

Supplementary Information to: A climate change risk analysis for world ecosystems

Table S1: Models and scenarios used in this study and the global mean temperature difference between 2071-2100 and 1961-1990 used to categorize the model run into one of the three global warming groups, as well as the mean land-atmosphere C flux over 2071-2100 as simulated by LPJ.

Model name	Scenario	ΔT (2071-2100 – 1961-1990) in °C	Mean land-atm. C flux (2071-2100) in Pg C/yr
Canadian Centre for Climate Model. & Analysis: CGCM3.1(T47) (1)	B1	2.1	-1.3
Météo-France / Centre National de Recherches Météorologiques: CNRM-CM3 (2)	A1B	3.1	-2.6
	A2	3.8	-2.2
	B1	2.0	-2.0
	committed	0.6	-0.3
CSIRO Atmospheric Research: CSIRO-Mk3.0 (3)	A1B	2.3	-2.7
	A2	2.9	-3.0
	B1	1.3	-1.7
US Dept. of Commerce / NOAA / Geophysical Fluid Dynamics Laboratory: GFDL-CM2.0 (4)	A1B	3.2	-0.2
	A2	3.5	1.3
	B1	2.4	-0.3
	committed	1.2	0.0
US Dept. of Commerce / NOAA / Geophysical Fluid Dynamics Laboratory: GFDL-CM2.1 (5)	A1B	2.8	-0.5
	A2	3.3	0.9
	B1	2.0	-0.7
	committed	0.9	0.9
NASA / Goddard Institute for Space Studies: GISS-AOM (6)	A1B	2.2	-2.2
	B1	1.6	-1.1
NASA / Goddard Institute for Space Studies: GISS-EH (7)	A1B	2.2	-1.8
NASA / Goddard Institute for Space Studies: GISS-ER (8)	A1B	2.4	-1.8
	A2	2.8	-1.2
	B1	1.7	-1.4
	committed	0.02	-0.5
Institute for Numerical Mathematics: INM-CM3.0 (9)	A1B	3.1	-1.8
	A2	3.8	-0.5
	B1	2.5	-0.8
Institut Pierre Simon Laplace: IPSL-CM4 (10)	A1B	3.4	0.5
	A2	3.9	1.3
	B1	2.6	0.4
	committed	1.1	-0.2
Center for Climate System Research (University of Tokyo), NIES, and Frontier Research Center for Global Change: MIROC3.2(medres) (11)	A1B	3.6	-1.9
	A2	4.0	-2.4
	B1	2.5	-0.2
	committed	0.8	-0.3
Max Planck Institute for Meteorology: ECHAM5/MPI-OM (12)	A1B	3.6	-0.9
	A2	3.9	0.2

	B1	2.6	-0.6
	committed	0.6	0.0
Meteorological Research Institute: MRI-CGCM2.3.2 (13)	A1B	2.6	-2.4
	A2	2.9	-2.7
	B1	1.9	-1.6
	committed	0.9	0.0
National Center for Atmospheric Research: CCSM3 (14)	A1B	3.3	-2.7
	B1	2.1	-2.0
National Center for Atmospheric Research: PCM (15)	A1B	2.5	-3.2
	A2	2.7	-4.1
	B1	1.7	-2.0
	committed	0.8	0.3
Hadley Centre for Climate Prediction and Research / Met Office: UKMO- HadCM3 (16)	A1B	3.4	0.4
	A2	3.8	1.9
	B1	2.4	1.1
	committed	0.7	-0.4

Supplementary References

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Figure Legends:

Figure S1: Exceedence of a threshold one standard deviations of the variability for the period 1961-1990) in the mean over 2071-2100 compared to the mean 1961-1990 for runoff (first column, blue for exceedance above the threshold and red for below) and fire occurrence (second column, green for above and red for below). The third column shows the change in biome type for 2071-2100 compared to 1961-1990 with green being a change from non-forest to forest and blue vice versa. The scenarios displayed produce a global warming of less than 2° C.

