LAND COVER CHANGES IN DELTAS OF THE BLACK SEA BASIN

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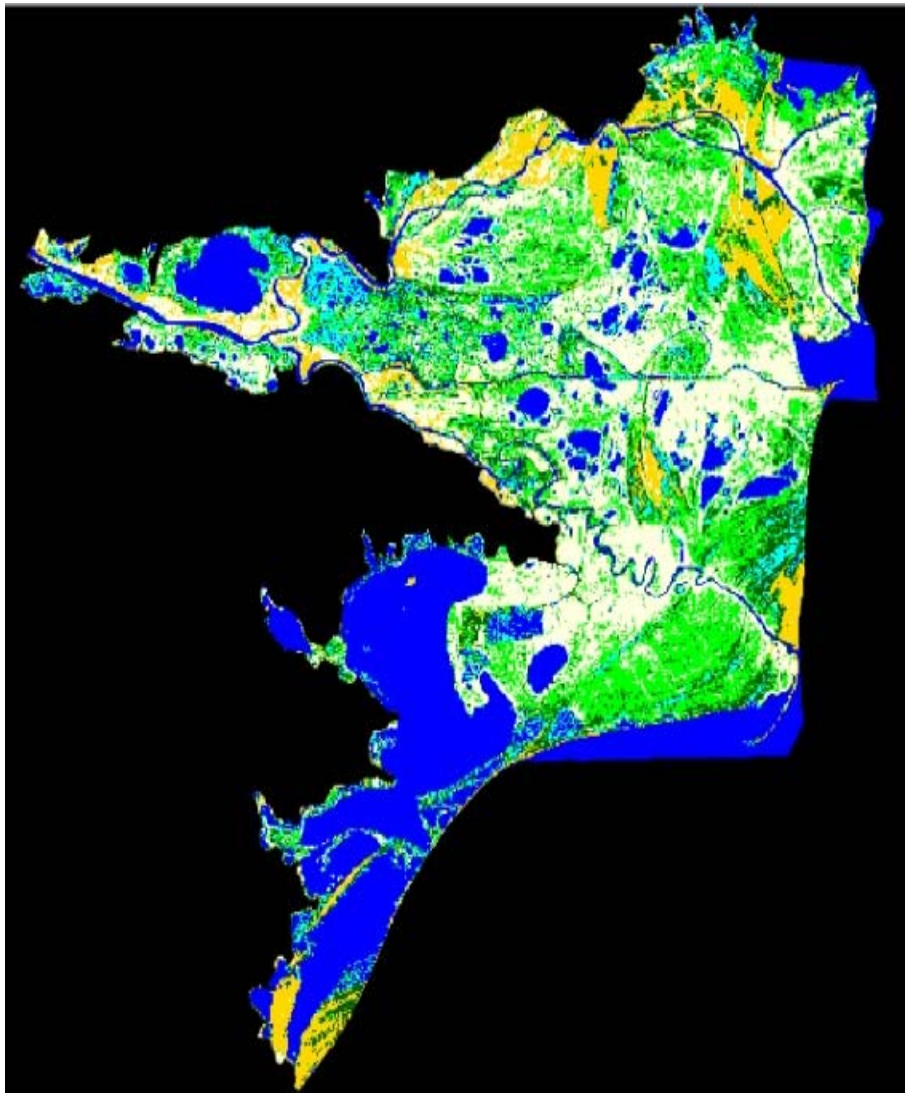
Scale of the problem

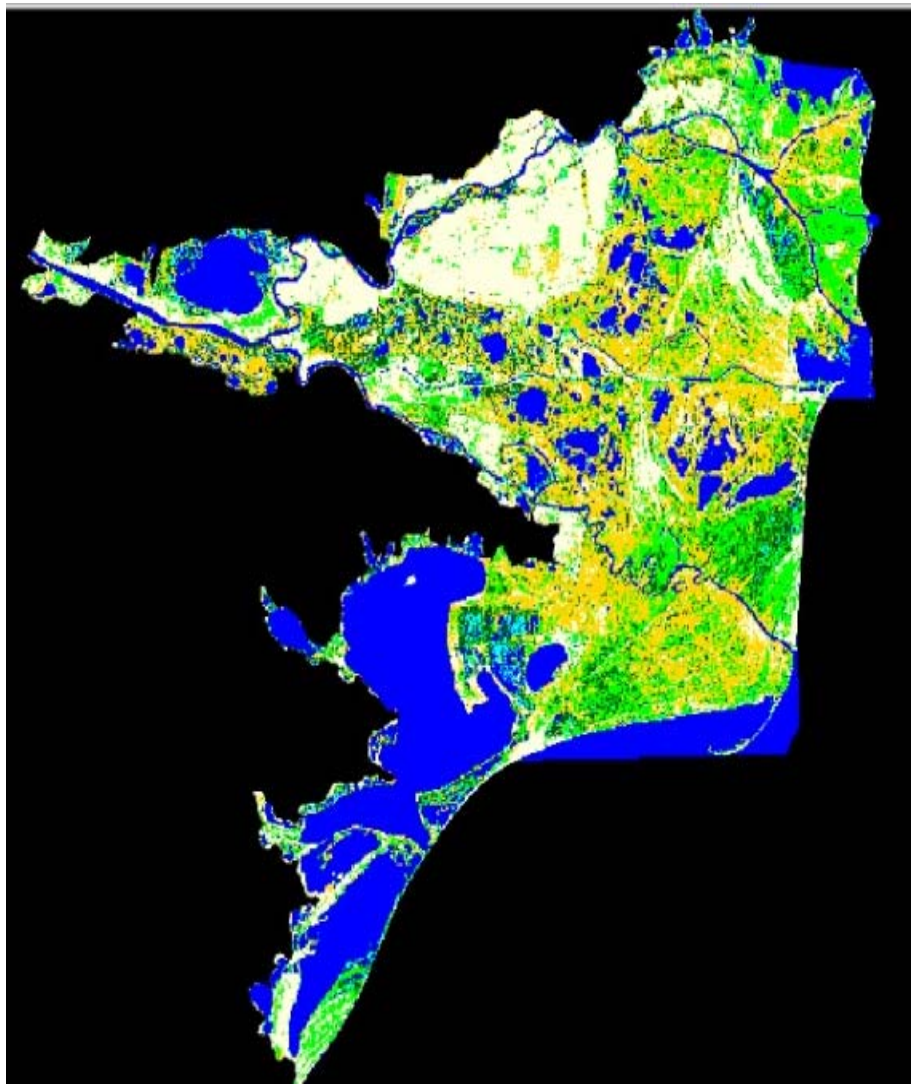
- **Processes of land cover changes (degradation) in deltas proceed very originally in every cases. Nevertheless, the general regularities are as follow:**

