

Online supplement

Kummu et al: Climate-driven interannual variability of water scarcity in food production: a global analysis

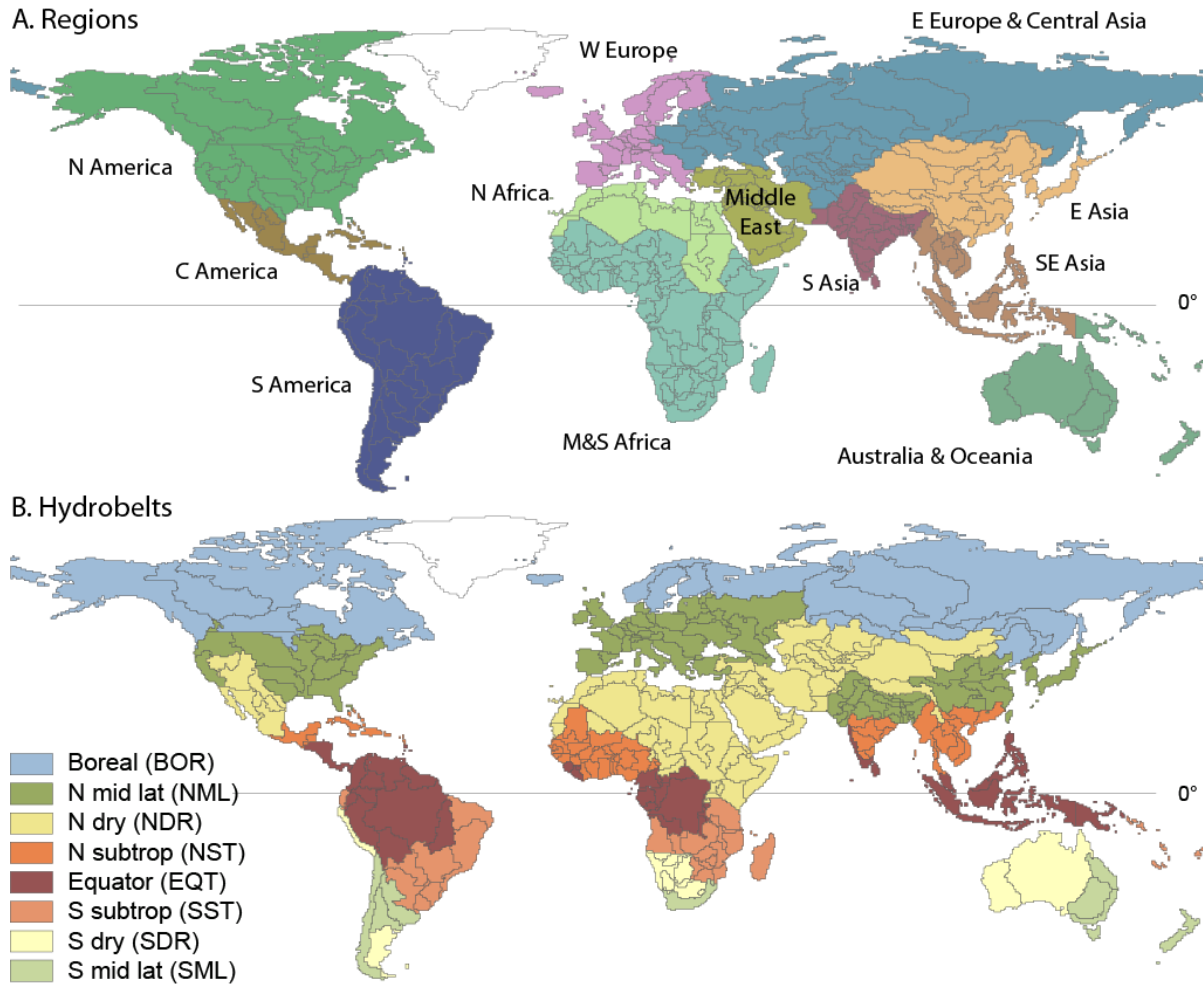


Fig S1. Division of FPUs to A: administrative regions (United Nations, 2000; Kummu et al., 2010) and B: hydrolbelts (Meybeck et al., 2013). Note: the hydrolbelt boundaries differ here slightly from the original, as hydrolbelts crossed some FPU borders, and thus each FPU was aggregated to a hydrolbelt with largest share in that FPU in question.

Table S1. Regional results for green-blue water scarcity frequency; See illustrations in Fig 3A in the main paper.