Figure S2: As Figure S1 but for scenario runs with a global warming of 2-3°C.

Figure S3: As Figure S1 but for scenario runs with a global warming more than 3°C.

Figure S4: Global land-atmosphere C flux. Dashed lines are same models as solid lines, but for a different scenario.

Figure S1

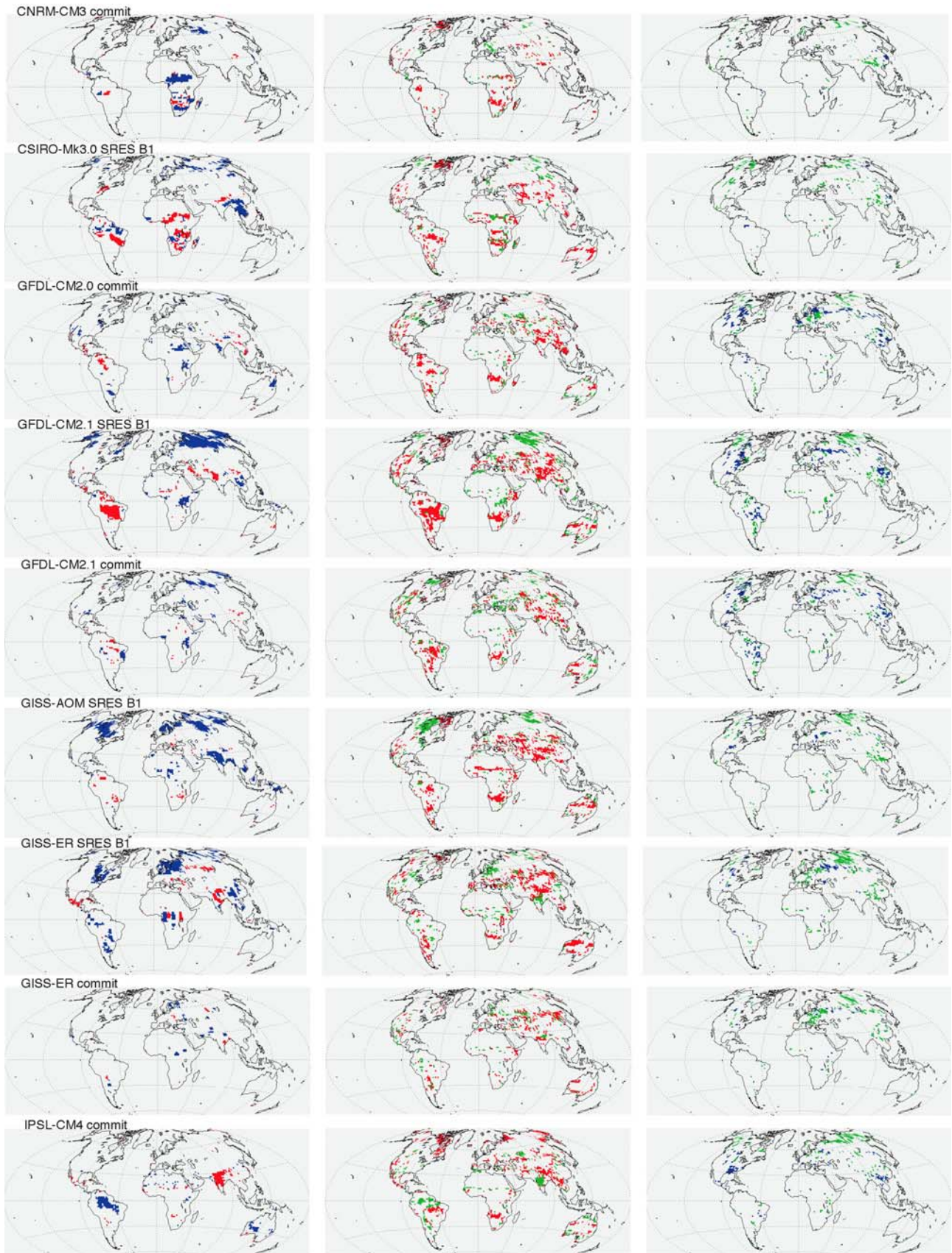


Figure S1 cont.

