

# Supplementary Materials: Potential Impacts of Food Production on Freshwater Availability Considering Water Sources

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Table S1. List of commodities.

Crops	Livestocks
Wheat	Cattle meat
Flour of wheat	Offal of cattle, edible
Bran of wheat	Fat of cattle
Macaroni	Meat–cattle boneless (beef and veal)
Germ of wheat	Cattle, butchered fat
Bread	Preparation of beef
Bulgur	Pork
Rice, paddy	Offal of pigs, edible
Rice husked	Fat of pigs
Milled husked rice	Pork
Rice milled	Bacon and ham
Rice broken	Pig, butchered fat
Bran of rice	Pork sausages
Rice bran oil	Prepared pig meat
Cake rice bran	Lard
Rice flour	Chicken meat
Rice fermented beverages	Offal and liver of chicken
Barley	Fat liver prepared (foie gras)
Pot barley	Chicken meat canned
Barley pearled	Fat of poultry
Bran of barley	Fat of poultry, rendered
Barley flour and grits	
Malt	
Malt extract	
Beer of barley	
Maize	
Germ of maize	
Flour of maize	
Bran of maize	
Maize oil	
Cake of maize	
Soybeans	
Soybean oil	
Cake of soybeans	
Soya sauce	
Maize, green	
Maize for forage and silage	

**Table S2.** Water footprint inventory based on meteorological forcing data for the 1991–2000 period (km<sup>3</sup>/year).

Land Type	Water Source	WFD	GSWP3	PFD	Average	SD
Rainfed cropland	Precipitation	2220	2502	2342	2354	115
Irrigated cropland	Precipitation	772	839	762	774	49
	Surface water	757	954	828	846	82
	Groundwater	223	547	335	369	134
Total		3912	4842	4268	4344	380

**Table S3.** Water footprint inventory based on meteorological forcing data for the 2001–2008 period (km<sup>3</sup>/year).

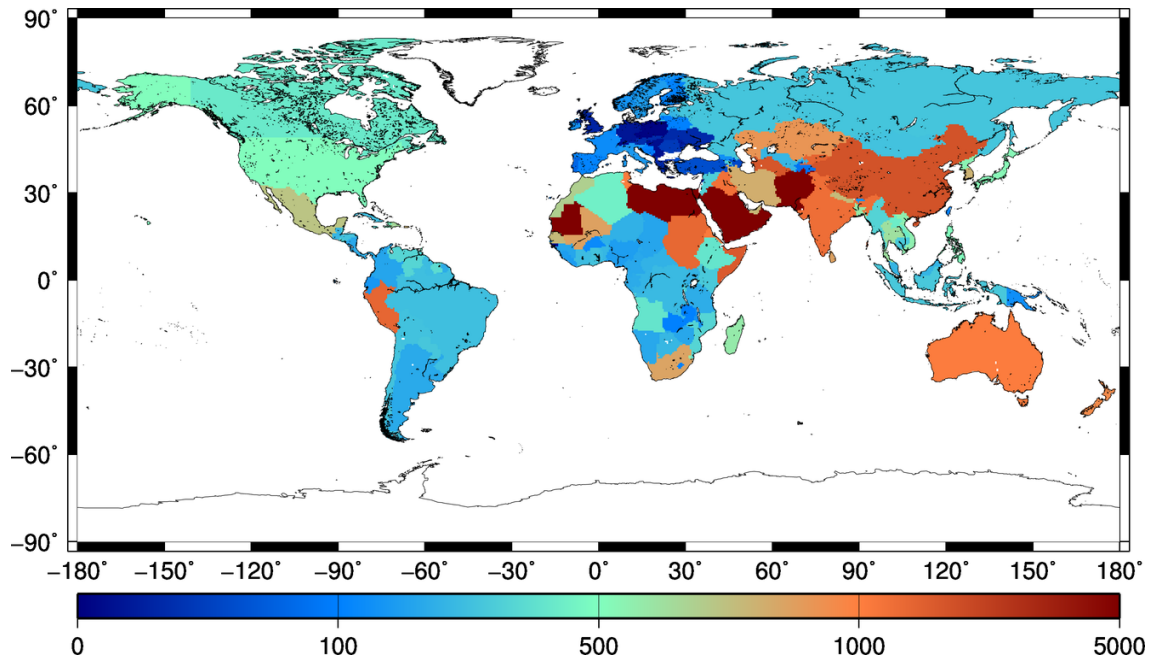
Land Type	Water Source	GSWP3	PFD	Average	SD
Rainfed cropland	Precipitation	2538	2344	2441	97
Irrigated cropland	Precipitation	852	759	805	46
	Surface water	944	798	871	73
	Groundwater	595	355	475	120
Total		4929	4256	4592	336

**Table S4.** Water scarcity footprint based on meteorological forcing data for the 1991–2000 period (km<sup>3</sup> H<sub>2</sub>Oeq/year).

