

Table S1. List of Landsat images used for interpretation

Row number	123/39	123/40	124/39	124/40
Data	19890211	19890211	19890210	19890210
	19890307	19890307	19890517	19890517
	19890814	19890510	19890906	19891125
	19891118	19890814	19890922	19900402
	19891204	19891102	19891024	19900520
	19900427	19891118	19891125	19900605
	19900716	19891204	19900418	19900723
	19900902	19900427	19900504	19901128
	19901223	19900716	19900605	19910115
	19910108	19900902	19900723	19910624
	19910516	19901207	19900824	19910726
	19910703	19910516	19901128	19910827
	19910719	19910601	19910115	19910928
	19910820	19910719	19910523	19911030
	19910921	19910810	19910624	19911115
	19911007	19911007	19910827	19911201
	19911023	19911108	19910928	19940107
	19911108	19940508	19911031	19940123
	19940305	19940727	19911115	19940429
	19940508	19940812	19911201	19940702
	19940727	19940913	19911217	19940803
	19940812	19940929	19940107	19940904
	19940929	19941031	19940123	19941022
	19941031	19950204	19940429	19941107
	19950204	19950409	19940702	19950227
	19950409	19950612	19940803	19950721
	19950527	19950628	19941022	19950907
	19950628	19950714	19941107	19950923

19950714	19950831	19950227	19951025
19950831	19951002	19950603	19951110
19951205	19951205	19950721	19960301
19960106	19960106	19950806	19960317
19960310	19960207	19950907	19960520
19960614	19960310	19950923	19960621
19960817	19960513	19951025	19960707
19960902	19960614	19951110	19960723
19961004	19960817	19951228	19960808
19961020	19960902	19960301	19960925
19961207	19960918	19960317	19991020
19961223	19961004	19960520	19991223
19990927	19961020	19960621	20000312
20000727	19961207	19960707	20000328
20000913	19961223	19960808	20000515
20001031	19991114	19960925	20000531
20041127	19991130	19991207	20000616
20041213	20000727	19991223	20000904
20050114	20000913	20000312	20001107
20050303	20001031	20000328	20041102
20050404	20041213	20000413	20041118
20050420	20050114	20000515	20050222
20050506	20050404	20000616	20050513
20050623	20050420	20000904	20050529
20050911	20050506	20001006	20050614
20090906	20050623	20001107	20050630
20091125	20050725	20001123	20050716
20101112	20050911	20041118	20050801
20101230	20051029	20041204	20051121
20150331	20091024	20050222	20100220

20150416	20091125	20050310	20100730
20150619	20100621	20050614	20100831
20150721	20100808	20050630	20101119
20150806	20101112	20050801	20101205
20150822	20101230	20050918	20101221
20150907	20141022	20051121	20141114
20151025	20150331	20100730	20141130
20151126	20150416	20100831	20150117
20191207	20150721	20101205	20150509
20200124	20150806	20101221	20150712
20200209	20150822	20150101	20150728
20200225	20150907	20150117	20150829
20200413	20151025	20150322	20151016
20200429	20151126	20150509	20191214
20200702	20151020	20150712	20200131
20200803	20191105	20150728	20200216
20200819	20191207	20150829	20200319
20201225	20200108	20150914	20200420
	20200209	20151016	20200826
	20200413	20151101	20201114
	20200429	20151117	
	20200616	20191230	
	20200803	20200131	
	20201022	20200216	
	20201123	20200319	
		20200810	
		20201029	
		20201130	

Note: The remote sensing image data from 1989 to 2010 were Landsat TM, and the image from 2015 to 2020 were Landsat OLI.

Table S2. List of MOD13Q1 remote sensing images used in this paper

Row number	Data
h27v06	2000-2001、2004-2006、2009-2011、2014-2016、2019-2020

Table S3. Accuracy assessment of main crop spatial distribution maps in 1990–2020 in comparison with statistical data.

Types		1995	2000	2005	2010	2015	2020
Single rice	SA	1.08	1.36	1.10	1.74	1.33	1.20
	RE	−15.58	−14.21	16.43	−11.35	−16.05	−11.63
Double-cropping rice	SA	2.77	1.41	1.39	1.21	2.02	1.17
	RE	17.58	16.05	−14.81	−13.31	−15.35	−14.55

Notes: SA is the statistical area and its unit is millions of hectares. RE is the relative error and is expressed as a percentage.

Double-cropping rice planting area is the sum of early rice and late rice planting areas. Due to problems in obtaining statistical data, this table did not include the statistical data in 1990.

