

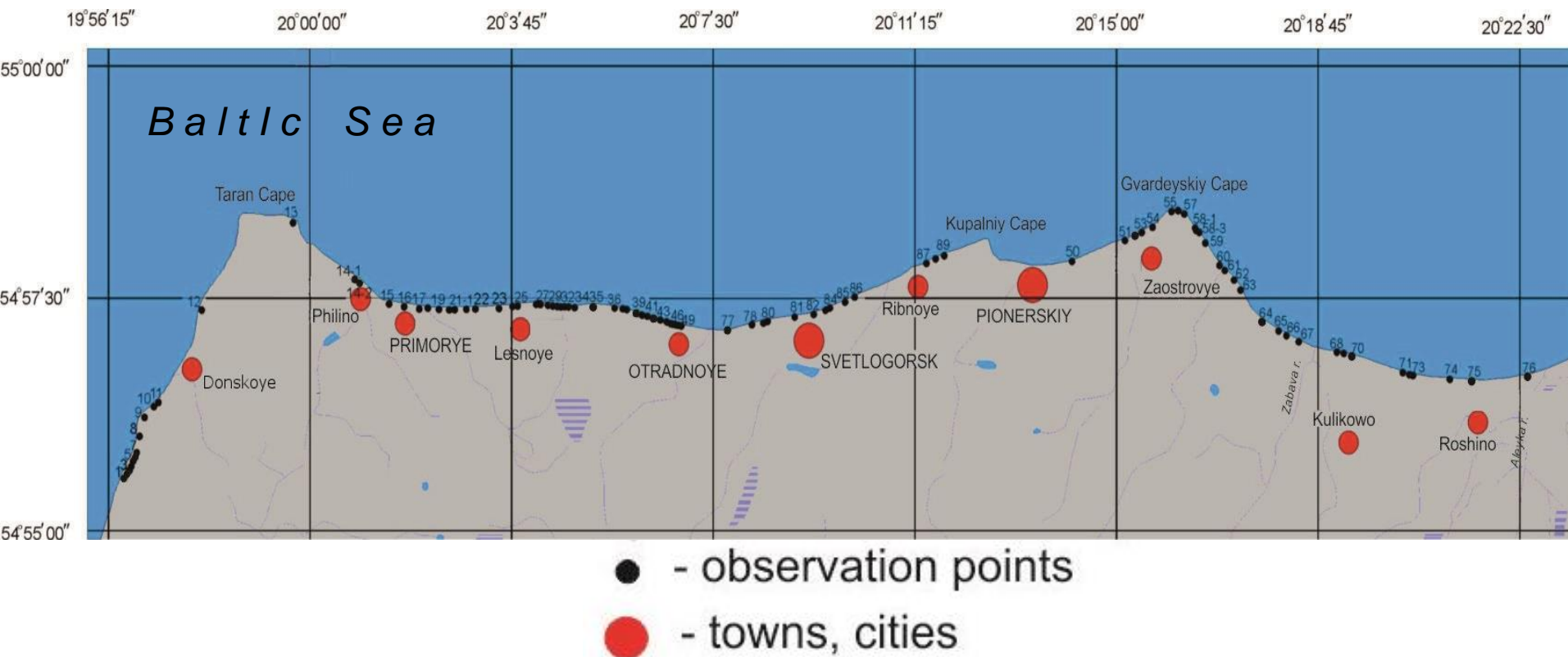
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SATELLITE REMOTE SENSING APPROACHES AND FIELD MEASUREMENTS TO TRACKING COASTLINE CHANGES OF THE SAMBIAN PENINSULA AT THE BALTIC SEA

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After the last extreme storm in 2012, geological studies of the dynamics of the coast are actively conducted from district, village of Donskoye in the West to the village of Roshchino in the East, for more than 30 km.

