

Map of the Altai-Sayan mountain system (Southern Siberian key area)

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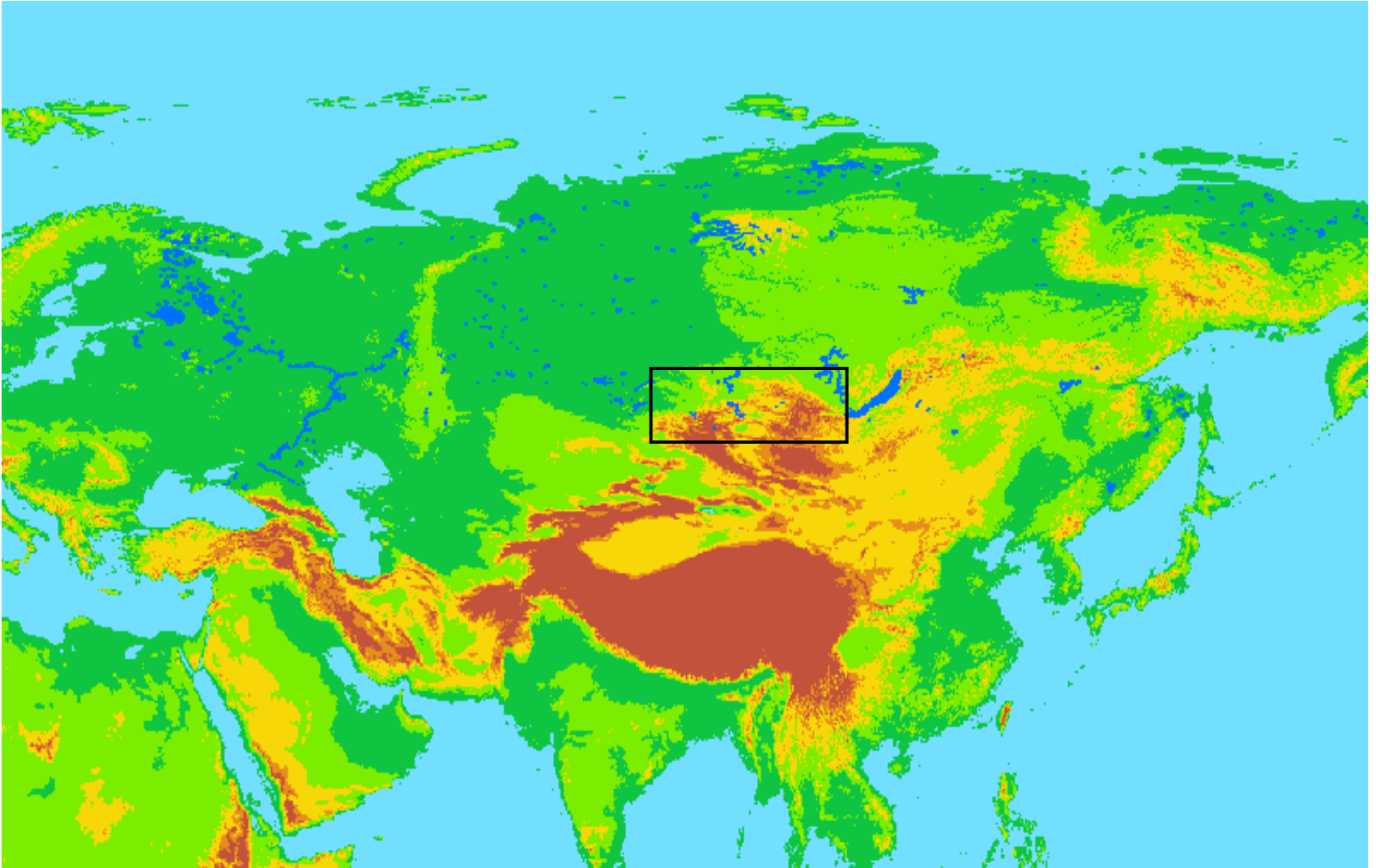




