



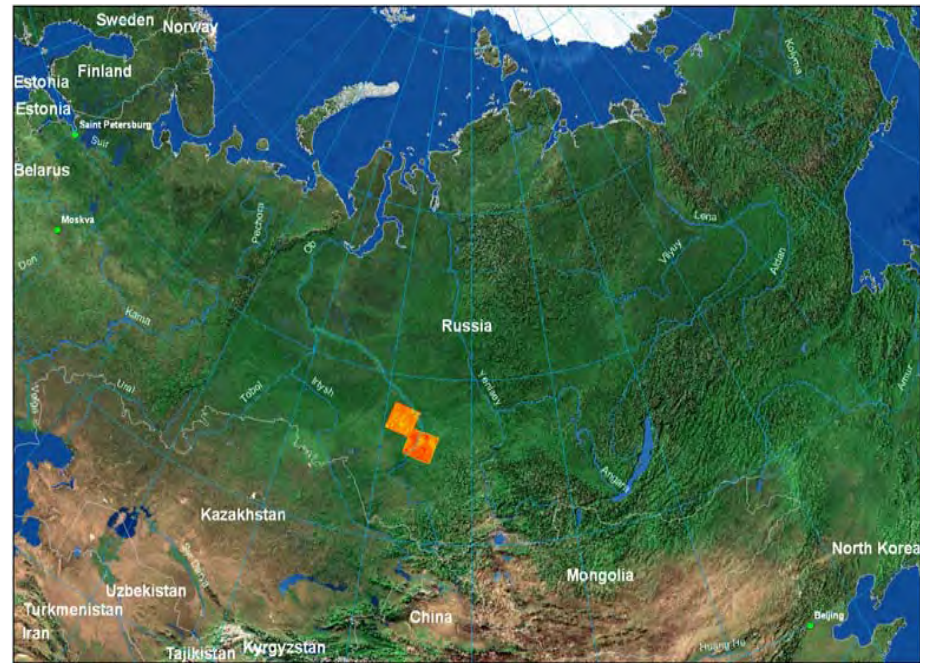
Analyses of changes in vegetation cover in the South and Sub-Taiga of Western Siberia using Landsat data

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Landsat imagery

Site 1 – Bakchar Path 150 Row 20	Site 2 – Tomsk Path 148 Row 21
TM, 30 Aug 1990	TM, 16 June 1990
ETM+, 16 Sep 1999	ETM+, 18 Sep 1999
TM, 20 July 2007	TM, 14 July 2007