Below is a Fragment map-scheme with observation points along of the northern coast of the Sambian Peninsula



Dynamics of the coast in the region Svetlogorsk for observation period 2012-2017 (A- point of observation on map)

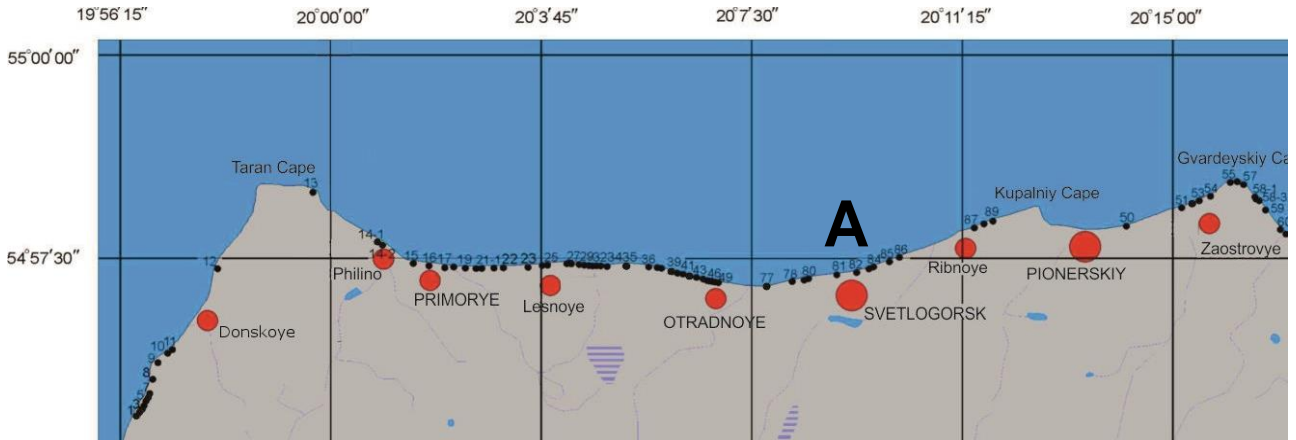
Comparison of initial and final foto



2012



2017

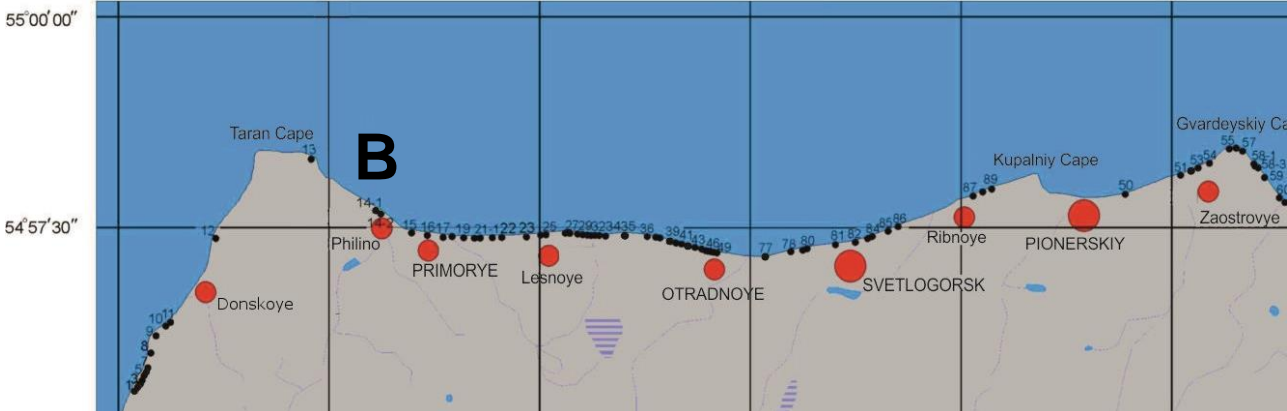


Dynamics of the coast in the region Filino for observation period 2012-2017 (B- point of observation on map)

