

Table 4.2: Model features of previous GCMs of tropical deforestation.

Reference:	Henderson-Sellers and Gornitz (1984)	Dickinson and Sellers (1988)	Lean and Warrilow (1989)	Shukla <i>et al.</i> ^a (1990)	Mylne and Rowntree (1992)	Lean and Rowntree (1993)	Henderson-Sellers <i>et al.</i> (1993)	Polcher and Laval (1994a, b) ^b	McGuffie <i>et al.</i> (1995)	Zhang <i>et al.</i> (1996a, b) ^c
Features:										
GCM Version	GISS Grid	CCMOB Spectral (R15)	UKMO Grid	NMC Spectral (R40)	UKMO Grid	UKMO Grid	CCM1-Oz Spectral (R15)	LMD Grid	CCM1-Oz Spectral (R15)	CCM1-Oz Spectral (R15)
Resolution (lat x lon)	8° x 10°	4.5° x 7.5°	2.5° x 3.75°	1.8° x 2.8°	2.5° x 3.75°	2.5° x 3.75°	4.5° x 7.5°	2.0° x 5.6°	4.5° x 7.5°	4.5° x 7.5°
Land-surface representation	2-layer soil hydrology	BATS	4-layer soil temperature scheme and canopy interception	SIB	Bucket	4-layer soil temperature model and canopy interception	BATS	SECHI BA	BATS	BATS
Ocean	Computed SST but fixed ocean transport	Fixed SST	Fixed SST	December SST	Fixed SST	Fixed SST	Mixed layer (slab) ocean with 3-layer ice model subcomponent and a standard q-flux ^f correction	Fixed SST	Mixed layer ocean with 3-layer ice model but improved q-flux ^f correction	Similar to McGuffie <i>et al.</i> (1995)
Cloud	(not given)	(not given)	(not given)	Fixed seasonal means	Fixed zonal means	Include cloud-water variable	Include parameterization of liquid water clouds	Include parameterization of liquid water clouds	Include parameterization of liquid water clouds	Similar to McGuffie <i>et al.</i> (1995)
Time of Integration: control	20 yr.	3 yr.	3 yr.	1 yr.	8 ^d yr.	3 yr.	6 yr.	11 yr.	14 yr.	25 yr.
deforestation	10 yr.	1 yr.	3 yr.	1 yr.	9 ^e mth.	3 yr.	6 yr.	11 yr.	6 yr.	11 yr.

^a Reported in more detail in Nobre *et al.* (1991).^b Both '1994a' & '1994b' have the same features but the given time of integration is referred to '1994b' (as '1994a' was integrated for 13.5 months only).^c Both '1996a' & '1996b' are referred to the same experiments with both having similar features and integration time.^d Control experiment here is the experiment with imposed albedo of 0.2 over all snowfree land and was integrated for 8 years (However, means used for 9 months only) and compared with 'forest' and 'woodland' experiments.^e Initialised from 1 December of the first year of the control run.^f A scheme in mixed layer ocean model to correct for ocean advection of energy. The standard flux correction in Henderson-Sellers *et al.* (1993) was based upon distribution of net radiation derived from a 5-year control run of the same model but with fixed SSTs. The improved flux correction in McGuffie *et al.* (1995) adds a second energy correction term based on temperature trend from a control run of an original model making mixed layer ocean model to represent a calculated SST derived as a net radiative perturbation of the original specified SSTs (more detail in Table 4.3).