Supplementary material for

An improved global land cover mapping in 2015 with 30 m resolution (GLC-2015) based on a multi-source product fusion approach

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Table S1. Relationship between our classification system and the classification systems of the three GLC products.

Id	GLC-2015	Globeland30	FROM_GLC	GLC_FCS30
10	Cropland	Cultivated land	Rice paddy	Rain-fed cropland
			Greenhouse	Herbaceous cover
			Other/orchard	Tree or shrub cover (orchard)
			Bare farmland	Irrigated cropland
20	Forest	Forest	Broadleaf, leaf-on	Evergreen broadleaved forest
			Broadleaf, leaf-off	Open/closed deciduous broadleaved forest
			Needleleaf, leaf-on	Open/closed evergreen needleleaved forest
			Needleleaf, leaf-off	Open/closed deciduous needleleaved forest
			Mixed leaf, leaf-on	Mixed leaf forest
			Mixed leaf, leaf-off	

30	Grassland	Grassland	Pasture	Grassland
			Natural grassland	
			Grassland, leaf-off	
40	Shrubland	Shrubland	Shrubland, leaf-on	Evergreen shrubland
			Shrubland, leaf-off	Deciduous shrubland
50	Wetland	Wetland	Marshland	Wetlands
			Mudflat	
			Marshland, leaf-off	
60	Water bodies	Water bodies	Water	Water
70	Tundra	Tundra	Shrub and brush tundra	
			Herbaceous tundra	Lichens and mosses
80	Impervious surfaces	Artificial surfaces	Impervious surfaces	Impervious surfaces
90	Bare land	Bare land	Bare land	Sparse shrubland
				Sparse herbaceous cover
				Consolidated/unconsolidated bare areas
100	Permanent snow and ice	Permanent snow and ice	snow and ice	Permanent snow and ice

Table S2. Information of Ecological Zone and its abbreviation across the globe.

Domain	Ecological Zone	
Name	Name	Abbreviation
	Tropical rainforest	TAr
	Tropical desert	TBWh
Tropical	Tropical moist forest	Tawa
	Tropical dry forest	TAwb
	Tropical shrubland	TBSh
	Tropical mountain system	TM
Subtropical	Subtropical humid forest	SCf
	Subtropical dry forest	SCs

	Subtropical desert	SBWh
	Subtropical steppe	SBSh
	Subtropical mountain system	SM
	Temperate oceanic forest	TeDo
	Temperate continental forest	TeDc
Temperate	Temperate mountain system	TeM
	Temperate steppe	TeBSK
	Temperate desert	TeBWk
	Boreal coniferous forest	Ba
Boreal	Boreal mountain system	BM
	Boreal tundra woodland	Bb
Polar	Polar	P
Water	Water	Water
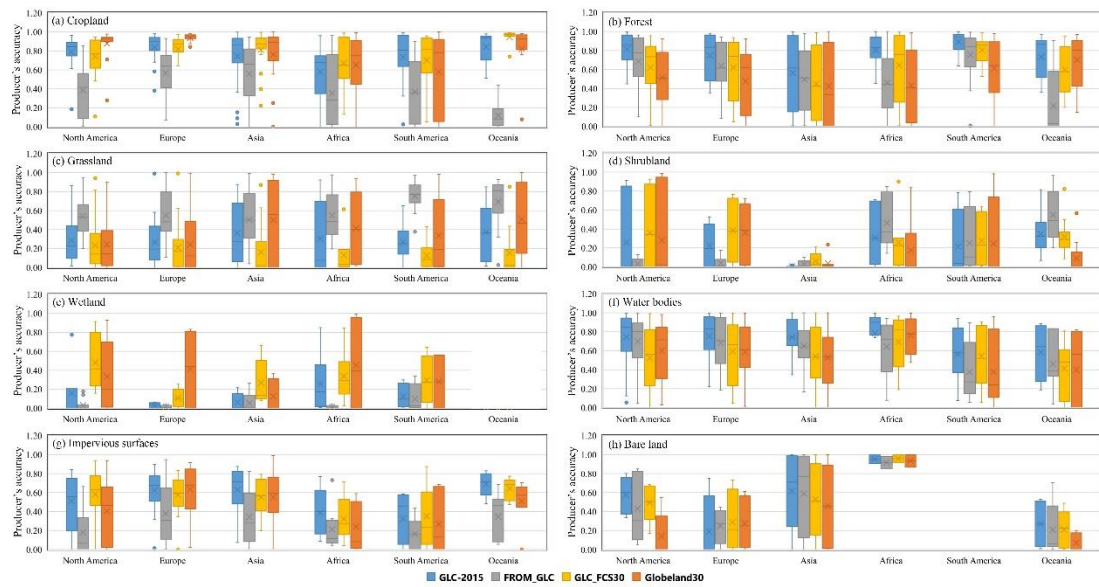
Figure S1. The box-plot of the producers' accuracy of various LC classes for different continents.
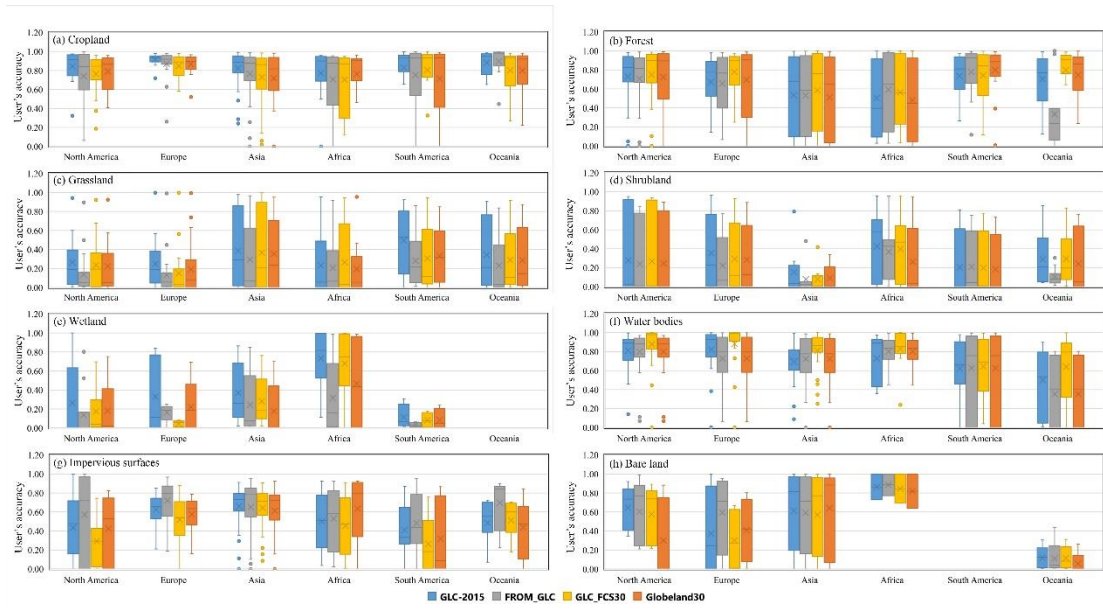
Figure S2. The box-plot of the users' accuracy of various LC classes for different continents.