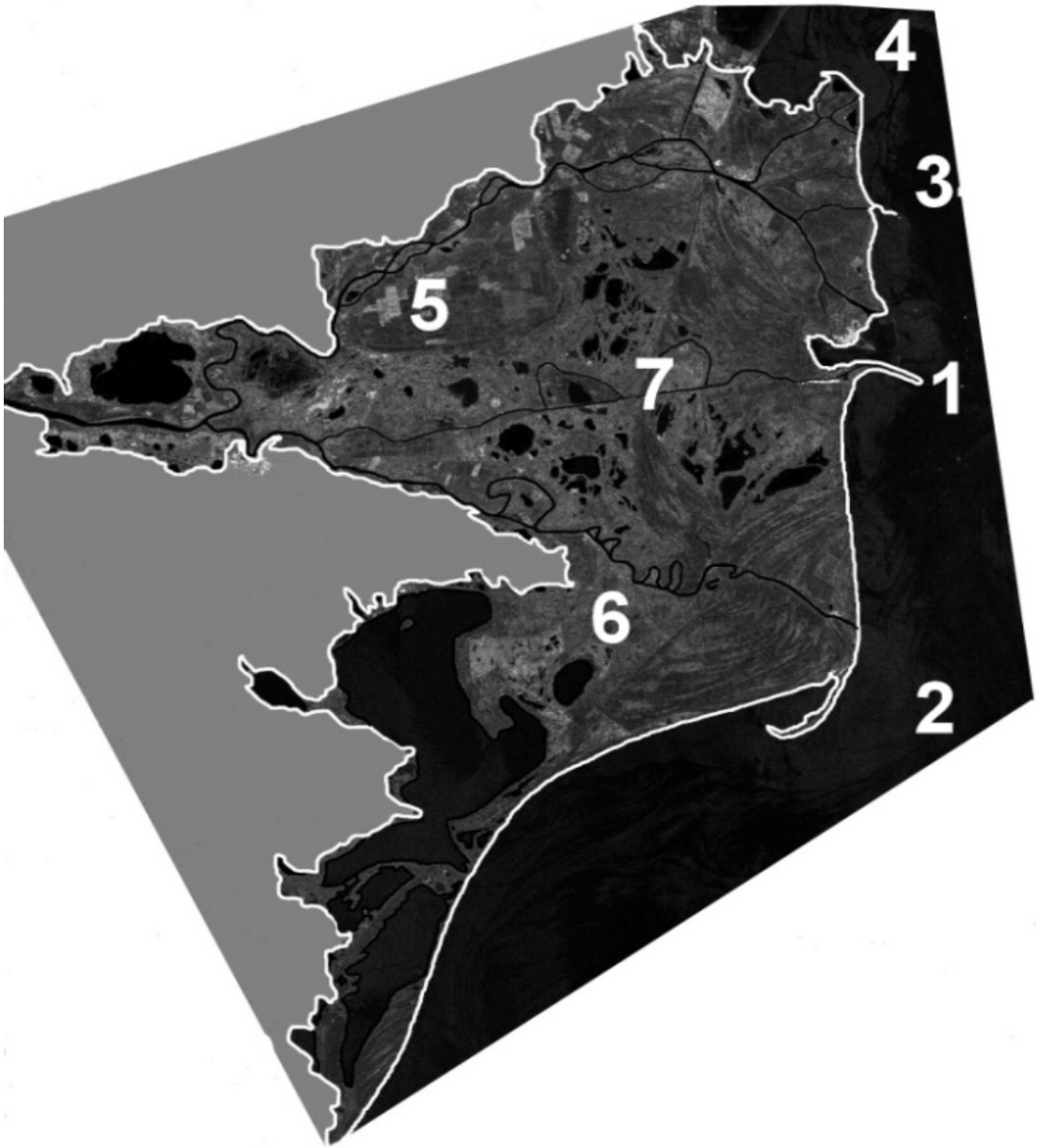
- **Depending on a climate the dominating processes are :**
- **• Arid and semiarid zones – land desertification, salinization, aeolian destruction.**
- **• Sub-humid zone – wetlands drying (degradation),steppe-like soil formation, slight salinization, sometime-desertification.**
- **• Humid zone – wetlands, peatbog and fen drying-up and degradation, meadow formation.**
- **Depending on geomorphologic conditions:**
- **•Inland deltas (Chu, Tarim, Heihe, Zeravshan, partly - Okavango) - fast and strong desertification and salinization, aeolian destruction.**
- **• Deltas on the shore of inner water bodies (lakes and seas) - (Ili, Syrdarya, Amudarya, etc.) drying-up, desertification, salinization, aeolian destruction.**
- **• Deltas in sea estuaries (limans) - (Dnepr, Dniester etc.) - drying-up, overgrowing with hygrophytes and hydrophytes, meadows and forests formation, slight salinization.**
- **• Deltas in the sea bays (Euphrates, Colorado) - intrusion of sea water, desertification, salinization, aeolian destruction.**
- **• Deltas on the coast of seas and oceans (Danube, Nile, Huanghe, etc.) - abrasion of the coast, sea water intrusion, drying-up, desertification, salinization.**

Black Sea basin

Danube delta changes (1977 and 2009)

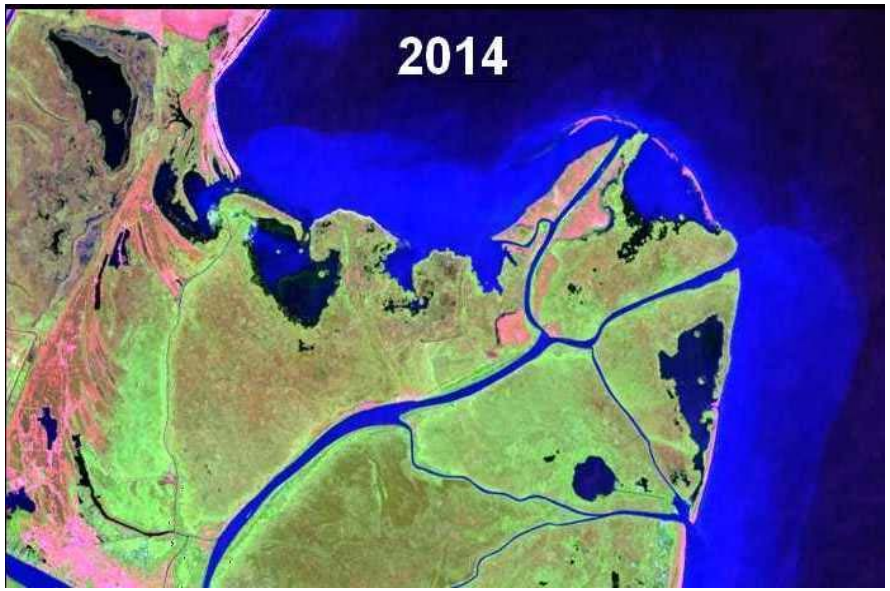






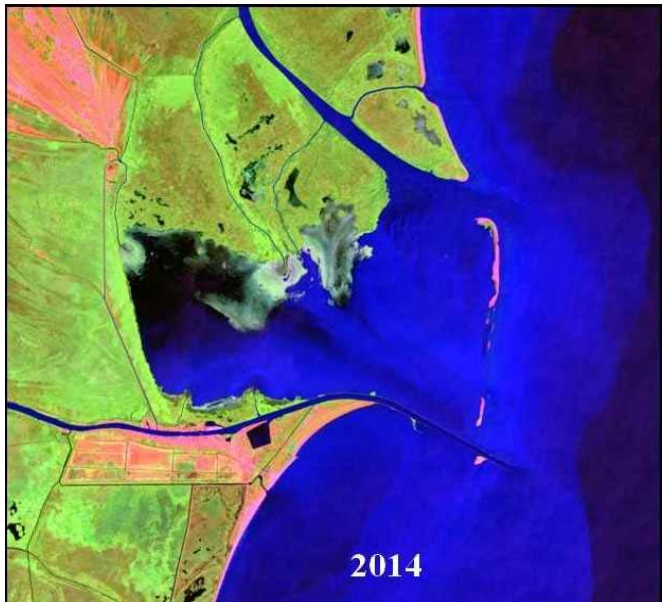
Key research areas in the Danube delta

Danube delta: key 4 (Ukraine)