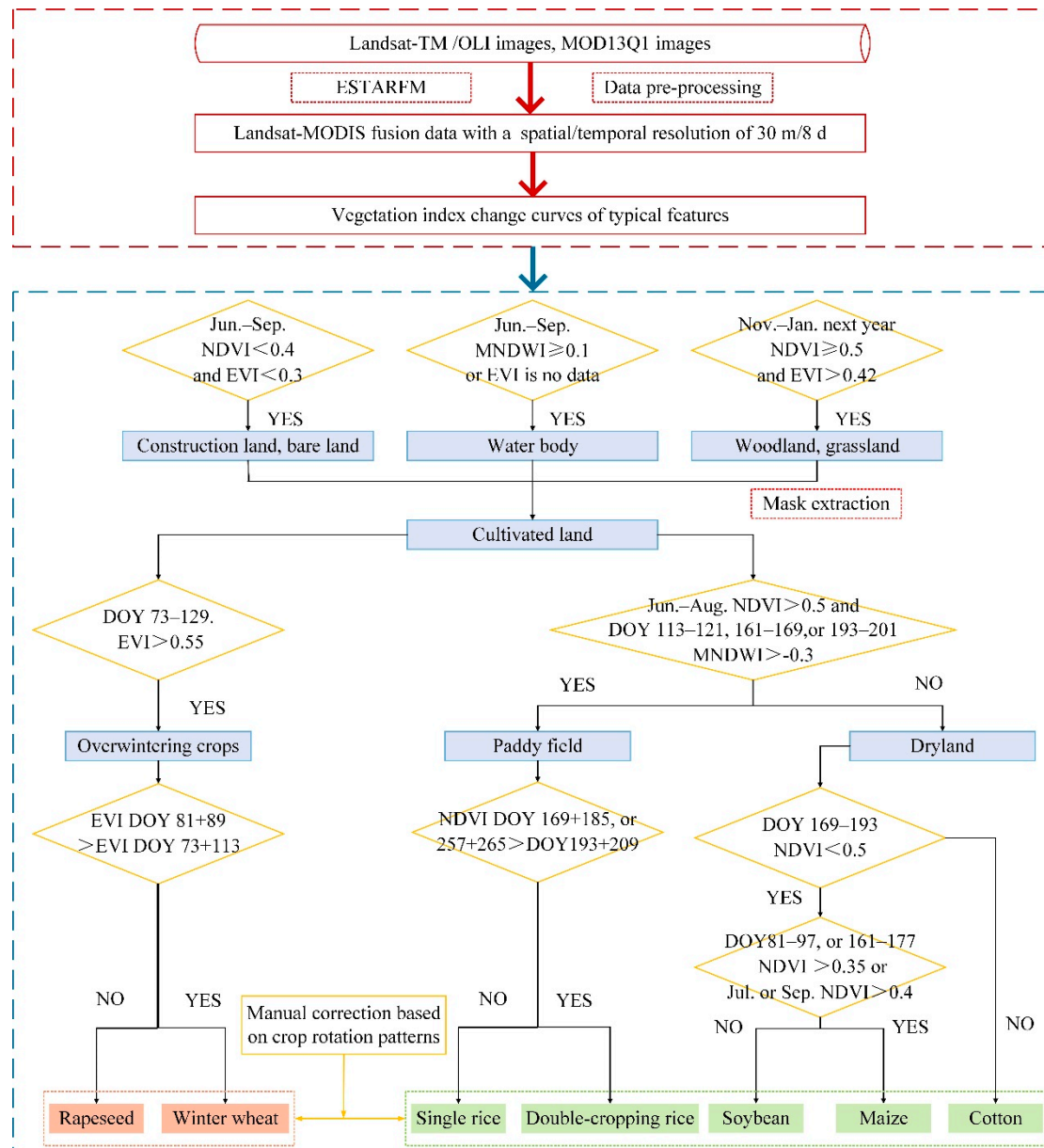


Figure S1. Flowchart of rice extraction based on phenological vegetation index

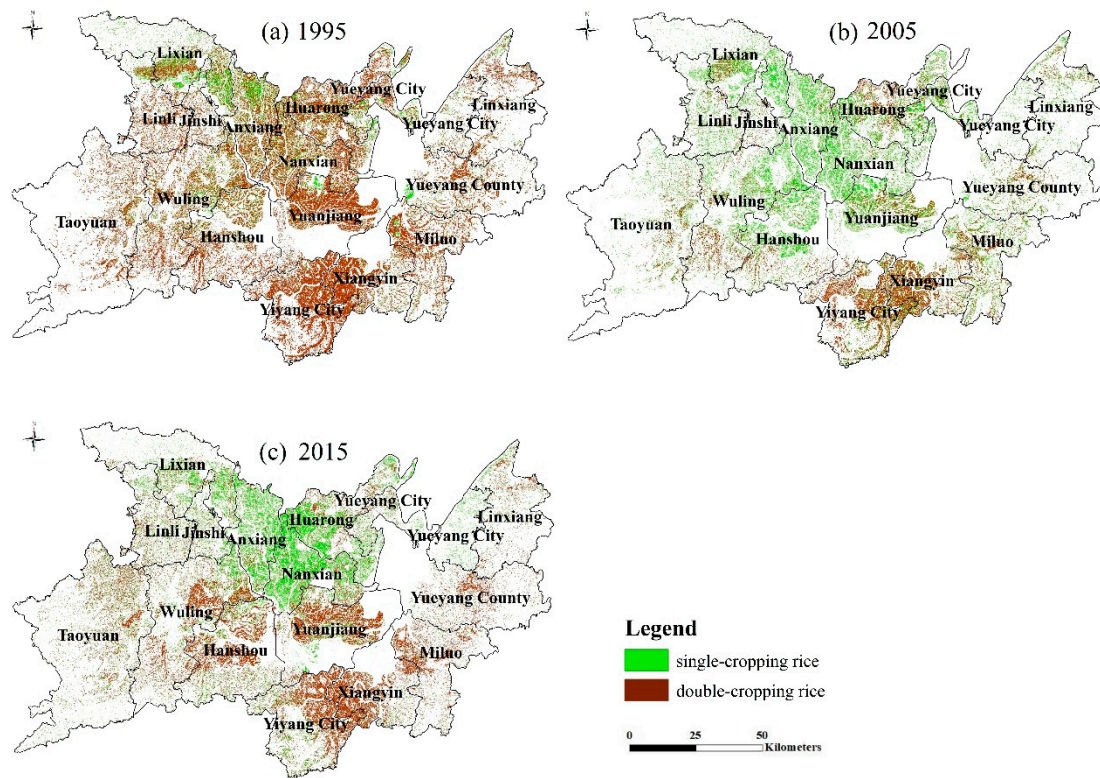


Figure S2. Spatial distribution of rice planting in