | 238 ± 33.0 | | | | | | | | | | | |
| 1997 | 242 | 250 ± 28.9 | | | | | | | | | | | |
| 1998 | 246 | 237 ± 20.2 | | | | | | | | | | | |
| 1999 | 250 | 249 ± 21.2 | | | | | | | | | | | |
| 2000 | 255 | 297 ± 25.1 | | | | | | | | | | | |
| 2001 | 267 | 279 ± 21.8 | | 329 | 133 | 12.2 | 7.30 | 105 | 1.89 | 13.2 | 15.2 | 36.8 | 2.53 |
| 2002 | 279 | 282 ± 16.7 | | 298 | 128 | 5.35 | 7.62 | 108 | 1.85 | 11.2 | 16.6 | 16.0 | 2.85 |
| 2003 | 289 | 284 ± 14.9 | | 321 | 134 | 7.17 | 9.26 | 114 | 1.59 | 12.9 | 17.5 | 22.4 | 2.34 |
| 2004 | 302 | 294 ± 15.2 | | 354 | 163 | 6.23 | 9.47 | 109 | 2.40 | 15.9 | 21.9 | 23.3 | 2.33 |
| 2005 | 331 | 336 ± 16.0 | 222 ± 24.1 | 409 | 213 | 7.17 | 9.41 | 116 | 2.88 | 14.8 | 21.3 | 21.8 | 2.20 |
| 2006 | 352 | 341 ± 16.9 | 310 ± 23.3 | 432 | 232 | 9.76 | 11.0 | 104 | 4.02 | 16.8 | 31.7 | 20.6 | 1.88 |
| 2007 | 376 | 378 ± 17.8 | 351 ± 22.6 | 505 | 273 | 13.5 | 15.4 | 120 | 3.27 | 20.6 | 37.6 | 20.0 | 1.80 |
| 2008 | 404 | 374 ± 18.9 | 315 ± 23.4 | 468 | 244 | 14.3 | 18.5 | 102 | 3.80 | 21.1 | 42.0 | 20.9 | 1.46 |
| 2009 | 437 | 389 ± 25.8 | 367 ± 26.1 | 478 | 275 | 12.8 | 29.4 | 69.3 | 3.57 | 24.5 | 46.4 | 15.3 | 1.60 |

**Fig. 3.** Global total HCFC-22 emissions. Prior emission estimates using EDGAR v4, the growth rate between 1990–2000 (McCulloch et al., 2003), and HCFC-22 consumption between 2001–2009 (UNEP, 2011) are shown in diamonds. Polynomial fit of these “raw” prior values that we used in our global inversion are shown as a red line with a shaded (pink) 40 % uncertainty range. Optimized emissions from this study are shown in blue with our calculated posterior uncertainty. Previously published bank emission estimates (blue crosses) (IPCC/TEAP, 2005; UNEP, 2007), “bottom-up” emission estimates (green stars) (UNEP/TEAP, 2006), 1-box model emission estimates (pink circle) (Montzka et al., 2009), as well as new AGAGE 12-box model emission estimates (black line) are also shown for comparison.**Fig. 4.** Global total prior (solid lines) and posterior (dash lines) HCFC-22 emissions using the following three sets of a priori emissions: polynomial fit prior (blue), “raw” prior (green), and linear fit prior (red).