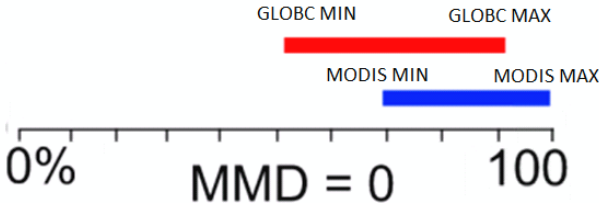
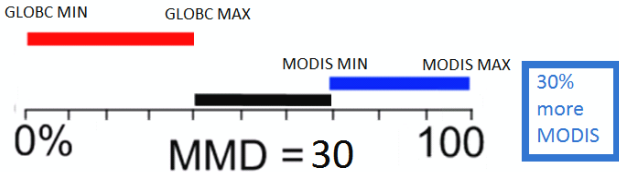


Supplementary Figure 1: Minimum Measurable Disagreement (MMD) is calculated by measuring the thematic difference between the minimum of one map to the maximum of the other map in the 0.125 pixel. Whenever the minimum-maximum pair of 2 products overlaps, no disagreement is recorded. The Minimum measurable disagreement is calculated for the cropland as well as the forest domain. Three examples are given below. This analysis is carried out for each pixel.

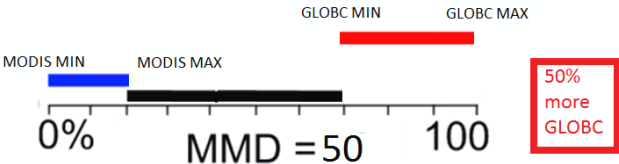
The first example shows the overlap between the minimum and maximum of GlobCover and MODIS. In this situation, no cropland disagreement is recorded.



The second example shows that the percentage distance between the MODIS minimum and the GlobCover maximum is 30%. In this situation, MODIS records 30% more cropland. See corresponding areas in Figure 1a.



The final examples shows that the percentage distance between the GlobCover minimum and the MODIS maximum is 30%. In this situation, GlobCover records 50% more cropland. See corresponding areas in Figure 1a.



Supplementary Table 1: Cropland definitions from the GLC-2000, MODIS v.5 and GlobCover 2005.

Land Cover Product	Legend Class	Class Definition	Minimum %	Maximum %
GLC-2000	Cultivated and managed areas	Cultivated and managed areas Examples of sub-classes at reg. level: (i) terrestrial; (ii) aquatic (=flooded during cultivation), and under terrestrial: (iii) tree crop & shrubs (perennial), (iv) herbaceous crops (annual), non-irrigated, (v) herbaceous crops (annual), irrigated	50%	100%
	Mosaic: Cropland/Tree Cover/natural vegetation	Mosaic: Cropland/Tree Cover/Other natural vegetation	20%	50%
	Mosaic: Cropland/Shrub or Grass Cover	Mosaic: Cropland/Shrub or Grass Cover	20%	80%
MODIS v.5	Croplands	Croplands are lands covered with temporary crops followed by harvest and a bare soil period (e.g., single and multiple cropping systems). Note that perennial woody crops will be classified as the appropriate forest or shrub land cover type.	60%	100%
	Cropland/natural vegetation	Cropland/natural vegetation mosaics are lands with a mosaic of croplands, forests, shrublands, and grasslands in which no one component comprises more than 60% of the landscape	20%	60%
GlobCover 2005	Post-flooding or Irrigated croplands	Post-flooding or irrigated croplands	70%	100%
	Rainfed croplands	Rainfed croplands	70%	100%
	Mosaic Cropland/grass or shrub or forest	Mosaic cropland (50-70%) / vegetation (grassland / shrubland / forest) (20-50%)	50%	70%
	Mosaic grass or shrub or forest/Cropland	Mosaic vegetation (grassland / shrubland / forest) (50-70%) / cropland (20-50%)	20%	50%

Supplementary Table 2: Forest land cover definitions from the GLC-2000, MODIS v.5 and GlobCover 2005.