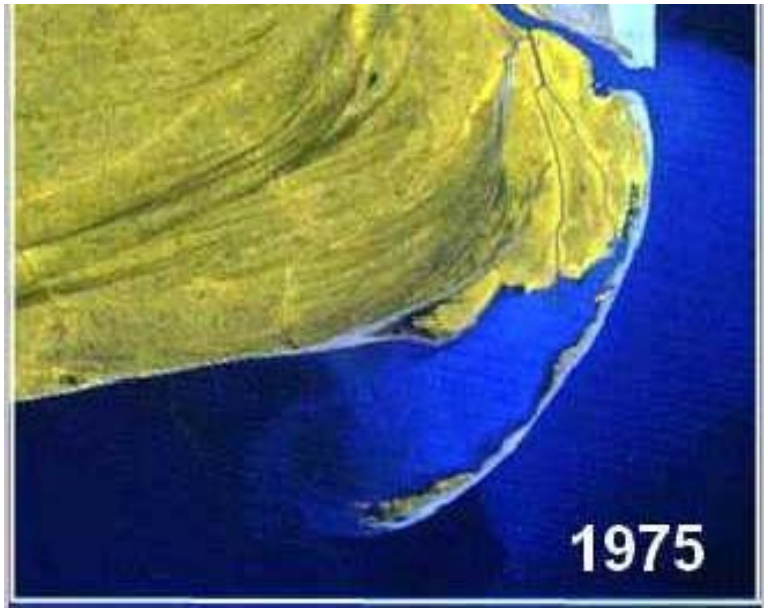


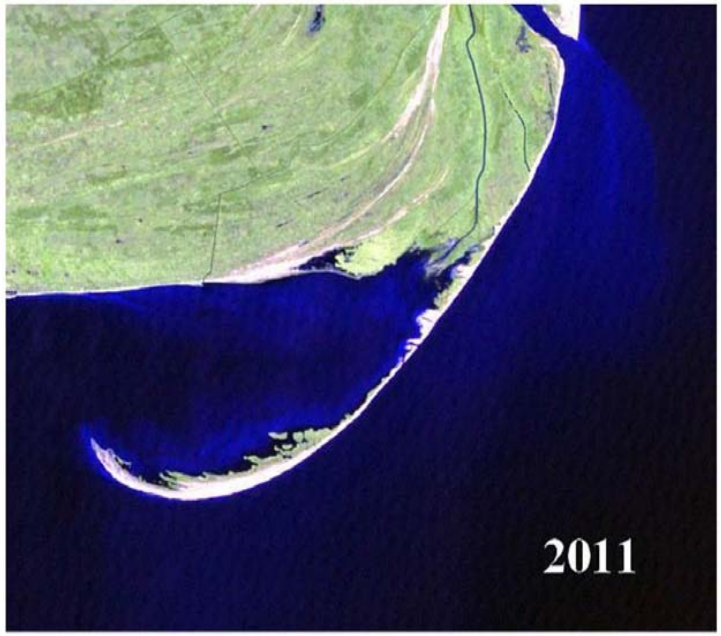
Danube delta: Key 3 (Ukraine)

Danube delta: Key 1 (Ukraine/Romania)

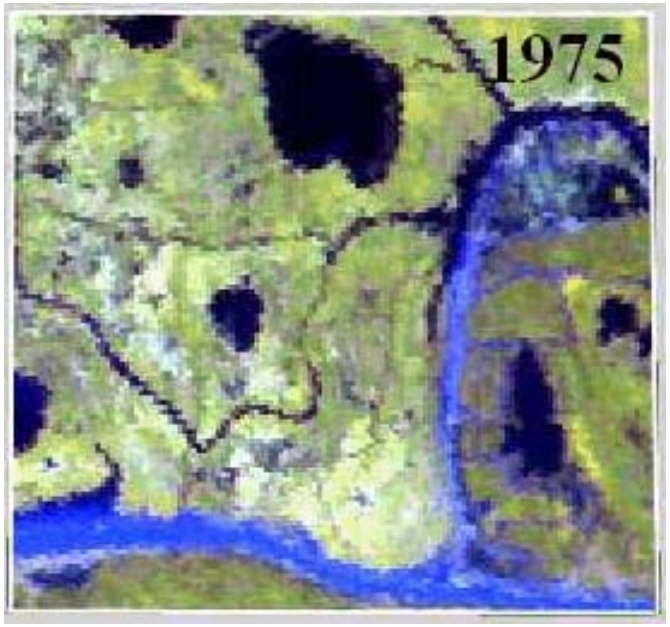


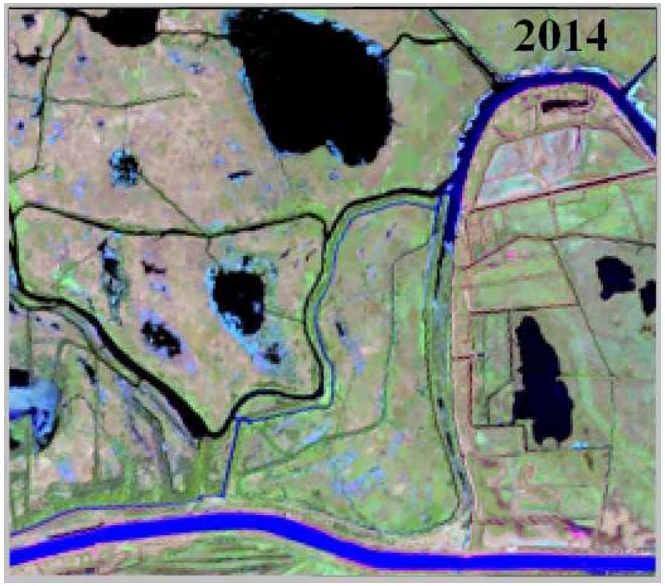
Danube delta: key 2 (Romania)