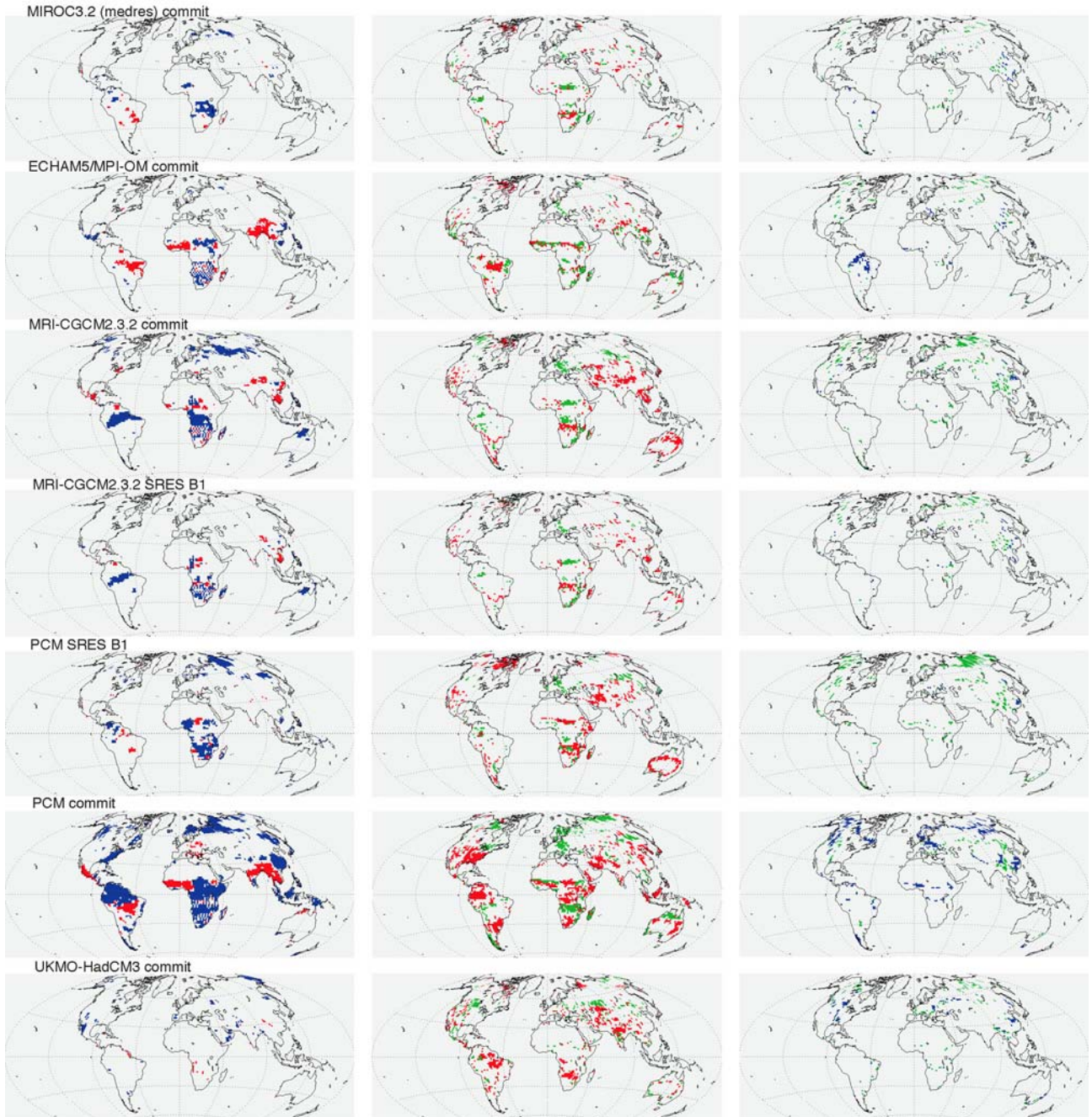


Figure S2