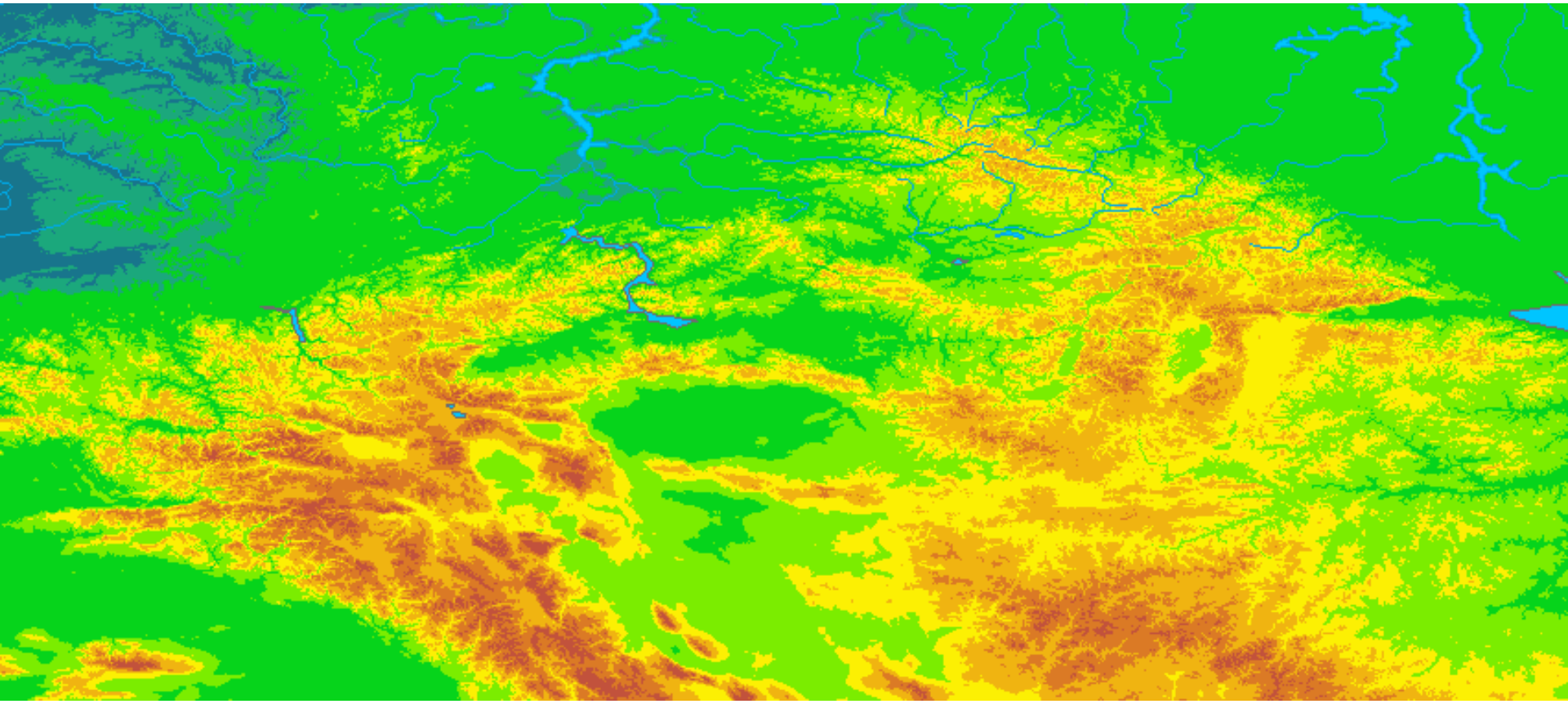
Aims

- to develop the vegetation map for key area as a part of CBVM
- to determine basic units of mountain vegetation for scale 1:7 500 000
- to test hierarchical levels accepted in previous Workshop (Helsinki 2010)