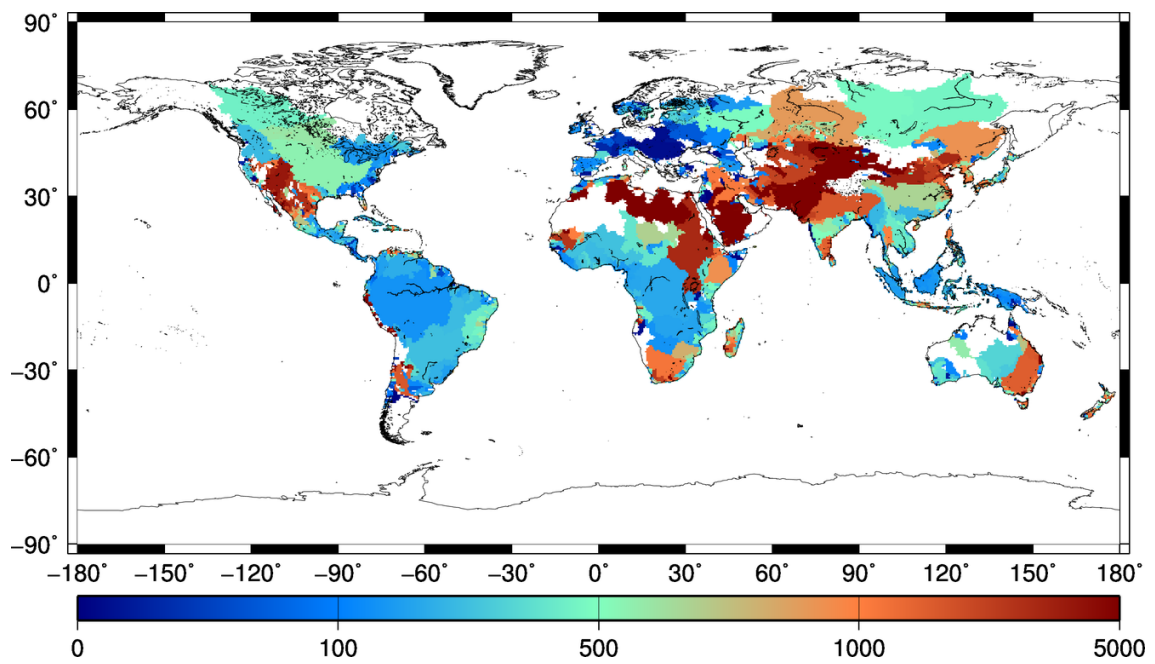
Land Type	Water Source	WFD	GSWP3	PFD	Average	SD
Rainfed cropland	Precipitation	2500	2988	2749	2746	199
Irrigated cropland	Precipitation	869	1035	935	946	68
	Surface water	5506	7798	6234	6513	957
	Groundwater	4925	10,919	7,636	7,827	2451
Total		13,800	22,740	17,553	18,031	3,666

**Table S5.** Water scarcity footprint based on meteorological forcing data for the 2001–2008 period (km<sup>3</sup> H<sub>2</sub>Oeq/year).

Land Type	Water Source	GSWP3	PFD	Average	SD
Rainfed cropland	Precipitation	3037	2787	2912	125
Irrigated cropland	Precipitation	1060	956	1008	52
	Surface water	7957	6704	7330	626
	Groundwater	12,433	8412	10,422	2010
Total		24,486	18,860	21,673	2813



**Figure S1.** Water scarcity footprints related to agricultural activities in each country (mm H<sub>2</sub>Oeq/year).



**Figure S2.** Water scarcity footprints related to agricultural activities in each basin (mm H<sub>2</sub>Oeq/year).