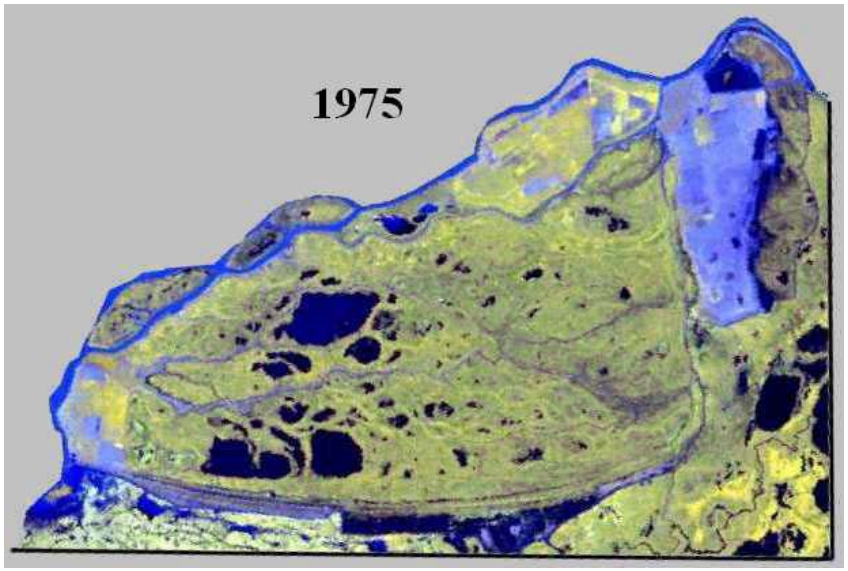


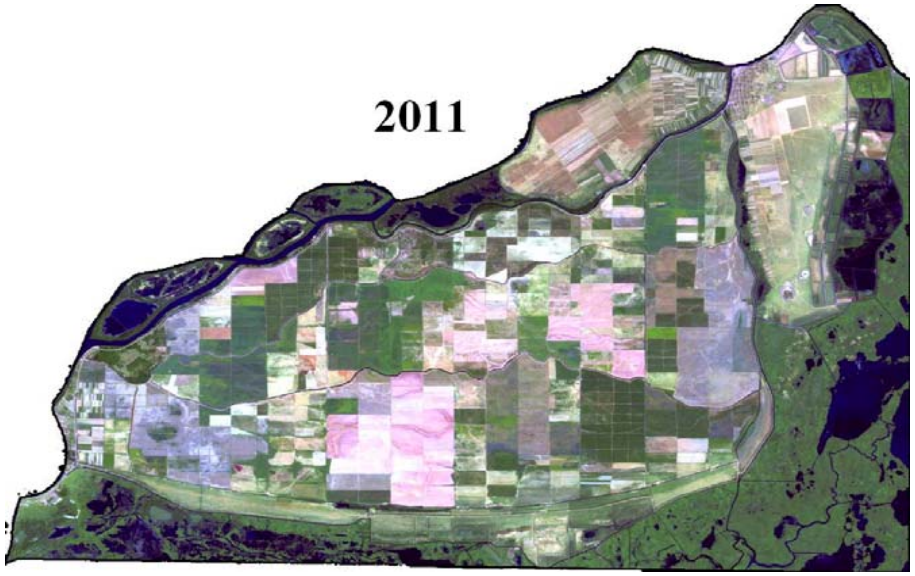
Danube delta: Key 7 (Romania)

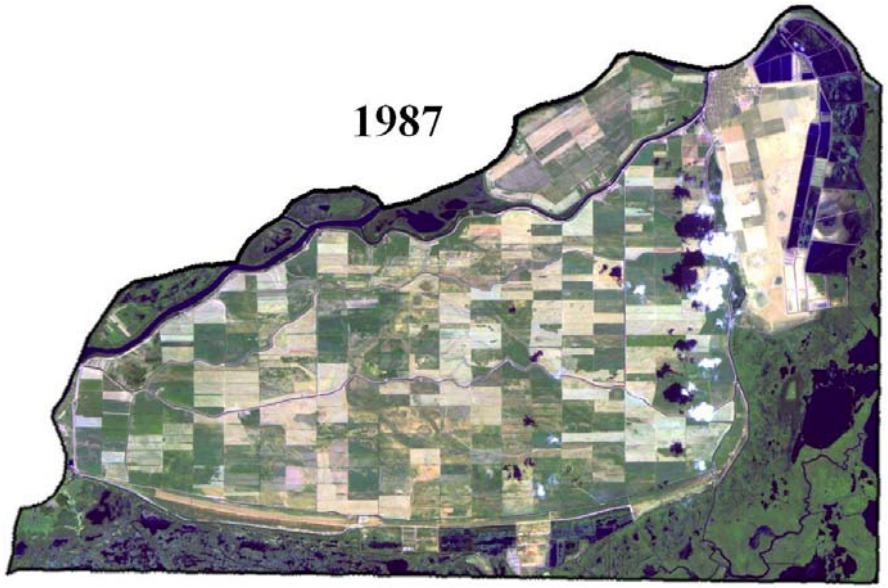


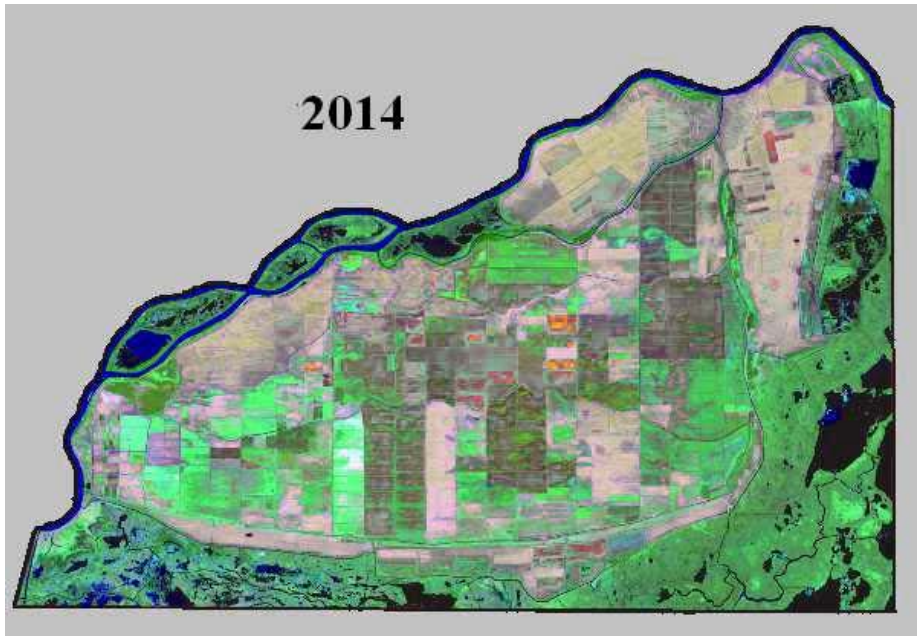


Danube delta: Key 5 (Romania)