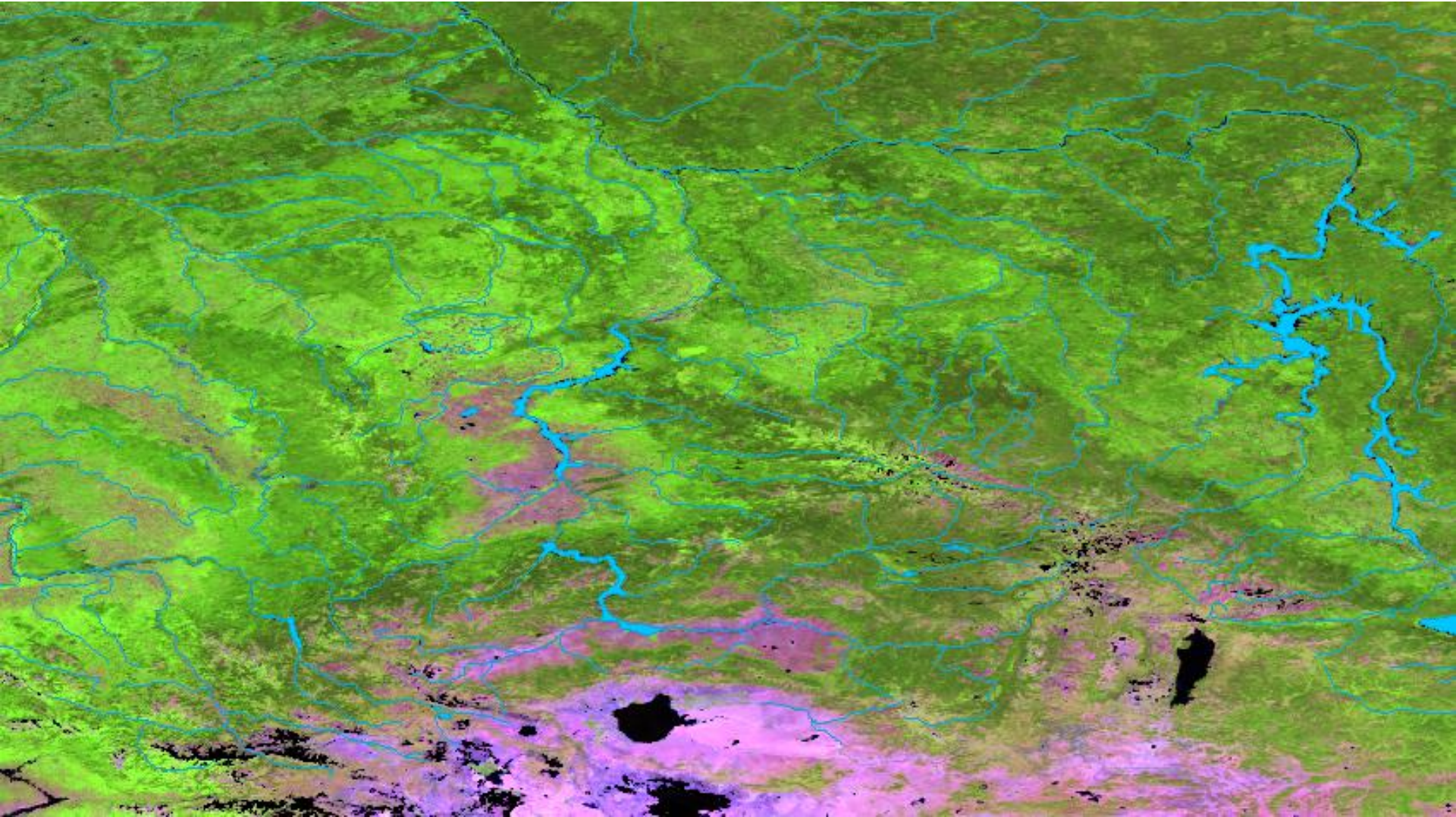
Location of the key area



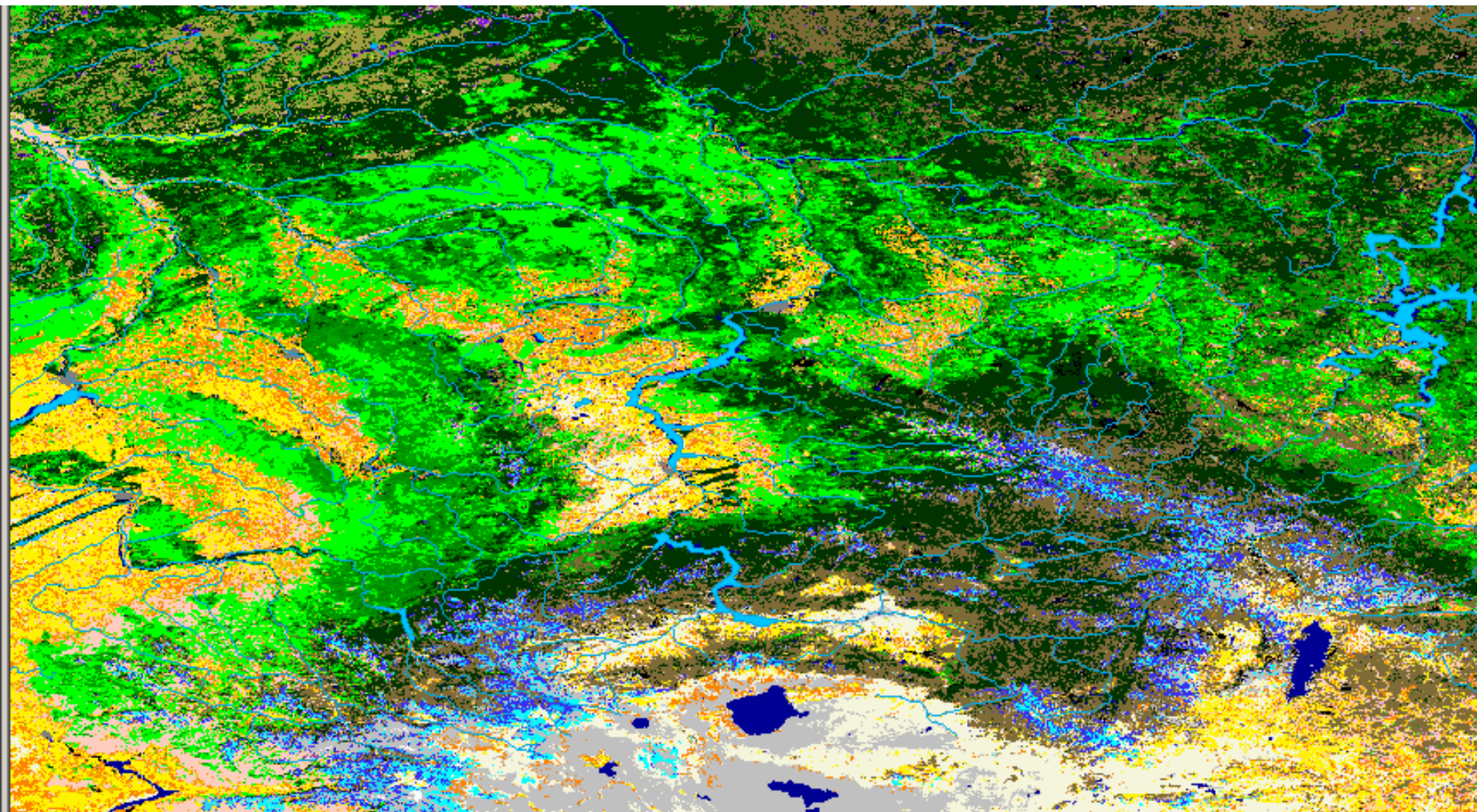
Pattern of relief in mountains of southern part of Middle Siberia