Comparison of initial and final foto

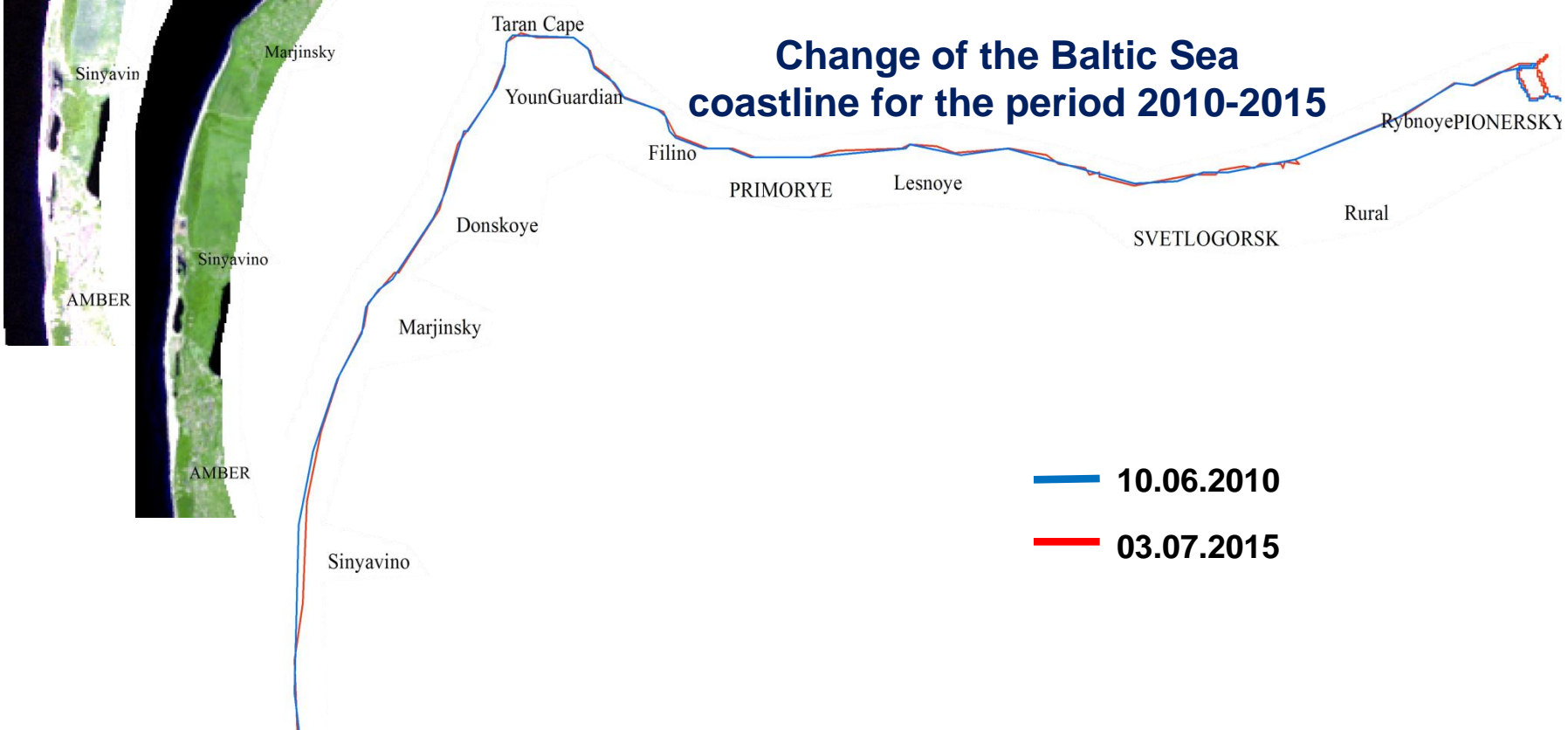
