Deriving a per-field land use and land cover map in an agricultural mosaic catchment

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Table ST1: Crop types adopted from the FAO-LCCS (Di Gregorio, 2005). The column 'Crop type' shows the definition and the column 'Major local crops' lists the six types recorded during the field campaign (2009-2011).

	Crop type	Major local crops
Food Crops	Cereals and Pseudocereals	Rice
	Roots and Tubers	Potato and White radish
	Pulses and Vegetables	Chinese Cabbage, European Cabbage and Pepper
	Fruit and Nuts	Apple, Peach and Grape
	Fodder Crops	Rye
	Beverages and Stimulants	Not observed
	Other Food crops	Not observed
Non-Food Crops	Industrial Crops	Ginseng, Sesame and Soybean
	Wood and Timber	Not observed
	Crops for Biological Filtration	Not observed
	Fibre Crops and Structural Material	Not observed
	Other non-food crops	Not observed

Table ST2: Four levels in the FAO-LCCS (Di Gregorio, 2005).

Presence of Vegetation	Edaphic Condition	Artificiality of Cover	Major Land Cover Types (LCCS code)
Primarily vegetated area (A)	Terrestrial	Artificial/managed	Cultivated and Managed Terrestrial Area (A11)
		(Semi-)natural	Natural and Semi-Natural Terrestrial Vegetation (A12)
	Aquatic or Regularly Flooded	Artificial/managed	Cultivated Aquatic or Regularly Flooded Vegetation (A23)
		(Semi-)natural	Natural and Semi-natural Aquatic or Regularly Flooded Vegetation (A24)
Primarily non-vegetated area (B)	Terrestrial	Artificial/managed	Artificial Surfaces and Associated Area (B15)
		(Semi-)natural	Bare Area (B16)
	Aquatic or Regularly Flooded	Artificial/managed	Artificial Waterbodies, Snow and Ice (B27)
		(Semi-)natural	Natural Waterbodies, Snow and Ice (B28)

Table ST3: Changes of land use/land cover according to the classification scheme S1 in percent. The LULC type 'dry field' was assigned to patches with unknown type of dry field crop. Note that in 2011 we only surveyed the northern half of catchment and there are 12.35% of missing data. In consequence a comparison can only be made between 2009 and 2010.

LULC type	2009	2010	2011	LULC type	2009	2010	2011
Acanthopanax	0.260	0.291	0.110	lettuce	0.000	0.005	0.000
apple	0.255	0.520	0.410	Ligularia fischeri	0.085	0.085	0.031
Aster scaber	0.011	0.011	0.011	maize	0.709	0.294	0.116
bare soil	0.098	0.144	0.027	medicinal herb	0.050	0.125	0.000
barren	0.216	0.080	0.050	mixed dry field	0.087	0.133	1.206
bean	2.146	2.280	1.245	mixed forest	2.060	2.082	2.093
bracken	0.245	0.014	0.007	orchard	0.016	0.049	0.031
bridge	0.001	0.001	0.001	orchard preparation	0.123	0.000	0.016
broccoli	0.000	0.044	0.019	peach	0.461	0.594	0.289
C4 cover crop	0.000	0.070	0.000	pepper	0.237	0.245	0.088
cabbage	0.021	0.000	0.138	permananet wetland	0.001	0.001	0.001
cattle barn	0.008	0.008	0.005	pine forest	0.149	0.149	0.236
chicory	0.000	0.014	0.000	potato	3.268	2.461	1.022
chinese bellflower	0.049	0.000	0.000	pumpkin	0.129	0.024	0.002
chinese cabbage	0.182	0.514	0.018	reservoir	0.068	0.233	0.238
chinese millet	0.041	0.000	0.000	rice paddy	8.499	8.093	4.650
codonopsis	0.481	0.458	0.305	riparian zone	0.091	0.090	0.065
common ragweed	0.007	0.007	0.007	rye	0.259	0.769	0.935
coniferous forest	0.141	0.141	0.064	sanchae	0.015	0.015	0.023
cover crop	0.073	0.024	0.000	Schisandra chinensis	0.016	0.016	0.016
deciduous forest	55.720	55.414	54.734	sea bucktorn	0.002	0.013	0.037
dry field	3.644	1.766	0.477	semi natural	5.953	6.004	6.381
european cabbage	1.275	0.555	0.503	sesame	0.060	0.178	0.073
facilities	0.033	0.033	0.032	short grass	0.024	0.037	0.030
fallow	1.894	4.781	1.400	shrub	1.075	1.038	0.847
fatsia	0.051	0.021	0.032	stream	0.598	0.595	0.595
field margin	0.008	0.008	0.006	tall grass	2.172	2.253	2.127
ginseng	1.262	2.477	2.856	transportation	0.772	0.776	0.734
grape	0.326	0.305	0.163	urban	0.868	0.864	0.778
green onion	0.078	0.009	0.011	white radish	2.890	1.808	1.182
green pea	0.007	0.000	0.000	wrapping vegetables	0.035	0.020	0.000
greenhouse	0.767	0.850	0.575	zucchini	0.201	0.125	0.064
industrial	0.045	0.044	0.024	NA	0.018	0.033	12.348
inland water	0.028	0.036	0.060				

References

Di Gregorio, A (2005). *Land Cover Classification System: Classification Concepts and User Manual: LCCS*. Rome (Italy). Food and Agriculture Organization of the United Nations (FAO).