Model	Deposition scheme	Land cover classes	Reference
CAMCHEM	Wesely	Desert, Ice and ocean; Needleleaf evergreen temperate tree; Needleleaf evergreen boreal tree; Needleleaf deciduous temperate tree; Broadleaf evergreen tropical tree; Broadleaf evergreen temperate tree; Broadleaf deciduous tropical tree; Broadleaf deciduous temperate tree; Broadleaf deciduous boreal tree; Broadleaf evergreen shrub; Broadleaf deciduous temperate shrub; Broadleaf deciduous boreal shrub; C3 arctic grass; C3 non-arctic grass; C4 grass; Corn; Wheat	Lamarque et al., 2012 Walmsley et al., 1996 Wesely and Hicks, 2000
CHASER-v03	Wesely	Includes tropical forest	Sudo et al., 2002
FRSGC/UCI-v01	Wesely	Water, Desert, Snow and ice, Deciduous forest, Coniferous forest, Tropical forest, Tundra, Grass, Crop	Wild et al., 2000 Wang et al., 1998
GEMAQ-EC	Wesely	Includes snow cover	Kaminski et al., 2008
GEOSChem-v07	Wesely	Snow/Ice; Deciduous forest; Coniferous forest; Agricultural land; Shrub/grassland; Amazon forest; Tundra, Desert; Wetland; Urban; Water.	Bey et al., 2001 Wang et al., 1998 http://acmg.seas.harvard.edu/geos/
GISS-PUCCINI	Wesely	Forest, Tropical forest, Woodland, Shrubland, Grassland, Tundra, Desert, Cultivation	Shindell et al., 2001 Chin et al., 1996, Matthews et al., 1983
GMI-v02f	Wesely	Snow/Ice; Deciduous forest; Coniferous forest; Agricultural land; Shrub/grassland; Amazon forest; Tundra, Desert; Wetland; Urban; Water.	Rotman et al., 2001 Wang et al., 1998
INCA-vSSz	Wesely	Evergreen needleleaf forest; Evergreen broadleaf forest; Deciduous needleleaf forest; Deciduous broadleaf forest; Mixed forest; Woodlands; Wooded grasslands/shrublands; Closed bushlands or shrublands; Open Shrublands; Grasses; Croplands	Hauglustaine et al., 2004 DeFries et al., 1998
LLNL-IMPACT-T5a	Wesely	Snow/Ice; Deciduous forest; Coniferous forest; Agricultural land; Shrub/grassland; Amazon forest; Tundra; Desert; Wetland; Urban; Water; Tropical forests; Tundra	Rotman et al., 2004 Wang et al., 1998
MOZARTGFDL-v2	Wesely	Evergreen needleleaf forest; Evergreen broadleaf forest; Deciduous needleleaf forest; Deciduous broadleaf forest; Mixed forest; Woodlands; Wooded grasslands/shrublands; Closed bushlands or shrublands; Open Shrublands; Grasses; Croplands	Horowitz et al., 2003
STOC-HadAM3-v01	Wesely	Water; Urban; Snow/Ice; Bare soil; Deciduous forest; Coniferous forest; C3 grass; C4 grass; Shrub	Collins et al., 2003
STOCHEM-v02	Wesely	Water; Urban; Snow/Ice; Bare soil; Deciduous forest; Coniferous forest; C3	Collins et al., 1997

		grass; C4 grass; Shrub	
TM5-JRC-cy2-ipcc-v1	Wesely	Snow and Ice, Water, Soil, Vegetation	Van Huijnen et al., 2010 Ganzeveld et al., 1995, http//:tm.knmi.nl/index.php/Main_Page
ULAQ-v02	Prescribed resistances	Not described	Pitari et al., 1992
UM-CAM-v01	Prescribed resistances	Water, Forest, Grass/Shrub, Soil, Snow/Ice	Zeng et al., 2003 Zeng et al., 2008

Notes on this table:
This table shows the model deposition scheme, and land cover classes for the TF-HTAP models used in this study. Many of the models include modifications to the Wesely scheme. Where applicable, additional references detailing these modifications are given.

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