Region	Population	0%	0-25%	25-50%	50-75%	75-100%	100%	Grand Total
Australia and Oceania	29,198,205	100%						100%
Central America	169,414,768	90%		10%				100%
Eastern Asia	1,484,822,477	57%	5%	5%	10%	7%	17%	100%
Eastern Europe and Central Asia	391,175,459	85%	1%		5%	2%	7%	100%
Latin America	348,256,247	93%		1%		6%		100%
Middle and Southern Africa	605,305,081	54%	13%	4%	5%	12%	12%	100%
Middle East	257,268,709	24%	2%			6%	68%	100%
North Africa	173,300,517	16%	32%	1%	0%	25%	26%	100%
North America	309,635,372	100%						100%
South Asia	1,345,367,745	10%	8%	6%	1%	8%	66%	100%
Southeastern Asia	517,658,581	99%					1%	100%
Western Europe	410,875,355	98%	2%					100%
Grand Total	6,042,278,516	57%	5%	3%	4%	6%	24%	100%

Table S2. Results by hydrobelts for green-blue water scarcity frequency; See illustrations in Fig 3B in the main paper.

Hydrobelt	Population	0%	0-25%	25-50%	50-75%	75-100%	100%	Grand Total
Boreal	210,586,285	100%		0%				100%
Northern Mid Latitude	3,050,054,031	51%	4%	5%	4%	4%	32%	100%
Norther Dry	727,553,475	25%	11%	1%	10%	16%	37%	100%
Norther Sub-Tropical	1,007,074,982	59%	6%	3%	2%	11%	19%	100%
Equator	604,513,955	97%		1%			3%	100%
Souther Sub-Tropical	342,816,490	78%	12%	1%		5%	3%	100%
Southern Dry	35,180,354	36%	4%			56%	4%	100%
Souther Mid Latitude	64,498,944	71%	27%	1%				100%
Grand Total	6,042,278,516	57%	5%	3%	4%	6%	24%	100%

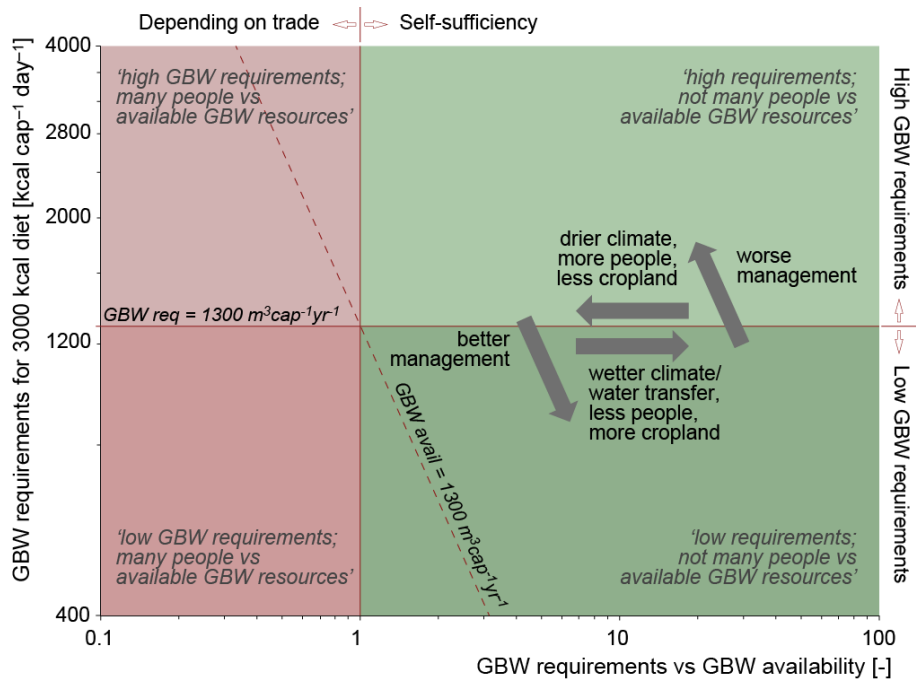


Fig S2. Green-blue water (GBW) matrix. Green-blue water (GBW) requirements for the reference diet is at y-axis and GBW availability ratio (i.e. GBW availability vs GBW requirements) at x-axis. When the GBW requirements are higher than the GBW availability (x -axis < 1), an area is considered to be under GBW scarcity. The dashed red line re-presents the threshold for GBW scarcity in Rockström et al. (2009), i.e. GBW availability of $1300 \text{ m}^3 \text{ cap}^{-1} \text{ yr}^{-1}$, and thus provides a comparison to their method. Note: log10 scale in both axes.

References

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