

Natural regimes of the Western Siberian Wetlands: ecological and hydrological indicators





Bourse de thèse en cotutelle

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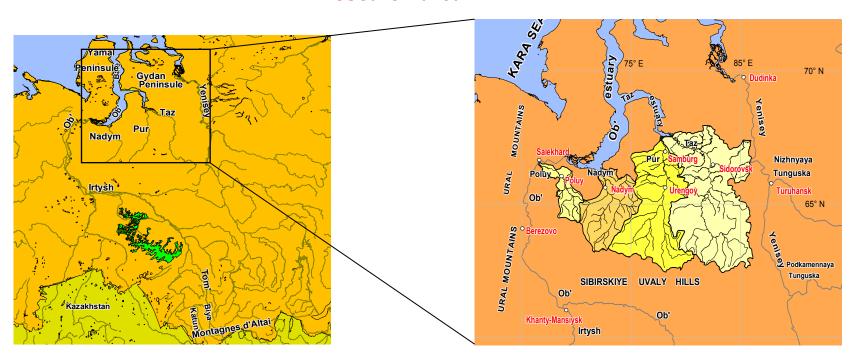
Scientific problem

Identification and evaluation of the most important ecological and hydrological indicators which characterize the natural regimes of the Western Siberian Wetlands

Objectives

- study the variability of flooded zones of Western Siberia using satellite and in situ data
- assessment of the variability of hydrological, hydrochemical and biological processes of the humid zones in subarctic and Altai mountain regions

Research area



Hydrology from space **ENVISAT** data a) Nadym (blue) Ratio of altimetric observations classed as open water (%) Pur (red) Poluy (green with crosses) Taz (black with dots) b) 5000 Pur (blue) and Nadym (red) daily discharge (m^3/s) 4000 3000 2000 1000 Pur (blue) Nadym (red) 0 -2009

Temporal variability of (a) flooded area / wet zones (% of ENVISAT altimetric observations classed as open water) and (b) daily river discharge for Pur at Samburg and Nadym at Nadym (m³/s). Timing of spring and autumnal maximas of flooded area is shown as grey an dash lines

International cooperation



Cooperation CNRS-Russia: GDRI CAR-WET-SIB (Biogeochemical cycle of carbon in wetlands of Western Siberia)



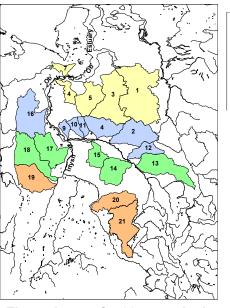


CAR-WET-SIB: field studies in the Novy Urengoy region (summers of 2008 and 2009) and in the Altai mountains (summer 2009) Int. J. of
Environmental
Studies August
2009 - special
issue on Western
Siberia with
several our
publications on
this subject

ERA-40 re-analysis project of the global atmosphere and surface conditions

1 (Pur,Taz,Nadym,Nazym,Poluy,Pike)
 2 (Lyamin,Pim,Tym,Vakh,Tromuygan,Sosva)
 3 (Tavda,Ket,Vasuygan,Konda,BigYugan)

4 (Om,Inner watershed,Tura)



Thematic map for 20 watersheds