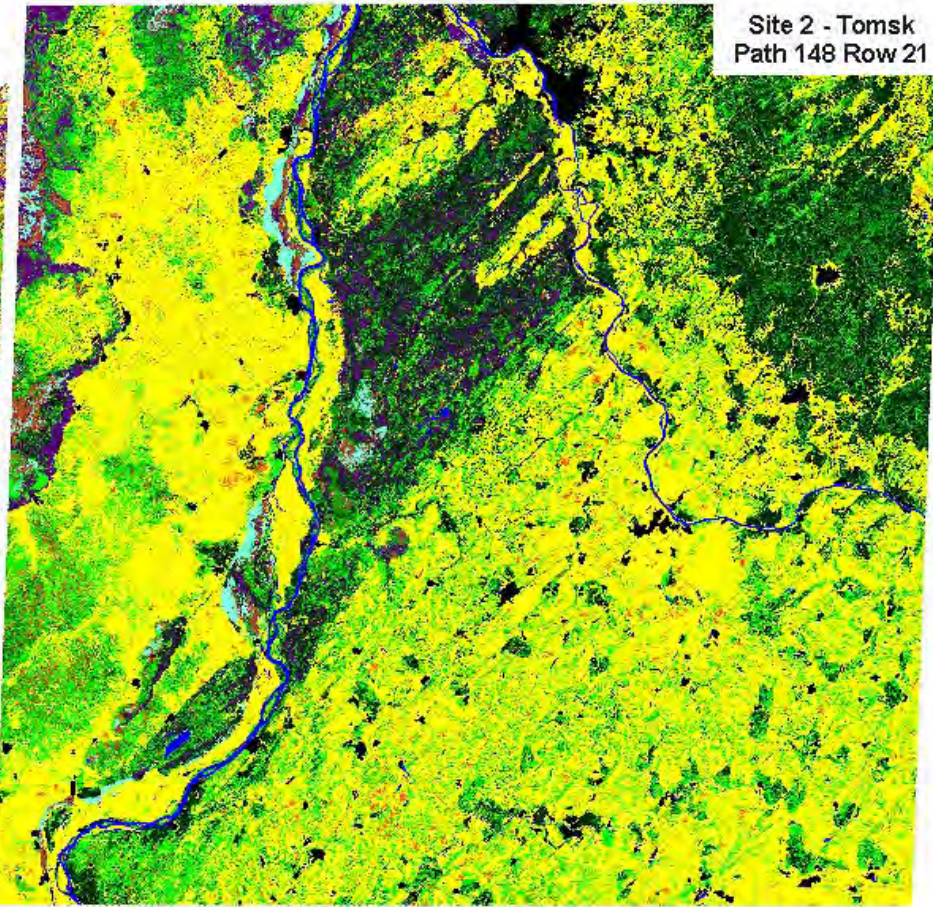
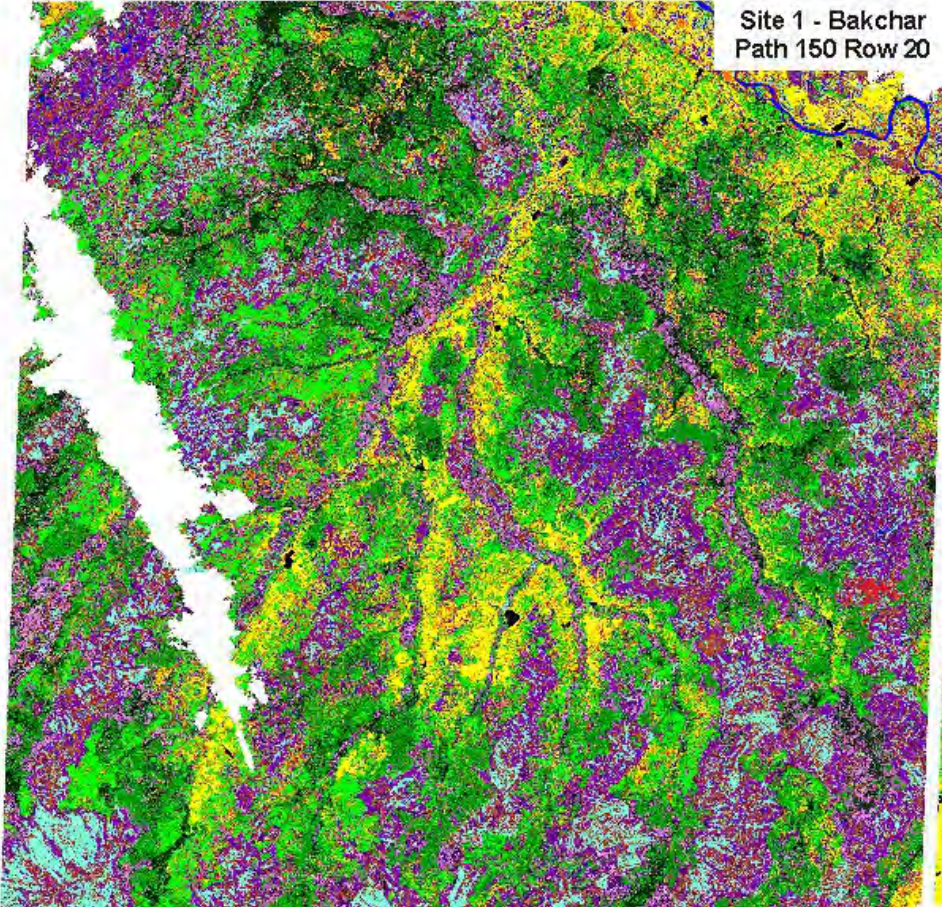
● Image processing:

- Cloud/haze masking
- Atmospheric correction
- Tasseled Cap index
- Classes attribution
- Urban area masking
- Radiometric calibration
- Unsupervised classification
- Accuracy assessment

Disturbance index computation

Analysis of changes in forest cover

Classification results



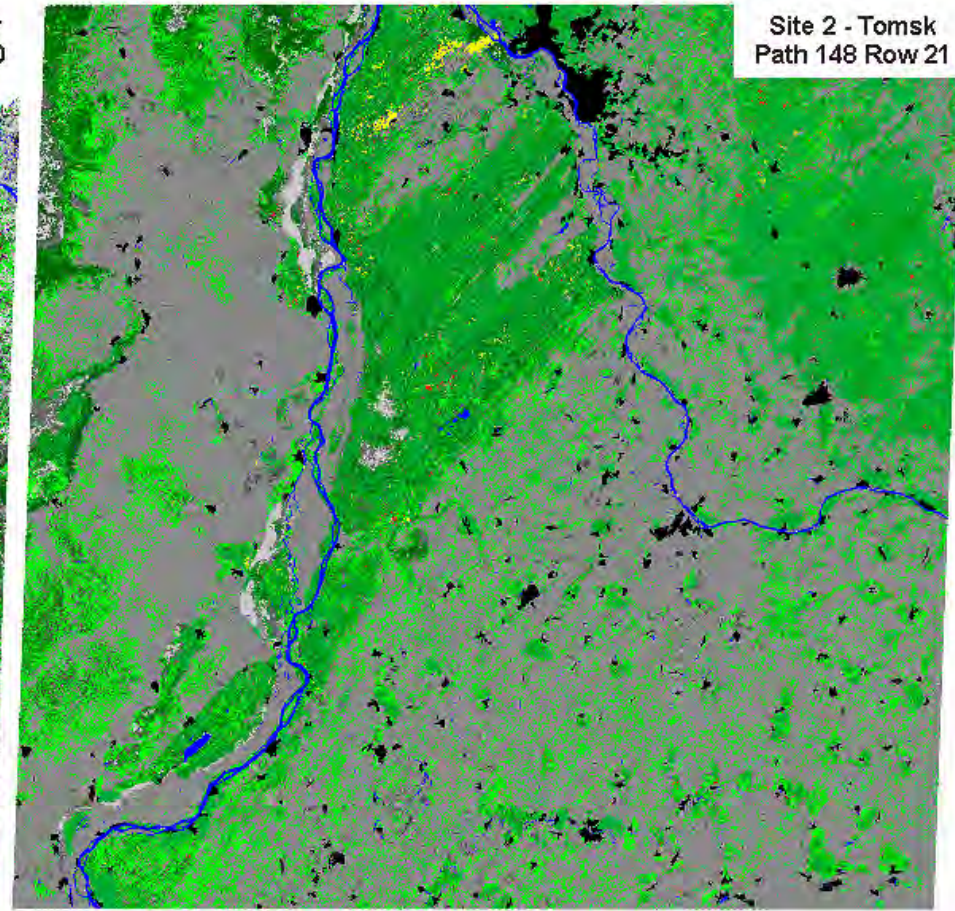
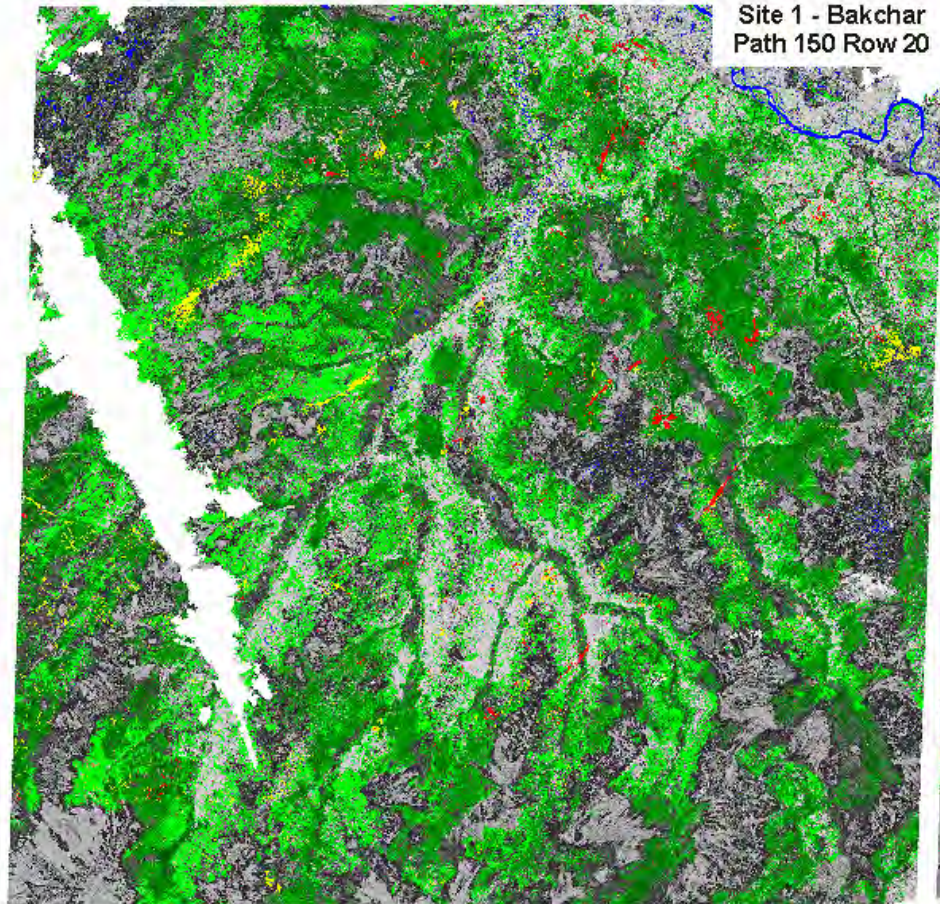
	TNEC		TMOW		HW
	TNECW		TBDC		B
	TNEOW		S		W
	TMC		SW		Set
	TMCW		H		Un

Results of vegetation cover classification.

TNEC - Tree.Needleleaved.Evergreen.Closed,
 TNECW - Tree.Needleleaved.Evergreen.Closed.Wetland,
 TMC - Tree.Mixed.Closed,
 TMOW - Tree.Mixed.Open.Wetland,
 S - Shrub, SW - Shrub.Wetland,
 B - Bare Land, W - Water,

TNEC - Tree.Needleleaved.Evergreen.Closed,
 TNECW - Tree.Needleleaved.Evergreen.Closed.Wetland,
 TNEOW - Tree.Needleleaved.Evergreen.Open.Wetland,
 TMCW - Tree.Mixed.Closed.Wetland,
 TBDC - Tree.Broadleaved.Deciduous.Closed,
 H - Herbaceous, HW - Herbaceous.Wetland,
 Set - Settlement, Un - Unclassified

Forest disturbance map



Forest disturbance map. 1—Disturbed in 1990-1999, 2—disturbed in 1999-2007, 3—undisturbed forests, 4—non-forested areas, 5—water, 6—clouds.



Disturbed forest area, ha

Period	Site 1 Bakchar	Site2 Tomsk
1990 - 1999	12 711	3 213
1999 - 2007	8 148	8 149

Windfall