the DTLP: (a) 1995; (b) 2005; (c) 2015.

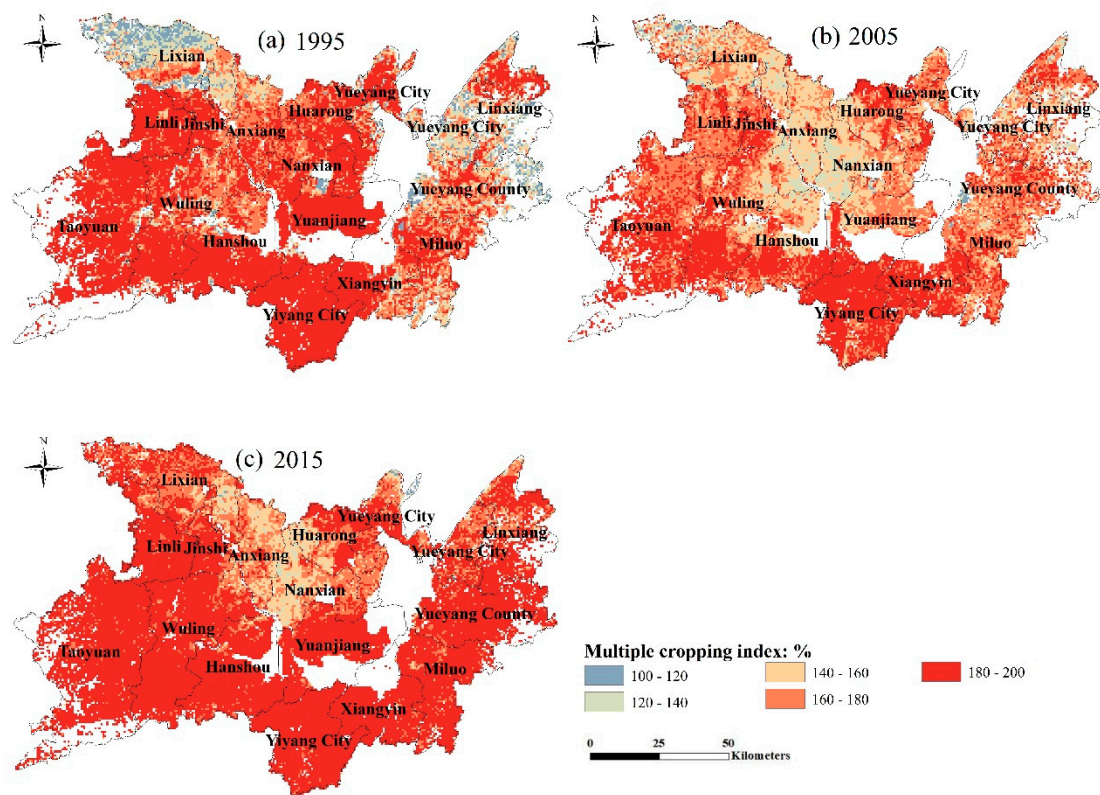


Figure S3. Spatial distribution of rice multiple-crop index (MCI) in the DTLP based on 1km×1km grid: (a) 1995; (b) 2005; (c) 2015.

