

Table S1: The Names of the global river basins used in this study (see Fig. 1 for locations).

Basin		Basin	
ID	Basin Name	ID	Basin Name
1	Amazon	28	Kolyma
2	Zaire	29	Okavango
3	Mississippi	30	Columbia
4	Ob	31	Colorado
5	Nile	32	Rio Grande
6	Parana	33	Sao Francisco
7	Lena	34	Orange
8	Amur	35	Amu Darya
9	Niger	36	Tigris-Euphrates
10	Yenisei	37	Baikal
11	Yangtze	38	Tarim (Yarkand)
12	Ganges-Brahmaputra	39	Dnieper
13	Mackenzie	40	Don
14	Lake Chad	41	Ili
15	Volga	42	Si
16	Zambezi	43	Senegal
17	Saskatchewan-Nelson	44	Syr Darya
18	St. Lawrence	45	Rio Colorado
19	Murray-Darling	46	Limpopo
20	Indus	47	Volta
21	Orinoco	48	Irrawaddy
22	Hwang Ho	49	N. Dvina
23	Yukon	50	Uruguay
24	Mekong	51	Indigirka
25	Danube	52	Parnaiba
26	Jubba-Shebelle	53	Godavari
27	Tocantins	54	Helmand



Figure S1: Correlation coefficients calculated over different river basins between model TWS estimates and GRACE data (see locations and basin names in Figure 1 and Table S1). The mean (average) value calculated from statistical values from all basins is also displayed (M).