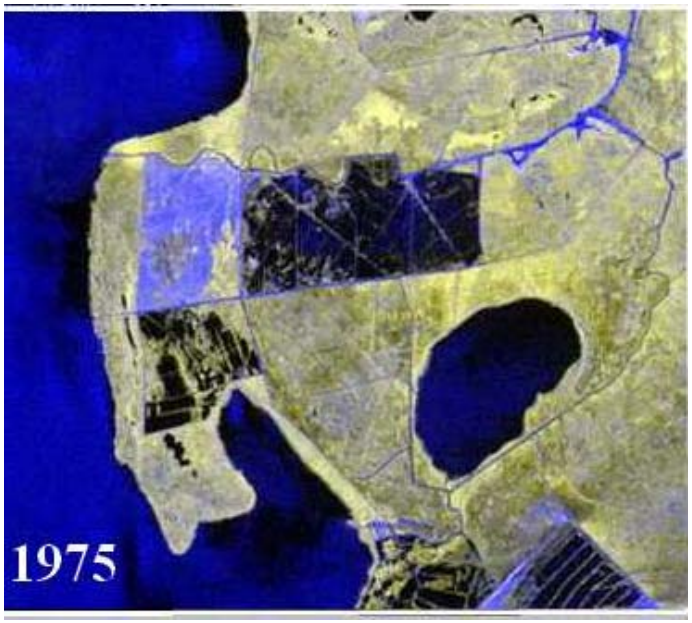




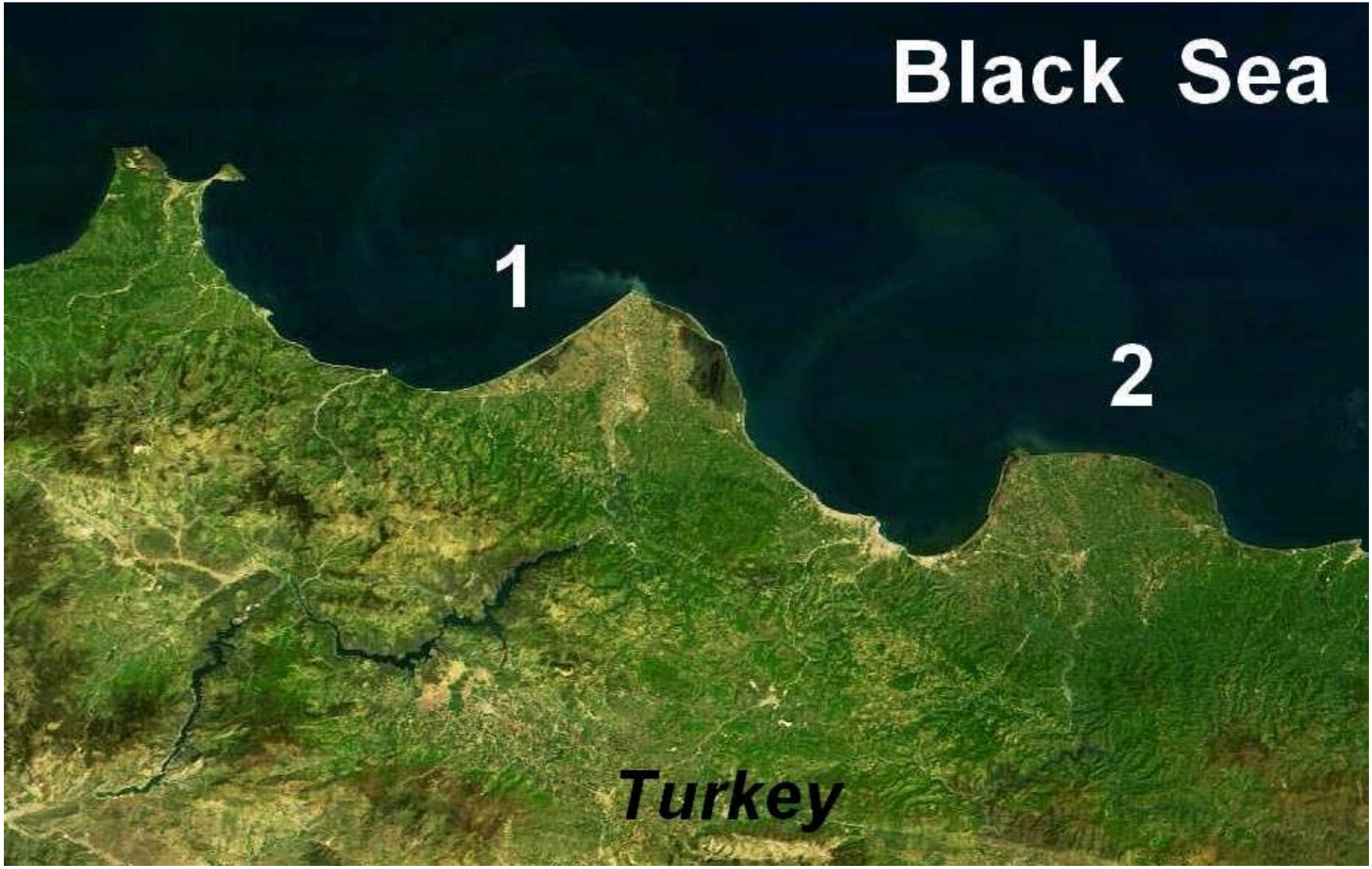




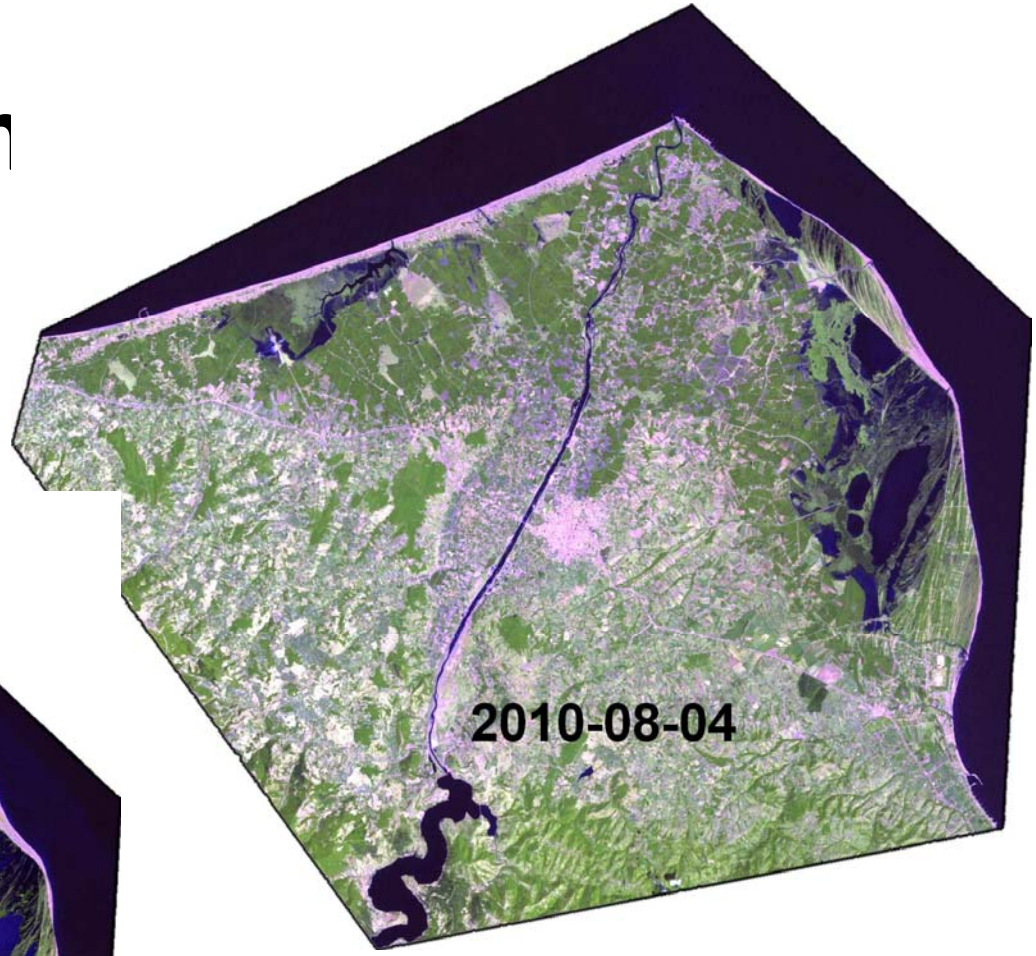
Danube delta: Key 6 (Romania)

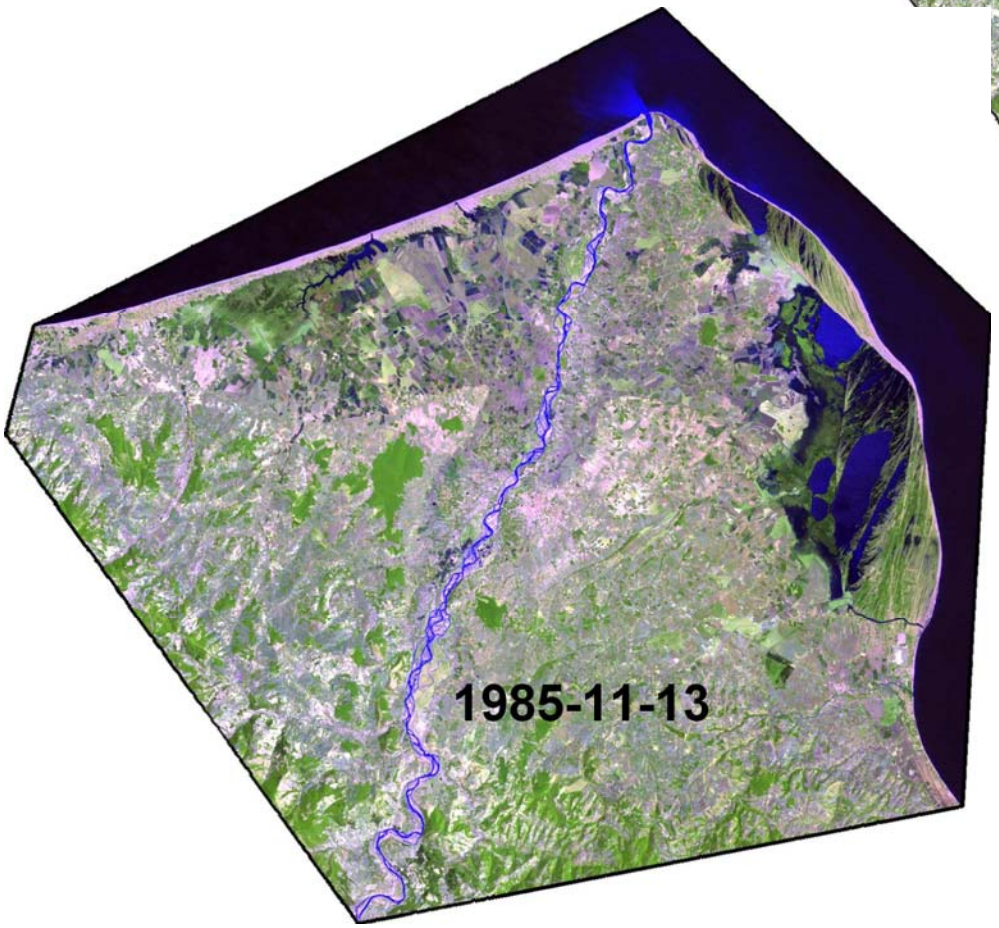


Kizilirmak (1) and Yesilirmak (2) deltas, 2013-04-30 (Terra).