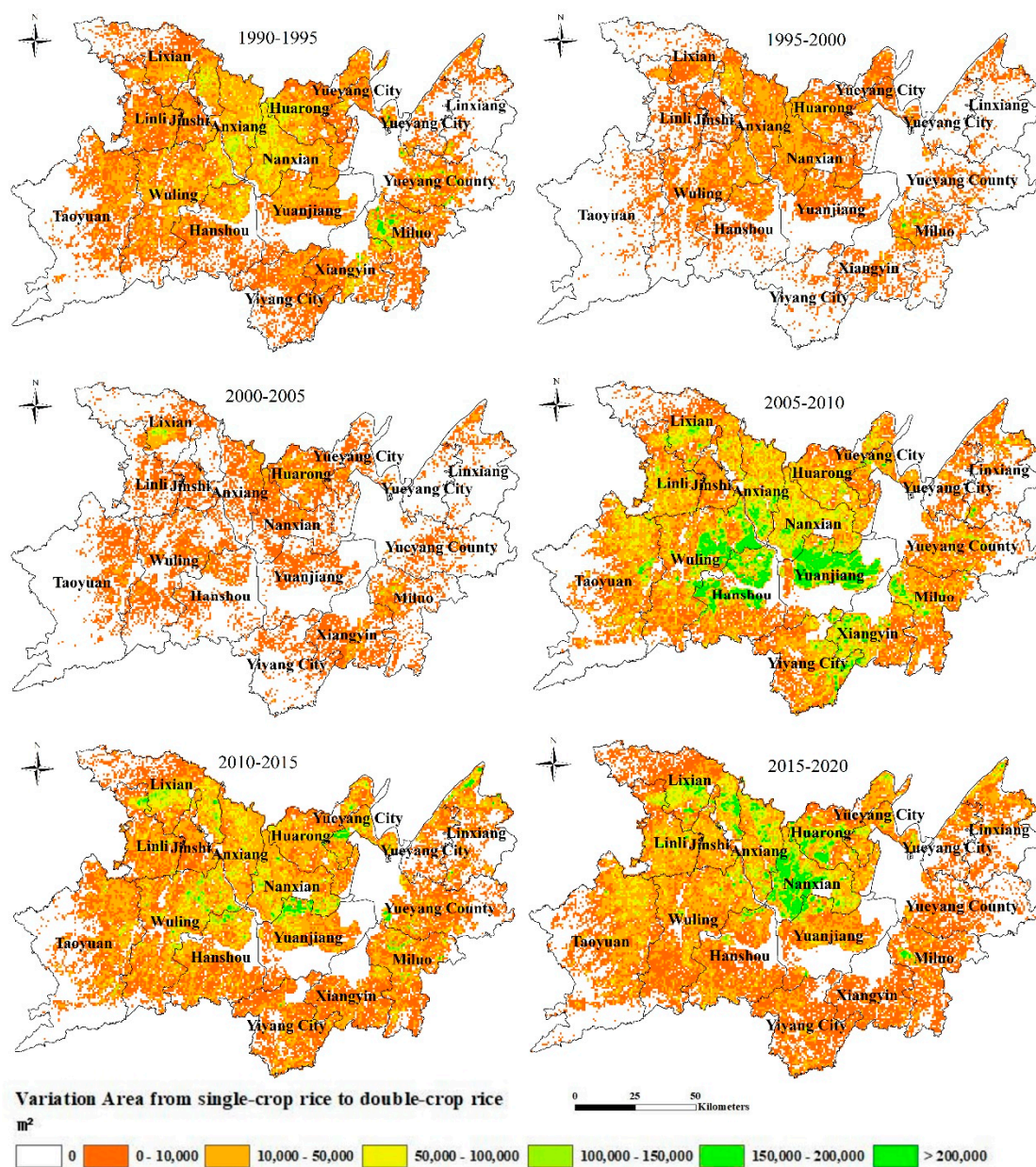


Figure S4. Spatial distribution of planting area of single-cropping rice to double-cropping rice.