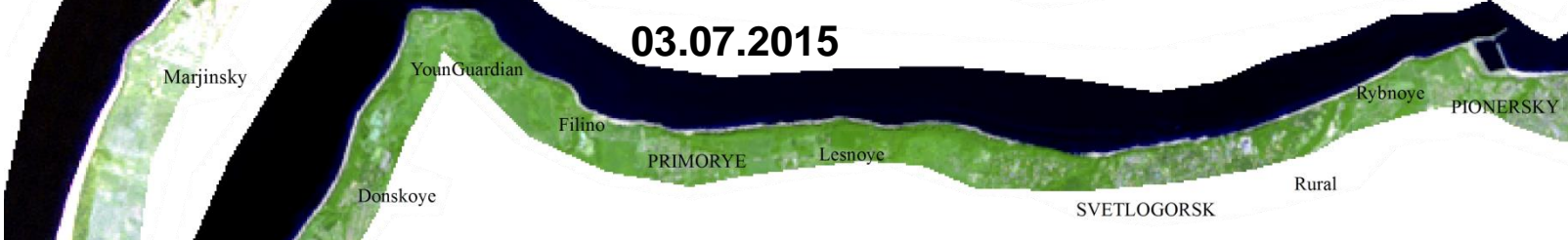
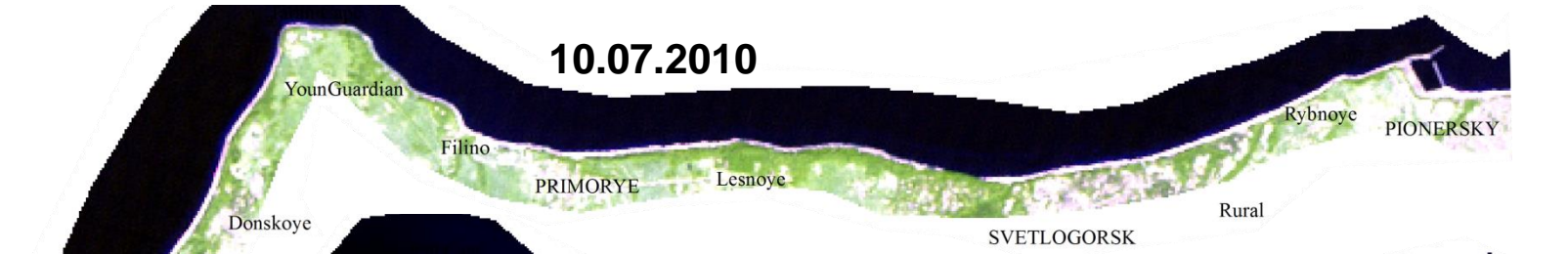