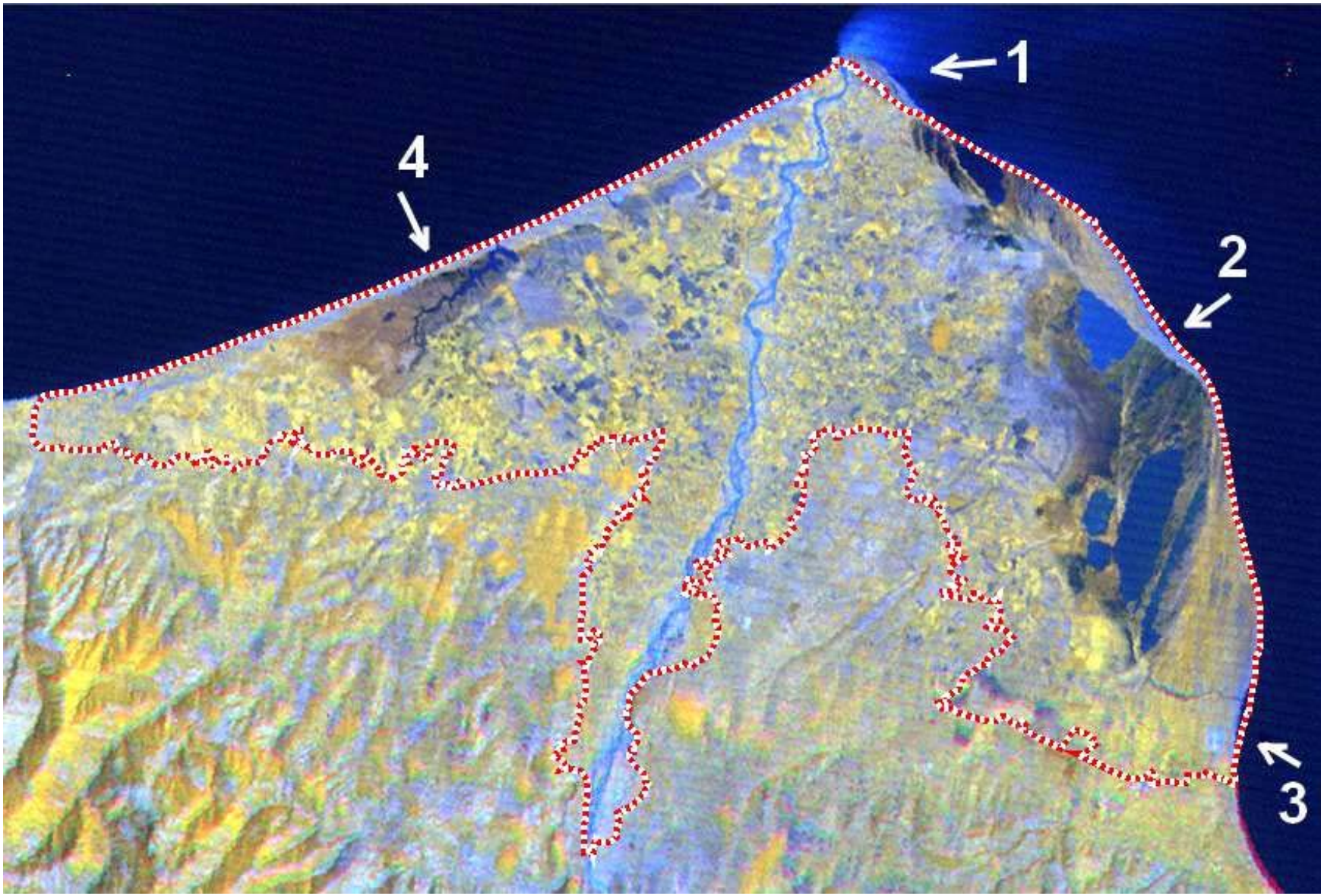
Kizilirmak delta in 1985 and 2010

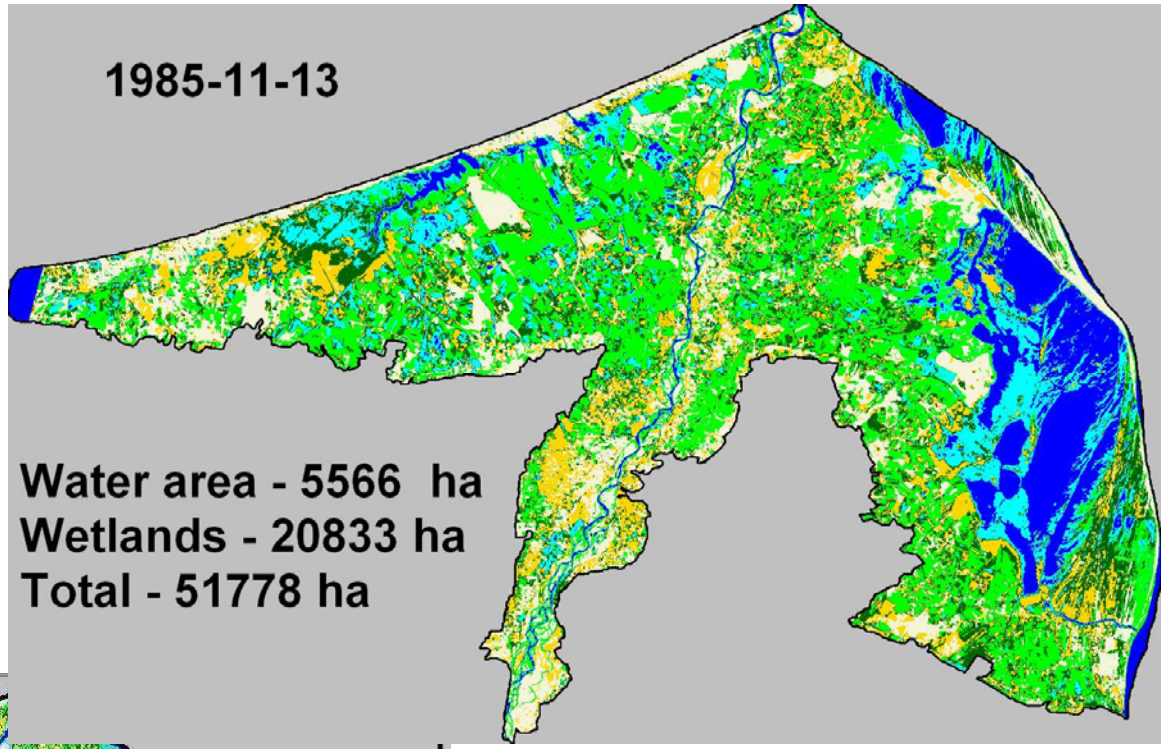


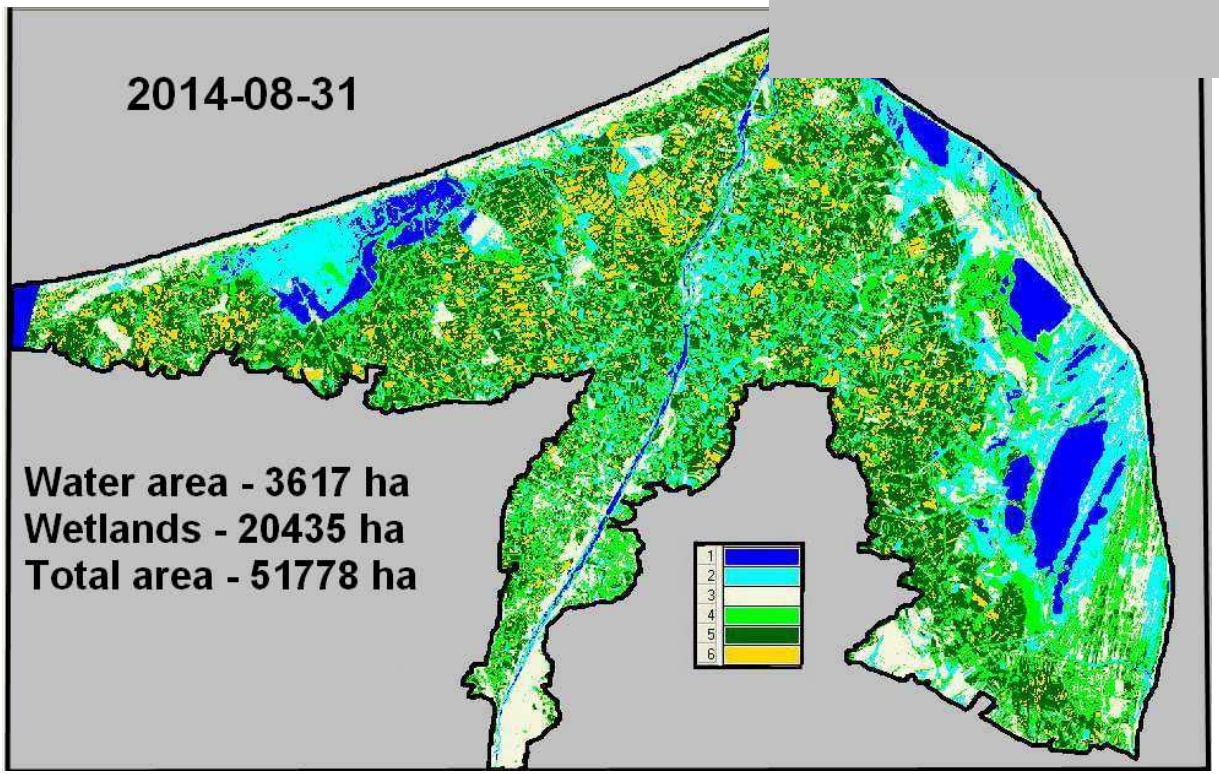


Kizilirmak delta: Coasts and their protection

Kizilirmak delta: coastline changes (1980 – 2010)