Land Cover Product	Legend Class	Class Definition	Minimum	Maximum
GLC-2000	Tree Cover, broadleaved, evergreen	Tree Cover, broadleaved, evergreen, LCCS >15% tree cover, tree height >3m closed >40% tree cover; open 15-40% tree cover	80%	100%
	Tree Cover, broadleaved, deciduous, closed	Tree Cover, broadleaved, deciduous, closed LCCS >15% tree cover, tree height >3m Examples of sub-classes at regional level: closed >40%	80%	100%
	Tree Cover, broadleaved, deciduous, open	Tree Cover, broadleaved, deciduous, open tree cover; open 15-40% tree cover	80%	100%
	Tree Cover, needle-leaved, evergreen	Tree Cover, needle-leaved, evergreen LCCS >15% tree cover, tree height >3m closed >40% tree cover; open 15-40% tree cover	80%	100%
	Tree Cover, needle-leaved, deciduous	Tree Cover, needle-leaved, deciduous LCCS >15% tree cover, tree height >3m closed >40% tree cover; open 15-40% tree cover	80%	100%
	Tree Cover, mixed leaf type	Tree Cover, mixed leaf type	80%	100%
	Mosaic: Tree cover/Other natural vegetation Tree Cover, burnt		20%	80%
	Mosaic: Cropland/Tree Cover/natural vegetation	Mosaic: Cropland/Tree Cover/natural vegetation	20%	80%
MODIS v.5	Evergreen needleleaf forests	Evergreen needleleaf forests are dominated by trees with a percent canopy cover of greater than 60% and height exceeding 2m. Almost all of its trees remain green all year. Its canopy is never without green foliage.	60%	100%
	Evergreen broadleaf forests	Evergreen broadleaf forests are dominated by trees with a percent	60%	100%

		canopy cover of greater than 60% and height exceeding 2m. Almost all of its trees remain green year all year. Its canopy is never without green foliage.		
	Deciduous needleleaf forests	Deciduous needleleaf forests are dominated by trees with a percent canopy cover of greater than 60% and height exceeding 2m. It consists of seasonal needleleaf tree communities with an annual cycle of leaf-on and leaf-off periods	60%	100%
	Deciduous broadleaf forests	Deciduous broadleaf forests are dominated by trees with a percent canopy cover of greater than 60% and height exceeding 2m. It consists of seasonal broadleaf tree communities with an annual cycle of leaf-on and leaf-off periods	60%	100%
	Mixed forests	Lands dominated by trees with a percentage cover >60% and height exceeding 2m. Consists of tree communities with interspersed mixtures or mosaics of the other four forest types	60%	100%
	Woody Savannahs	Woody Savannahs are lands with herbaceous and other understory systems, and with forest canopy cover between 30-60%. The forest cover height exceeds 2m.	60%	100%
	Non-Woody Savannahs	Non-Woody Savannahs are lands with herbaceous and other understory systems, and with forest canopy cover between 10-30%. The forest cover height exceeds 2m	60%	100%
GlobCover 2005	Closed-open broadleaved evergreen/semi-deciduous forest	Closed to open (>15%) broadleaved evergreen and/or semi-deciduous forest (>5m)	70%	100%
	Closed broadleaved deciduous forest	Closed (>40%) broadleaved deciduous forest (>5m)	70%	100%

	Open broadleaved deciduous forest	Open (15-40%) broadleaved deciduous forest/woodland (>5m)	70%	100%
	Closed needleleaved evergreen forest	Closed (>40%) needleleaved evergreen forest (>5m)	70%	100%
	Open needleleaved deciduous or evergreen forest	Open (15-40%) needleleaved deciduous or evergreen forest (>5m)	70%	100%
	Closed-open mixed broadleaved-needleleaved forest	Closed to open (>15%) mixed broadleaved and needleleaved forest	70%	100%
	Mosaic cropland vegetation (grassland / shrubland / forest)	Mosaic cropland (50-70%) / vegetation (grassland / shrubland / forest) (20-50%)	0%	50%
	Mosaic vegetation (grassland / shrubland / forest) / cropland	Mosaic vegetation (grassland / shrubland / forest) (50-70%) / cropland (20-50%)	0%	70%
	Mosaic forest or shrubland and grassland	Mosaic forest or shrubland (50-70%) and grassland (20-50%)	0%,	70%
	Mosaic grassland and forest or shrubland	Mosaic grassland (50-70%) and forest or shrubland (20-50%)	0%	50%