

Metadata for Geocryological-Geomorphological Map of the Lena River Delta

GIS-Shapes:

- Shape of class2 and class 3 based on: Morgenstern, Anne; Röhr, Christina; Grosse, Guido; Grigoriev, Mikhail N (2011): The Lena River Delta - inventory of lakes and geomorphological terraces. *Alfred Wegener Institute for Polar and Marine Research - Research Unit Potsdam*, doi:10.1594/PANGAEA.758728.
- shape for class one I digitized based on: Federov A.N., Botulu T.A., Varlamov S.P. et al. (1989) Permafrost Landscapes of Yakutia. 1: 2 500 000. Yakutian ASSR, Novosibirsk, GUGK, 170p.
and: Landsat-7 ETM+ mosaic (see basemap and water mask).

Basemap and water mask:

- MODIS water mask: Carroll, M., Townshend, J., DiMiceli, C., Noojipady, P., Sohlberg, R. 2009. A New Global Raster Water Mask at 250 Meter Resolution. *International Journal of Digital Earth*. (volume 2 number 4) (tile: MOD44W_Water_2000_XW5152.tif)
- water body mask extracted from the Lena River Delta Land Cover Classification from Schneider et al. (2009) with a resolution of 30m
- Landsat-7 ETM+ mosaic, displayed in bands 1-1-1, based on: MDA Federal (2004), Landsat GeoCover ETM+ 2000 Edition Mosaics Tile N-52-70.ETM-EarthSat-MrSID, 1.0, USGS, Sioux Falls, South Dakota, 2000.

Volumetric contents of soil constituents of the stratigraphic classes, as used for CryoGrid 2:

	depth in [m]	water/ice [vol.frac]	Mineral [vol.frac]	organic [vol.frac]	air [vol.frac]	type	
class 1	0-0.20	0.55	0.1	0.15	0.2	grass, moss, mini-shrubs	
	0.15-9	0.65	0.3	0.05	0	silty peaty sand	
	9-600	0.25	0.7	0.05	0	fine sand	
class 2	0-600	0.3	0.7	0	0	fine sand	
class 3	0-0.20	0.3	0.1	0.1	0.5	grass-moss, hammocky, shrubs	
	0.20-20	0.70	0.25	0.05	0	peat, partly sand	
	20-600	0.3	0.65	0.05	0	fine sand	

Citation of the map:

Peter, M., Langer, M., Boike, J., Etzelmüller, B. & Westermann, S. 2014. Modeling of permafrost temperatures in the Lena River Delta, Siberia, based on remote sensing products, DUE Permafrost 2014 workshop, Frascati, Italy, 11 February 2014 - 13 February 2014.