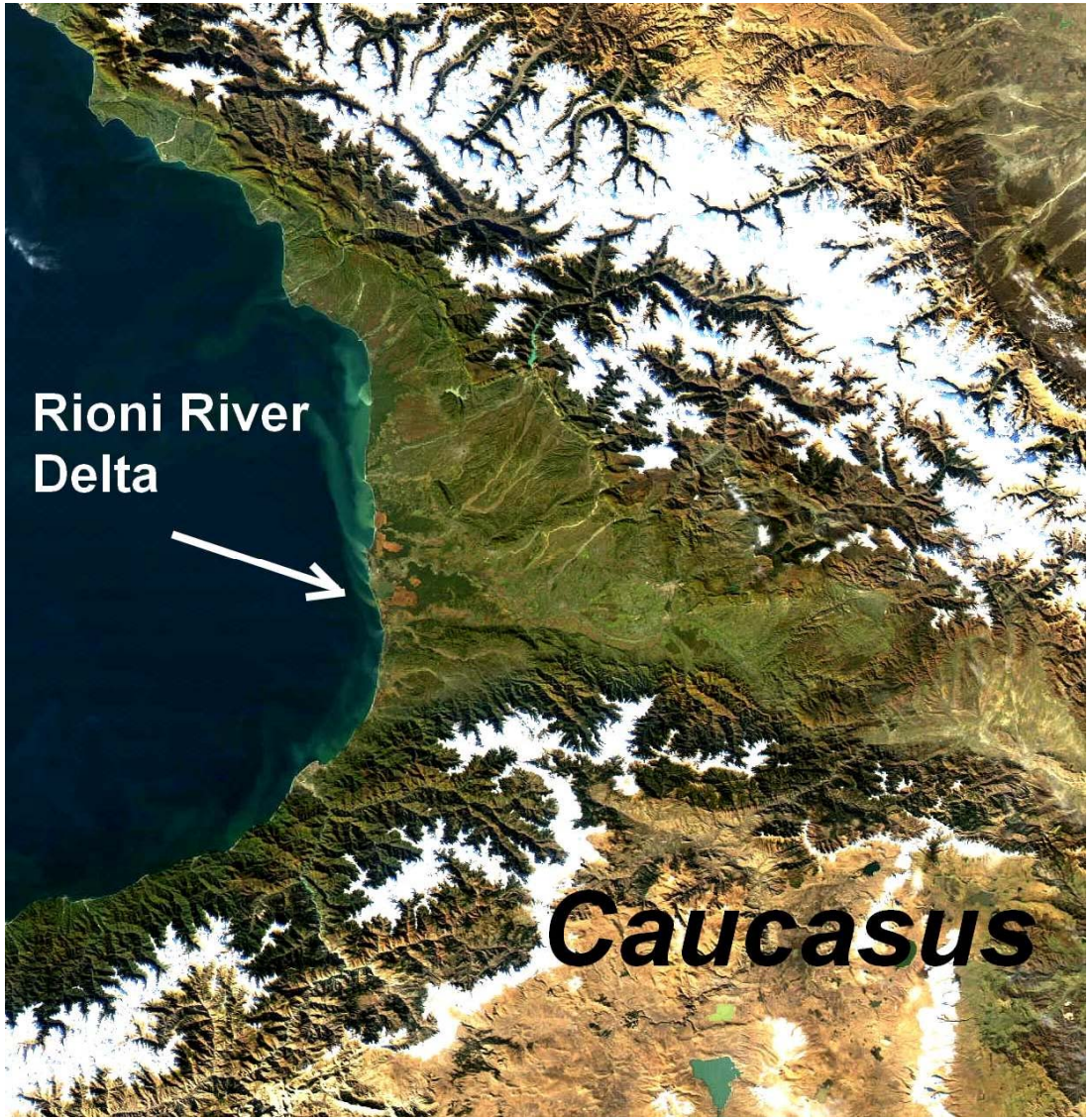


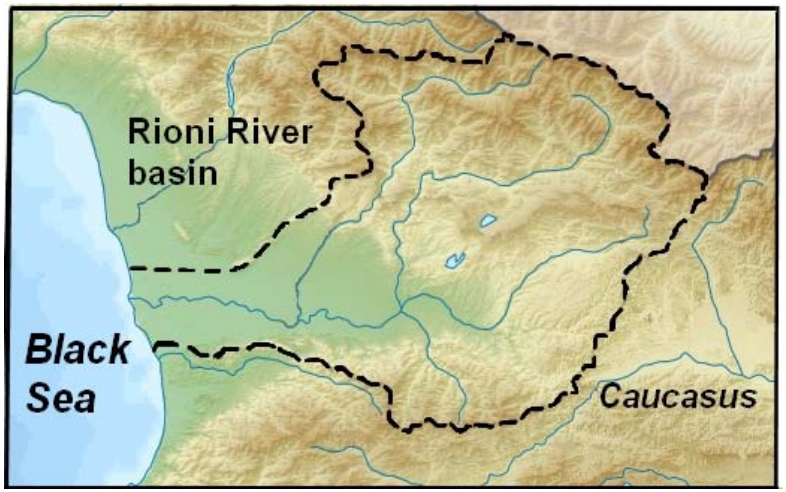


Land cover changes in the Kizilirmak delta

Kizilirmak delta: wetlands nature