19°56'15" 20°00'00" 20°3'45" 20°7'30" 20°11'15" 20°15'00"



The results of study of the coastal zone, based on the use of space images for the period 2010-2017

Comparison of initial and final space images Landsat

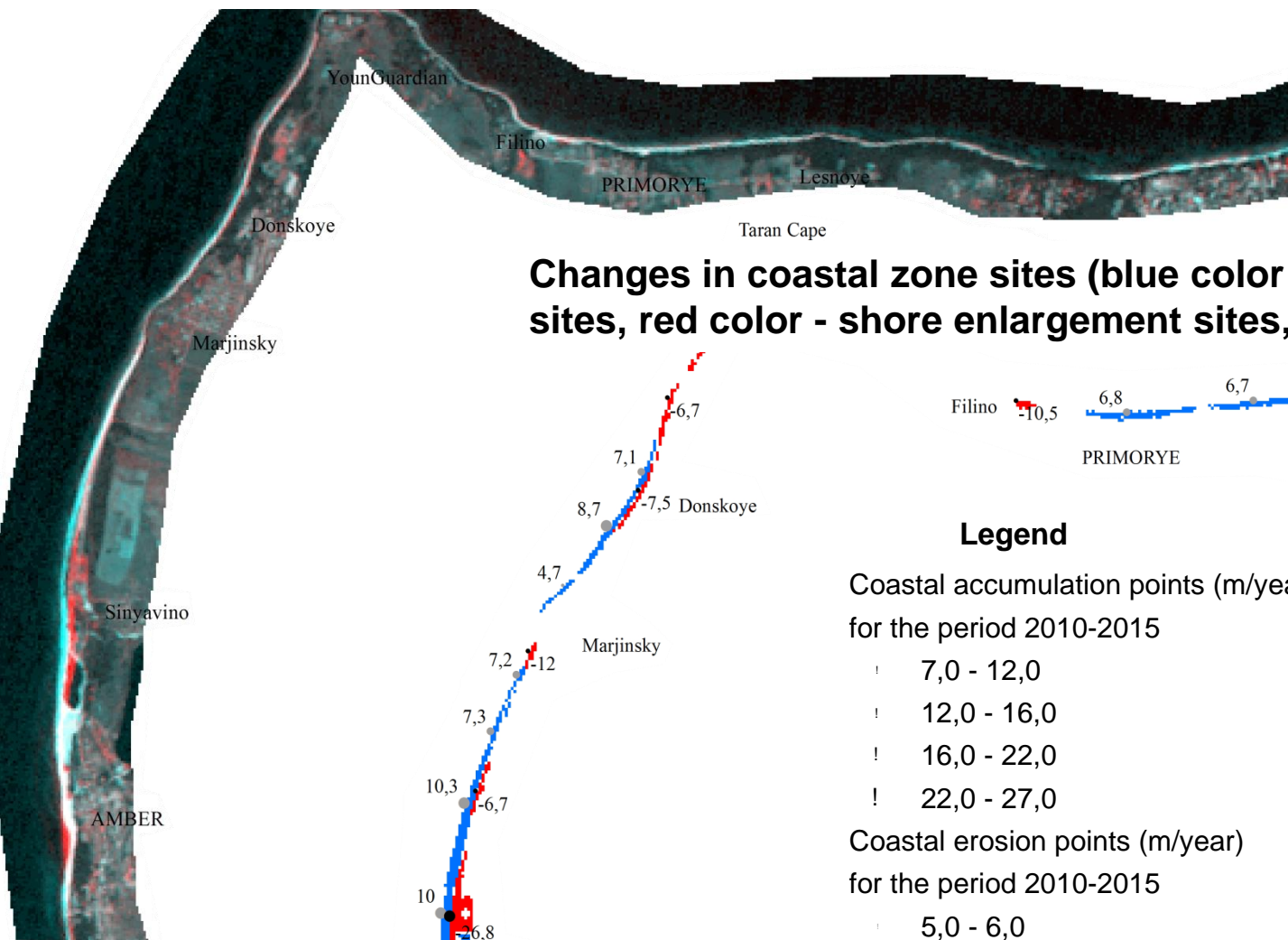


Detection of changed sites of the coastal zone for the period 2010-2015

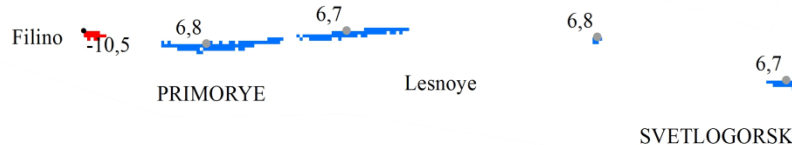
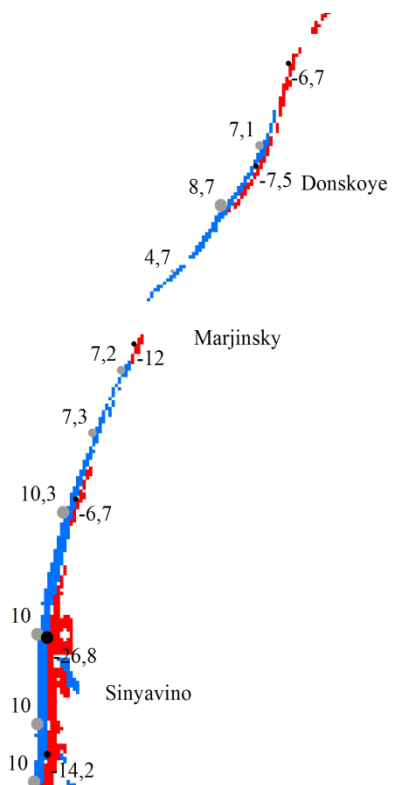
Classification of changes on the image of difference

4 channels Landsat-8, 2015 and 3 channels LANDSAT-5, 2010

Spatial resolution – 30 m.



