## **Supplementary Material**

## **Figure Captions**

**Figure 1**: Fractional coverage of the 13 PFTs for the ERA-Interim simulation

**Figure 2**: Fractional coverage of the 13 PFTs for the CRU-NCEP simulation

## **Tables**

PFT	Name	% ERA-I	% CRU-NCEP	% GlobCover
1	Bare soil	32.3	18.5	26.6
2	Tropical Broad-leaved Evergreen	10.1	9.6	6.0
3	Tropical Broad-leaved Raingreen	12.6	6.0	9.0
4	Temperate Needleleaf Evergreen	3.2	2.9	5.7
5	Temperate Broad-leaved Evergreen	1.3	3.6	3.3
6	Temperate Broad-leaved Summergreen	4.5	3.8	5.4
7	Boreal Needleleaf Evergreen	6.1	4.2	5.2
8	Boreal Broad-leaved Summergreen	1.4	3.6	3.1
9	Boreal Needleleaf Summergreen	1.7	1.4	4.1
10	C3 Grass	14.1	25.2	7.7
11	C4 Grass	0.1	10.0	11.2
12	C3 Crops	11.9	8.2	3.9
13	C4 Crops	0.6	2.8	8.8

**Table 1** describes the vegetation types used in ORCHIDEE and their repartition in terms of surface percentage, for both grid simulations, ERA-I and CRU-NCEP. We see that the CRU-NCEP vegetation map has a significant larger proportion of both C3 and C4 grasses. The PFT

distribution derived from the Globcover land cover (Poulter et al., 2011) is given to illustrate the large variability of the available PFT distributions.

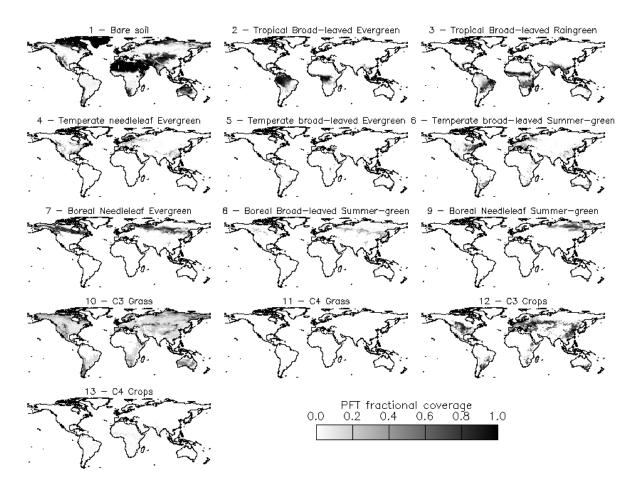


Figure 1

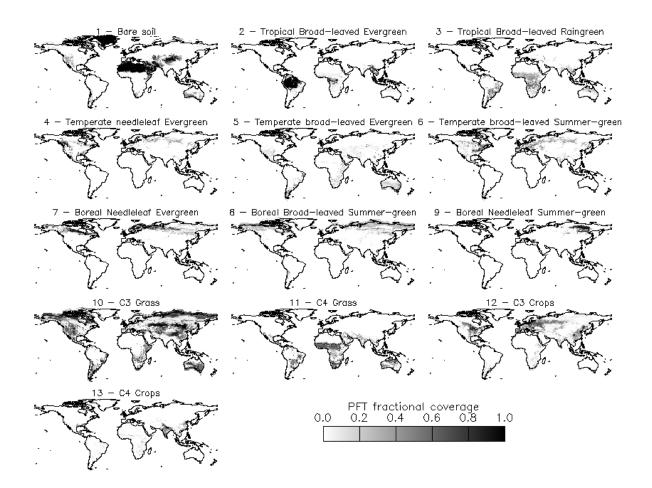


Figure 2