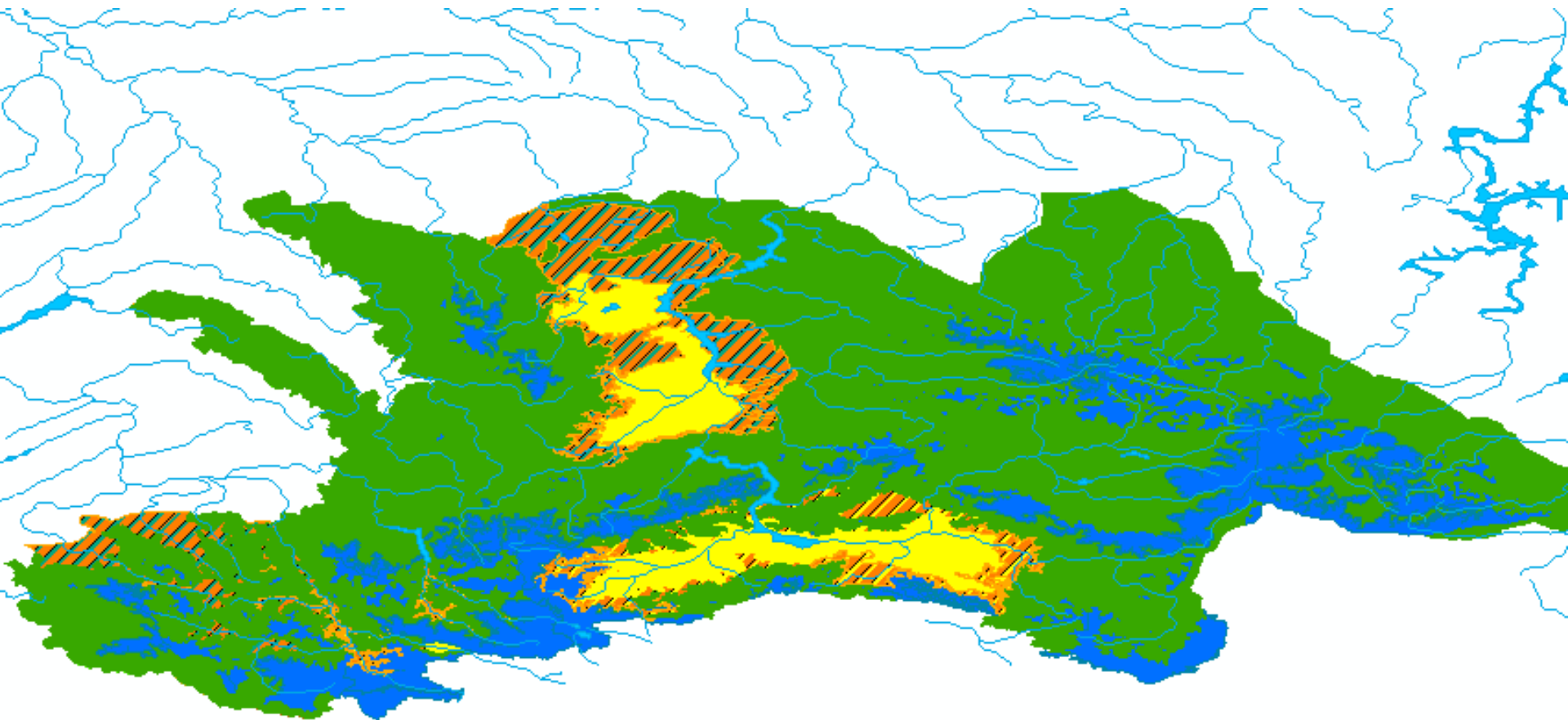
Satellite image data - Modis (150m) as well as Landsat-7



Subdivisions of vegetation distinguished in Modis (250m)