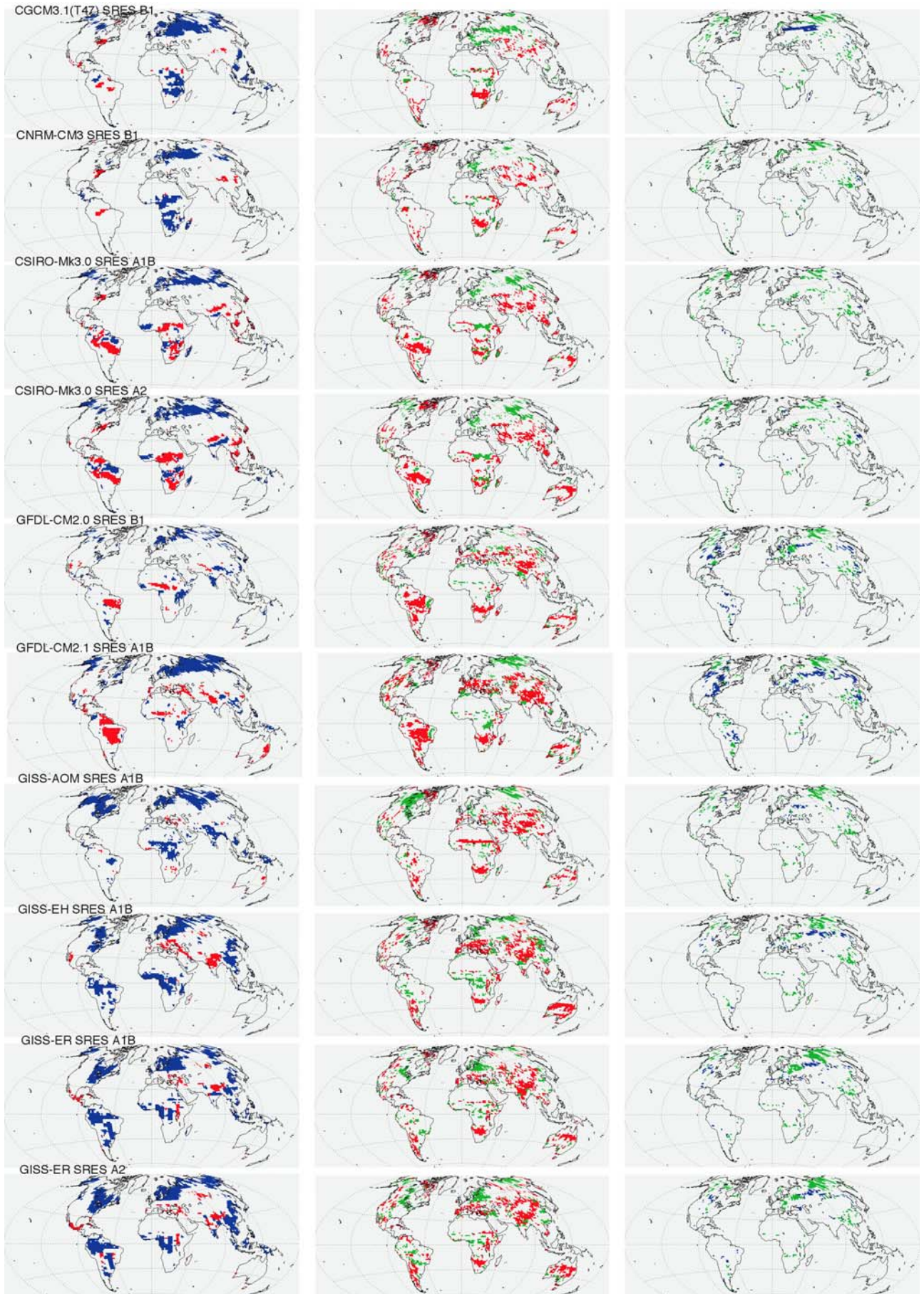


Figure S2 cont

