

APPENDIX 2

Extract from page 198, Chapter 2, Report of IPCC Working Group 1 – AR4

2.8.5.2 Long-Lived Greenhouse Gases

The few models that have examined efficacy for combined LLGHG changes generally find efficacies slightly higher than 1.0 (Figure 2.19). Further, the most recent result from the NCAR Community Climate Model (CCM3) GCM (Govindasamy et al., 2001b) indicates an efficacy of over 1.2 with no clear reason of why this changed from earlier versions of the same model. Individual LLGHG efficacies have only been analysed in two or three models. Two GCMs suggest higher efficacies from individual components (over 30% for CFCs in Hansen et al., 2005). In contrast another GCM gives efficacies for CFCs (Forster and Joshi, 2005) and CH₄ (Berntsen et al., 2005) that are slightly less than one. Overall there is medium confidence that the observed changes in the combined LLGHG changes have an efficacy close to 1.0 (within 10%), but there are not enough studies to constrain the efficacies for individual species.