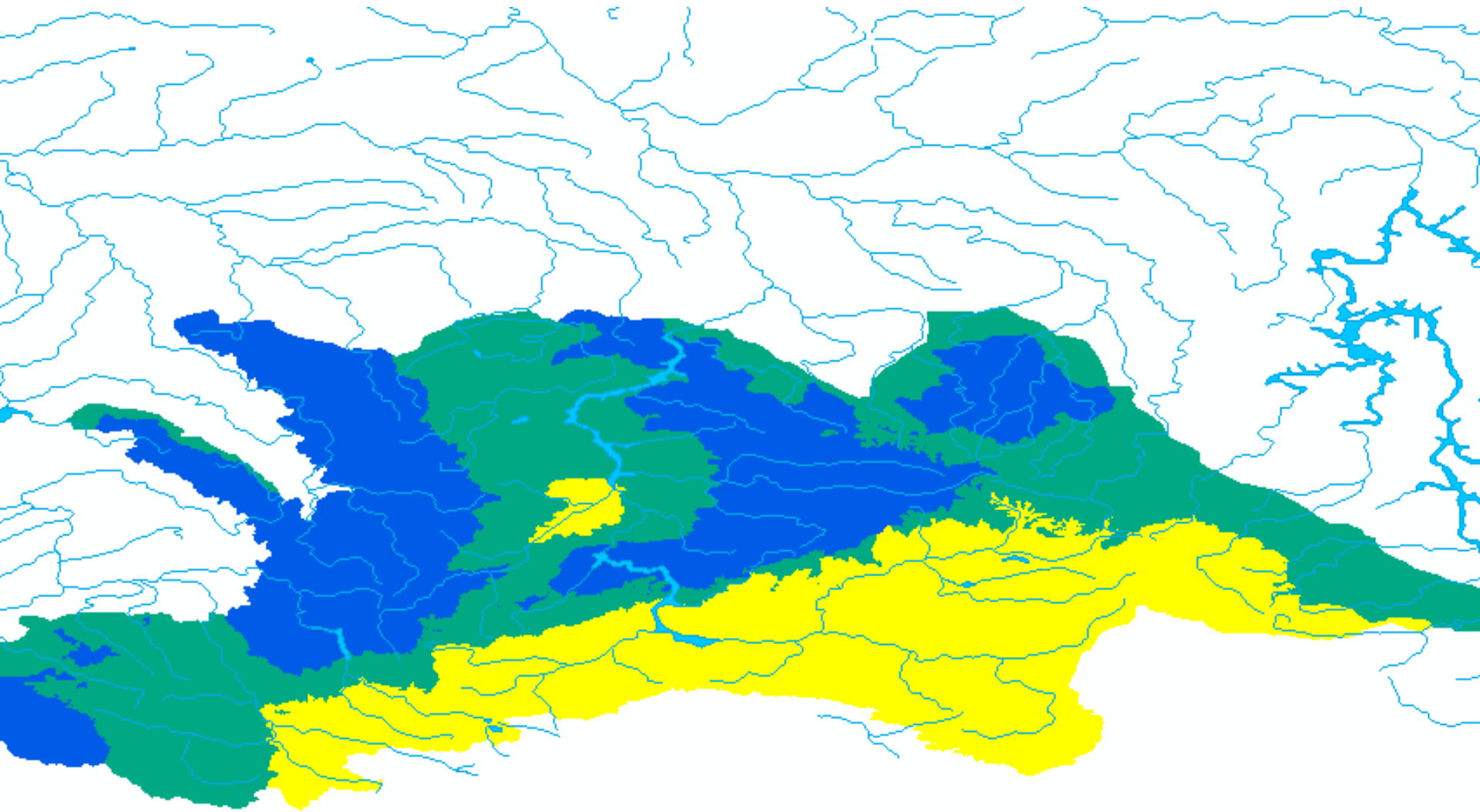


Altitudinal belts in the Altai-Sayanian mountain system



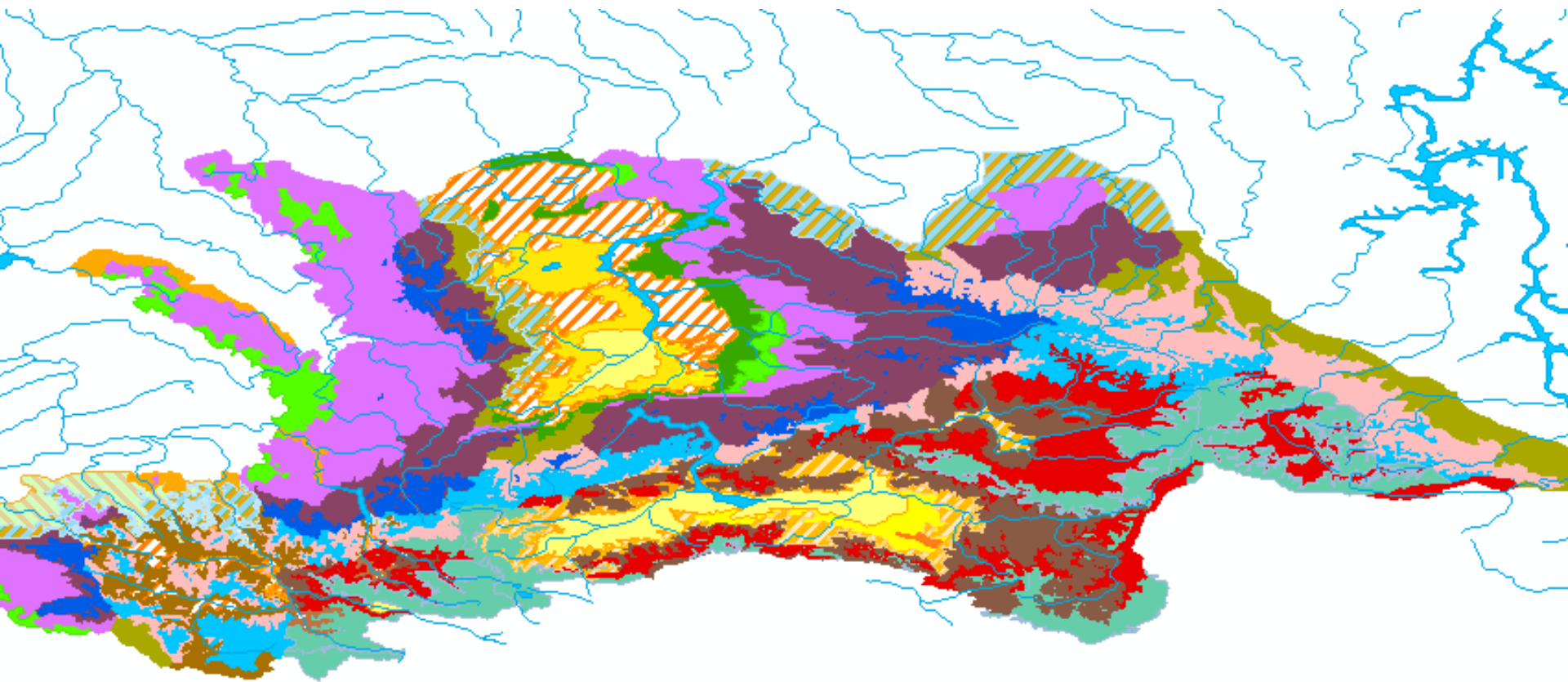
Bioclimatic sectors

1. Ultra-humid cyclonic, 2. Humid cyclonic, 3. Semi-arid anti-cyclonic



Vegetation map of the Altai-Sayanian mountain system

1:7500000



The map includes 19 units corresponding to the level of vegetation sub-belts and geographical (bioclimatic) sectors

Remarks on legend principals

Level 1 (Formation type) is not appropriate for vegetation complexes (combinations).

Level 1 and 2 are not harmonized. Maybe they should be merged.



Pine-fir forests (*Abies sibirica*, *Pinus sibirica*) with *Betula pendula*, with tall-forbs, ferns, herbs and mosses

Ground layer of *Pine-fir* forests (*Abies sibirica*, *Pinus sibirica*)



**Birch-pine (*Betula pendula*, *Pinus sylvestris*) grass forests of the
Brachypodio-Betuletea**



Birch grass forests of the Brachypodio-Betuletea



**Southern Siberian
forest-steppe.
Larch (*Larix sibirica*)
grass forests of the
*Rhytidio-Laricetea
sibiricae* alternating
with the steppes of
Central Asian type.**



**Ground layer of Larch (*Larix sibirica*) grass forests of the
*Rhytidio-Laricetea***



