Appendix G: Notation

C_0	Initial (mean pre-industrial) atmospheric CO_2 concentration.
$C(t)$	Atmospheric CO_2 concentration at time t, in ppmv.
$D_{\rm n}(t)$	Net carbon flux from land-use change.
$D_{\rm g}(t)$	Gross carbon flux from land-use change.
F	Radiative forcing.
F_X	Radiative forcing due to constituent X.
G	Generic notation for response functions (Green's functions).
g	Laplace transform of G.
$G_{\rm a}$	Total atmospheric response function.
$g_{\rm a}$	Laplace transform of $G_{\rm a}$.
$G_{\rm a:bio}$	Function defining response of biota to atmospheric perturbation.
$g_{\rm a:bio}$	Laplace transform of $G_{\rm a:bio}$.
$G_{\rm a:oc}$	Function defining response of ocean to atmospheric perturbation.
$g_{\rm a:oc}$	Laplace transform of $G_{\rm a:oc}$.
$N_{\rm a}$	Excess atmospheric carbon (in Gt) $= 2.123[C(t) - C_0]$.
$n_{\rm a}$	Laplace transform of $N_{\rm a}$.
$N_{\rm b}$	Perturbation to biotic carbon reservoir (excluding land-use term).
$n_{\rm b}$	Laplace transform of $N_{\rm b}$.
$N_{\rm o}$	Perturbation to ocean carbon content.
$n_{\rm o}$	Laplace transform of $N_{\rm o}$.
p	Laplace transform variable.
$Q, Q(t)$	Total anthropogenic source, $= Q_{\rm foss} + D_{\rm n}$
$q(p)$	Laplace transform of $Q(t)$.
$Q_{\rm foss}$	Fossil carbon source.
$Q_{\rm foss}(t)$	Fossil carbon source.
r	Airborne fraction: $\dot{N}_{\rm a}/Q$
$\bar{r}$	Average airborne fraction $\Delta N_{\rm a}/\int Q\,dt$
S	Generic notation for sinks.
$S_{\rm ocean}$	Net ocean carbon sink.
$S_{\rm fert}$	CO_2 sink from CO_2-fertilisation.
$S_{\rm resid}$	Residual CO_2 sink.
t	Time in years.
t_s	Time of stabilisation of concentration.
$z_{\rm pen}$	Penetration depth for bomb-^{14}C.
$\delta(t)$	Dirac delta function.

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