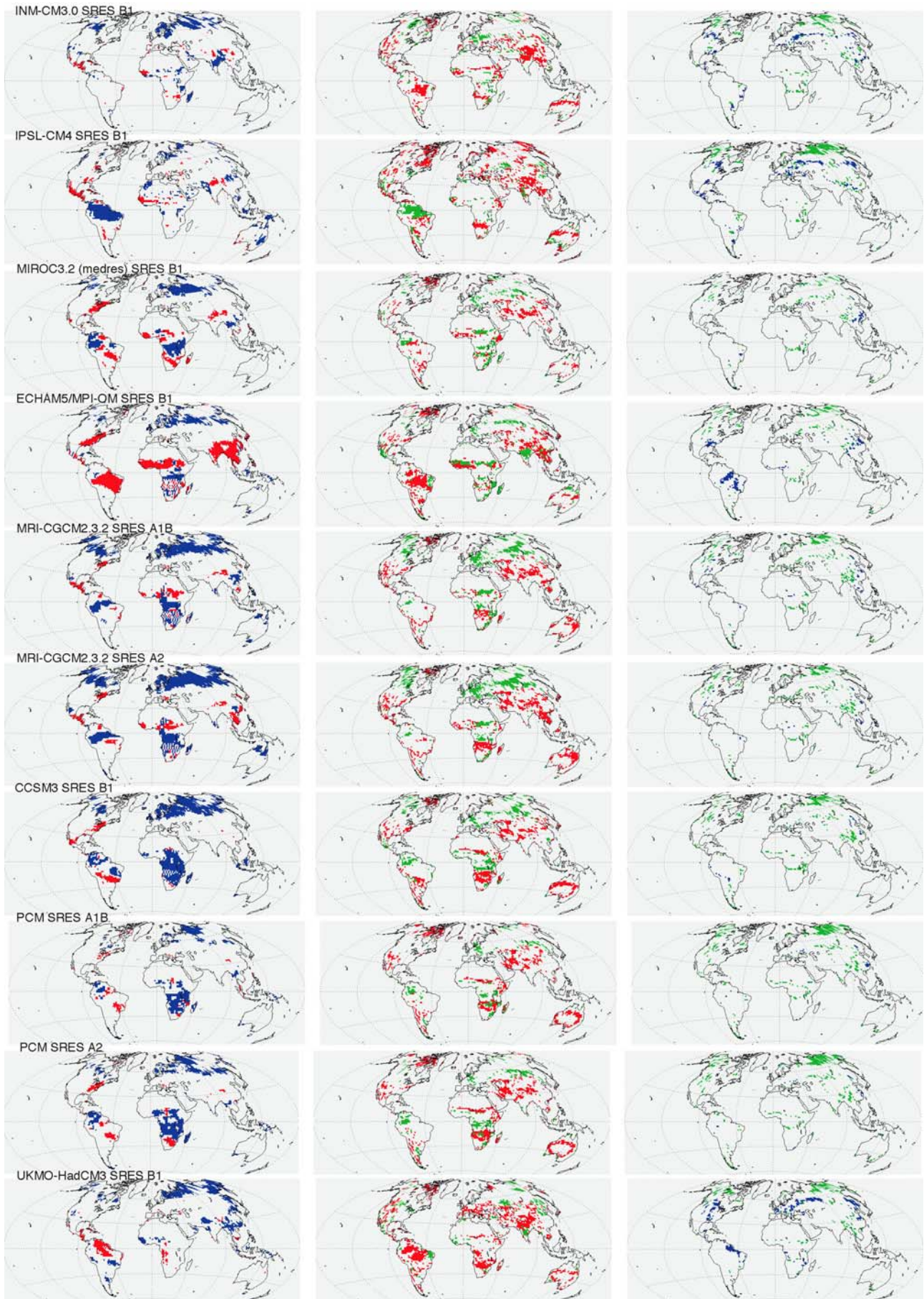


Figure S3

