Table X. List of land surface models affected by the derivation error in M2002 and the affected Earth Systems Models (ESMs) being used in the CMIP6 simulations. Note that 17 of the 40 (42.5%) CMIP6 ESMs are affected by the derivation error. Affected models are in bold.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Land Surface Model Family |  | # of ESMs | M2002? | Affected ESMs | References |
| Atmosphere-Vegetation Interaction Model | AVIM | 2 | No | BCC-CSM2-MR,  BCC-ESM1 | Ji, 1995 |
| **Community Atmosphere-Biosphere Land Exchange Model** | **CABLE** | **2** | **Yes** | **ACCESS-CM2,**  **ACCESS-ESM1-5** | **Haverd et al., 2018** |
| **Canadian Land Surface Scheme** | **CLASS** | **1** | **Yes** | **CanESM5** | **Swart et al., 2019** |
| **Community Land Model** | **CLM** | **12** | **Yes** | **CAMS-CSM1-0, CESM2, CESM2-FV2, CESM2-WACCM, CESM2-WACCM-FV2, NorESM2-LM, NorESM2-MM, E3SM-1-0, FGOALS-f3-L, FGOALS-g3, TaiESM1, SAM0-UNICON** | **Bonan, 1996;**  **Lawrence et al., 2018** |
| Goddard Institute for Space Studies Global Circulation Model | GISS-GCM | 3 | No | GISS-E2-1-G, GISS-E2-1-H, GISS-E2-2-G | Friend & Kiang, 2005 |
| Interaction Soil Biosphere Atmosphere Carbon Cycle | ISBAcc | 3 | No | CNRM-CM6-1, CNRM-CM6-1-HR, CNRM-ESM2-1 | Calvet et al., 1998;  Joetzjer et al., 2015 |
| Joint Scheme for Biosphere Atmosphere Coupling in Hamburg | JSBACH | 4 | No | AWI-CM-1-1-MR, MPI-ESM1-2-HR, MPI-ESM1-2-LR, NESM3 | Rogers et al., 2017;  Cao et al., 2018 |
| Joint UK Land Environment Simulator | JULES | 3 | No | HadGEM3-GC31-LL, HadGEM-GC31-MM, UKESM | Clark et al., 2011 |
| Land Model 4 | LM4 | 2 | No | GFDL-CM4, GFDL-ESM4 | Milly et al., 2014 |
| Lund-Potsdam-Jena Model | LPJ | 3 | No | EC-Earth3, EC-Earth3-Veg,  IPSL-CM6A-LR | Sitch et al., 2003;  Arora et al., 2020 |
| Simple Biosphere Model | SiB | 3 | No\*\*\*\* | INM-CM4-8, INM-CM5-0, MRI-ESM2-0 | Sato et al., 1989;  Volodin & Lykosov, 1998;  Hosaka, 2011 |
| **Vegetation Integrative SImulator for Trace Gases** | **VISIT** | **2** | **Yes** | **MIROC6, MIROC-ESL2** | **Ito, 2010; Arora et al., 2020** |

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