Changes in coastal zone sites (blue color - shore erosion sites, red color - shore enlargement sites, windward sands)



Legend

Coastal accumulation points (m/year) for the period 2010-2015

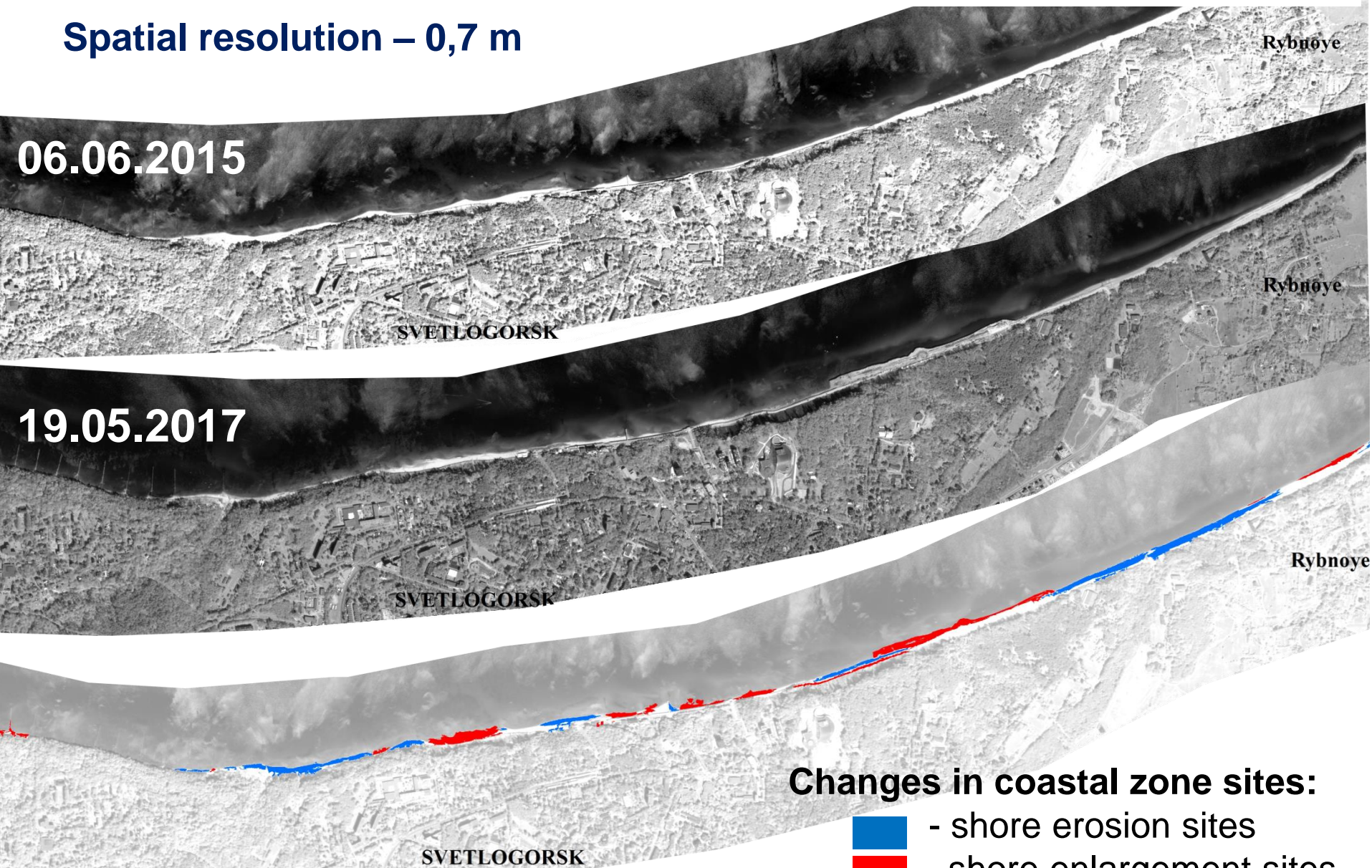
- ! 7,0 - 12,0
- ! 12,0 - 16,0
- ! 16,0 - 22,0
- ! 22,0 - 27,0

Coastal erosion points (m/year) for the period 2010-2015

- ! 5,0 - 6,0
- ! 6,0 - 8,0
- ! 8,0 - 10,5

Comparison of initial and final space images Resurs-P

Spatial resolution – 0,7 m



06.06.2015

19.05.2017

SVETLOGORSK

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Rybnoye

Rybnoye

Rybnoye

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Changes in coastal zone sites:

-  - shore erosion sites
-  - shore enlargement sites, windward sands, structures

0 250 500
Meters

Thank you for attention!