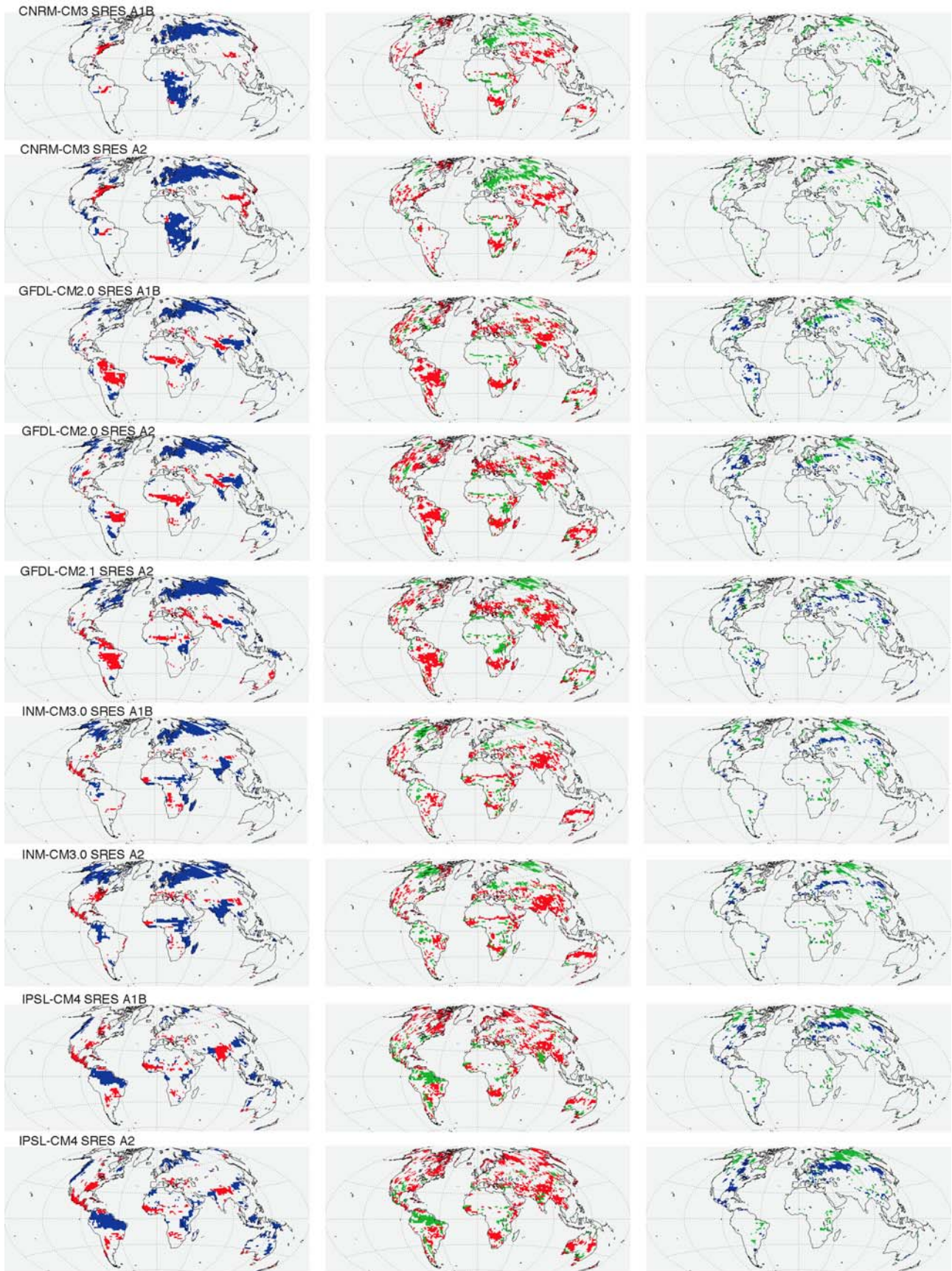


Figure S3 cont

