

**Table S1.** Allocation of rice selection points by provincial administrative units within the whole China monsoon region.

Region	Provincial Administrative Units	Statistical area of rice (km <sup>2</sup> ) <sup>1</sup>	POI Number	NPOI Number
Northern Region	Heilongjiang	38670	1291	4295
	Liaoning	5206	174	578
	Jilin	8373	279	930
	Inner Mongolia	1550	52	172
	Hebei	1439	48	160
	Beijing	3	— <sup>2</sup>	—
	Shanxi	27	—	—
	Shaanxi	1061	35	118
	Gansu	31	—	—
	Ningxia	508	18	60
	Henan	5953	199	661
	Shandong	1130	38	126
	Tianjin	585	20	67
Southern Region	Jiangsu	22192	741	2465
	Shanghai	878	29	98
	Zhejiang	5314	177	590
	Anhui	25121	838	2790
	Jiangxi	9400	314	1044
	Fujian	5994	200	666
	Hunan	14761	493	1640
	Hubei	20192	674	2243
	Guangxi	8075	269	897
	Guizhou	6452	215	717
	Chongqing	6589	220	732
	Sichuan	18750	626	2083
	Guangdong	18274	610	2030
	Yunnan	10431	348	1159
	Hainan	2266	76	252
Sum		239225	7984	26573

<sup>1</sup> Data from the websites of local government statistical offices. <sup>2</sup> Since the statistical rice area is so small that it is negligible, no points are selected.

**Table S2.** Formula for calculating classification coefficients based on confusion matrix.

Classification Coefficient	Calculation formula <sup>1</sup>	Definition
User's Accuracy (UA)	$UA = \frac{t_i}{v_i} \times 100\%$	false positives, or errors of commission, also referred to as Type 1 error.
Producer's Accuracy (PA)	$PA = \frac{t_i}{m_i} \times 100\%$	false negatives, or errors of omission, also referred to as Type 2 error.
Overall Accuracy (OA)	$OA = \frac{\sum_{i=1}^n t_i}{V} \times 100\%$	Percentage of check points for correctly classified land cover categories to the total number of check points taken.
Kappa Coefficient (KC)	$Kappa = \frac{V \sum_{i=1}^n t_i - \sum_{i=1}^n (t_i \times v_i)}{V^2 - \sum_{i=1}^n (t_i \times v_i)}$	Overall assessment of the accuracy of the classification.
F-score	$F_i = \frac{2PA_i \times UA_i}{PA_i + UA_i} \times 100\%$	Summed average of precision and recall.

<sup>1</sup> In these formulas, n is the total number of categories;  $t_i$  is the number of validation samples in category i that are correctly classified; V is the total number of validation samples;  $v_i$  is the number of validation samples in category i;  $m_i$  is the number of validation samples classified as category i;  $PA_i$  is the producer accuracy in category i;  $UA_i$  is the user accuracy in category i; and  $F_i$  is the F1-score in category i.