**East-Siberian-Mongolian ultra-continental boreal forests of the
*Rhytidio-Laricetea sibiricae***





**European-Siberian dark
evergreen needle leaf
forests (*Picea, Abies*)**

***(Vaccinio-Piceetea,
Piceetalia excelsae)***

***predominate in regions
with distinct cyclonic
climate regime***

Ground layer of European-Siberian dark evergreen needle leaf boreal forests



Altai-Sayanian mixed pine-spruce-larch forests (*Larix sibirica*, *Picea obovata*, *Pinus sibirica*) with dwarf shrubs, herbs and mosses (*Vaccinium vitis-idaea*, *Linnaea borealis*, *Carex macroura*, *Lupinaster pentaphyllos*, *Hylocomium splendens*, *Rhytidium rugosum*)



Ultra-continental East Siberian-Mongolian *Vaccinio-Piceetea* forests with participation of xerophilous elements (*Lathyro humilis-Laricetalia*)



Ground layer of the *Lathyro humilis*-*Laricetalia* forests



Altai-Sayanian larch and pine-larch forests (*Larix sibirica*, *Pinus sibirica*) with dwarf shrubs and mosses (*Ledum palustre*, *Vaccinium uliginosum*, *Linnaea borealis*, *Hylocomium splendens*, *Sphagnum girgensohnii*)



**North Eurasian cold-resistant boreal forests on long-frozen soils
and permafrost (*Ledo palustris*-*Laricetalia*)**



Forest belt in continental bioclimatic sector of the Western Sayan



Thank you for attention!