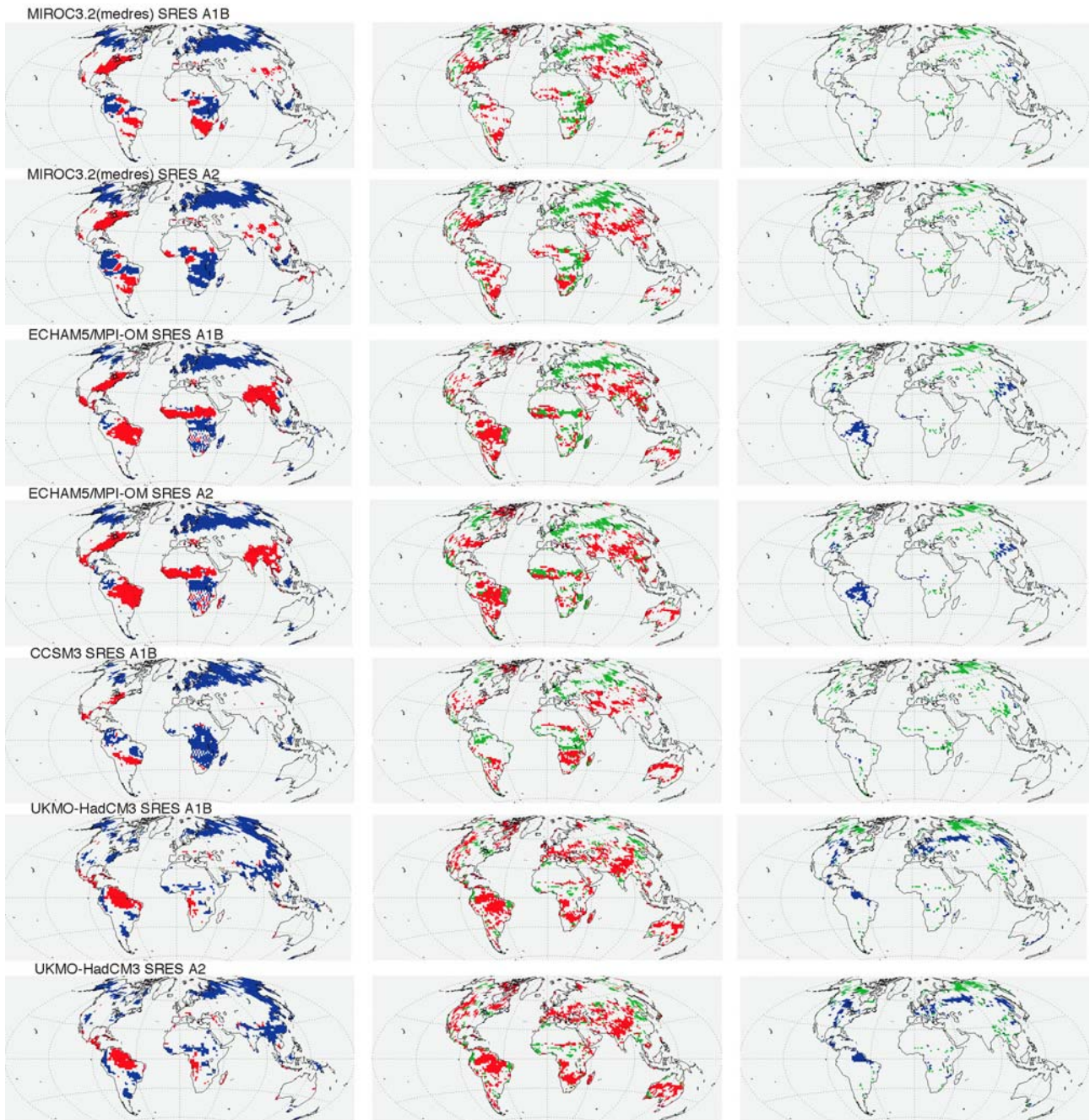


Figure S4

