

Temporal and Spatial Changes of Water Occurrence in the Selenga River Delta

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Contents of this file

Tables S1 to S6

Introduction

We applied two classifiers on four images in two conditions; one considering all bands of the Landsat products without any indices, and another one by considering the combination of NDWI, NDVI, NIR, SWIR2, and Blue band. Tables S1 to S4 show that the band-index combination leads to higher accuracy.

Image 1987-09-25		All bands included	Selected Bands and indices combination
Maximum Likelihood	Overall accuracy (%)	99.1566	99.5689
	Kappa Coefficient	0.9536	0.9767

Table S1. Classification accuracy for Landsat image 1987/09/25

Image 1995-09-15		All bands included	Selected Bands and indices combination
Maximum Likelihood	Overall accuracy (%)	98.5446	98.9877
	Kappa Coefficient	0.9208	0.9461

Table S2. Classification accuracy for Landsat image 1995/09/15

Image 2005-09-26		All bands included	Selected Bands and indices combination
Maximum Likelihood	Overall accuracy (%)	99.6863	99.8201
	Kappa Coefficient	0.9753	0.9860

Table S3. Classification accuracy for Landsat image 2005/09/26

Image 2018-09-30		All bands included	Selected Bands and indices combination
Maximum Likelihood	Overall accuracy (%)	98.6579	98.8823
	Kappa Coefficient	0.8971	0.9129

Table S4. Classification accuracy for Landsat image 2018/09/30

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1987									25			
1988												
1989						18		21	30			
1990												
1991												
1992											09	
1993												
1994									12			

1995								14,30	15	01		
1996				26		13	31		01			
1997				13				03,19	20		07	
1998				16		03	05	22				
1999					05	22		25	26			
2000						24		11				
2001				24	10	27	29				02,18	
2002				11	13				18			
2003								04				
2004							05		07	25	26	
2005				03,19					26			
2006						25		28				
2007					27							
2008										04		
2009				14								
2010						20	06	23		10		
2011						07			11			
2012												
2013								31		02,18	03	
2014				12,28	30		17			21	06	
2015			30			02,18	20	21	06			
2016												
2017						23	09		11	29		
2018				07	09			13,29	30	16		
2019				10	12	13		16				

Table S5. The number of images used in the study per year. The numbers in each cell show the day of the column month.

Land Cover	No Pixels with $\overline{\Delta w} \neq 0$	Total No of Pixels
CFDNL	8201	9386
CFN	48533	52925
Herb	261683	334843
OFDNL	951	1143
OFN	138628	147202
Sand Bar	2007	2046
Shrub	3894	3929
Wetland	73872	78084
Permanent Water	107903	592437
Seasonal Water	250194	252062
Land	338522	522034

Total	696621	1366533
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Table S6. Number of Pixels per landcover. The abbreviations correspond to the names in Figure 4 in the manuscript.