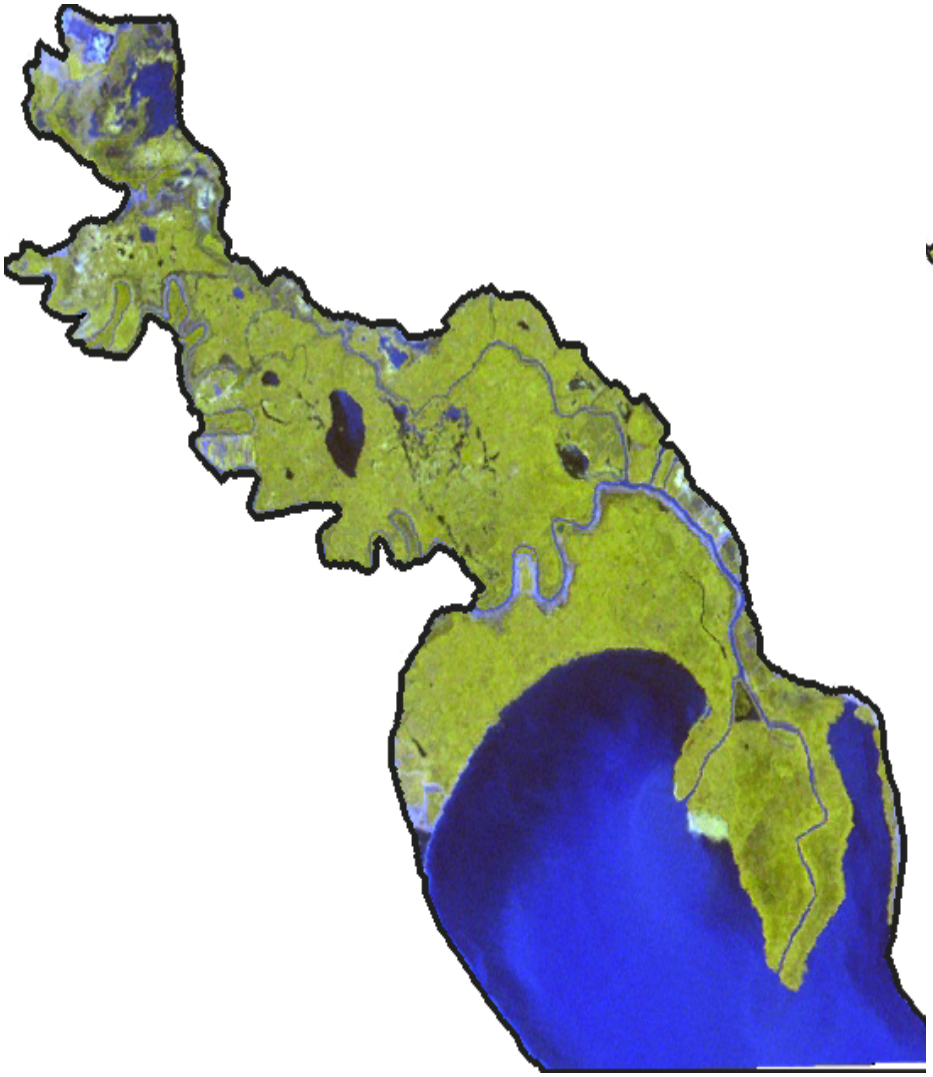
Rioni river in Georgia

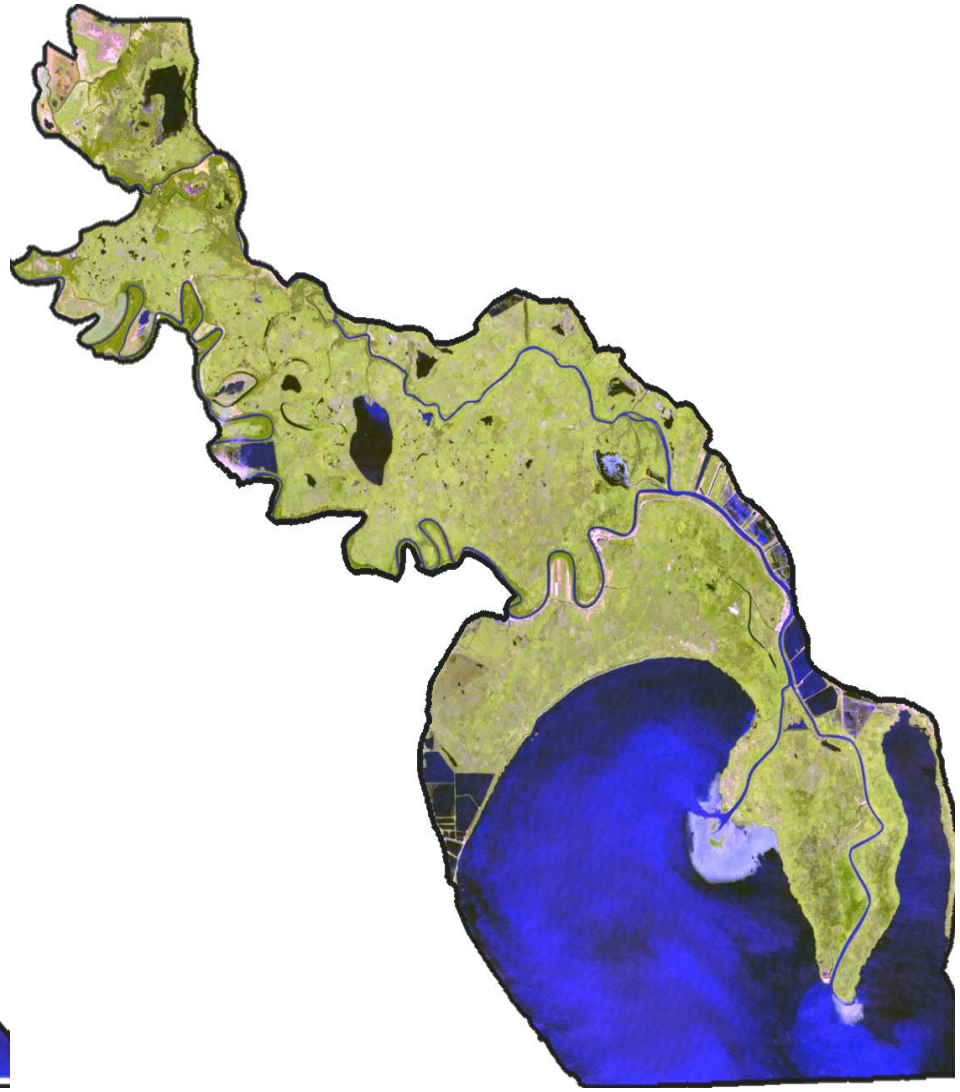




Rioni delta in 1980, 2009 and 2014 (Georgia)

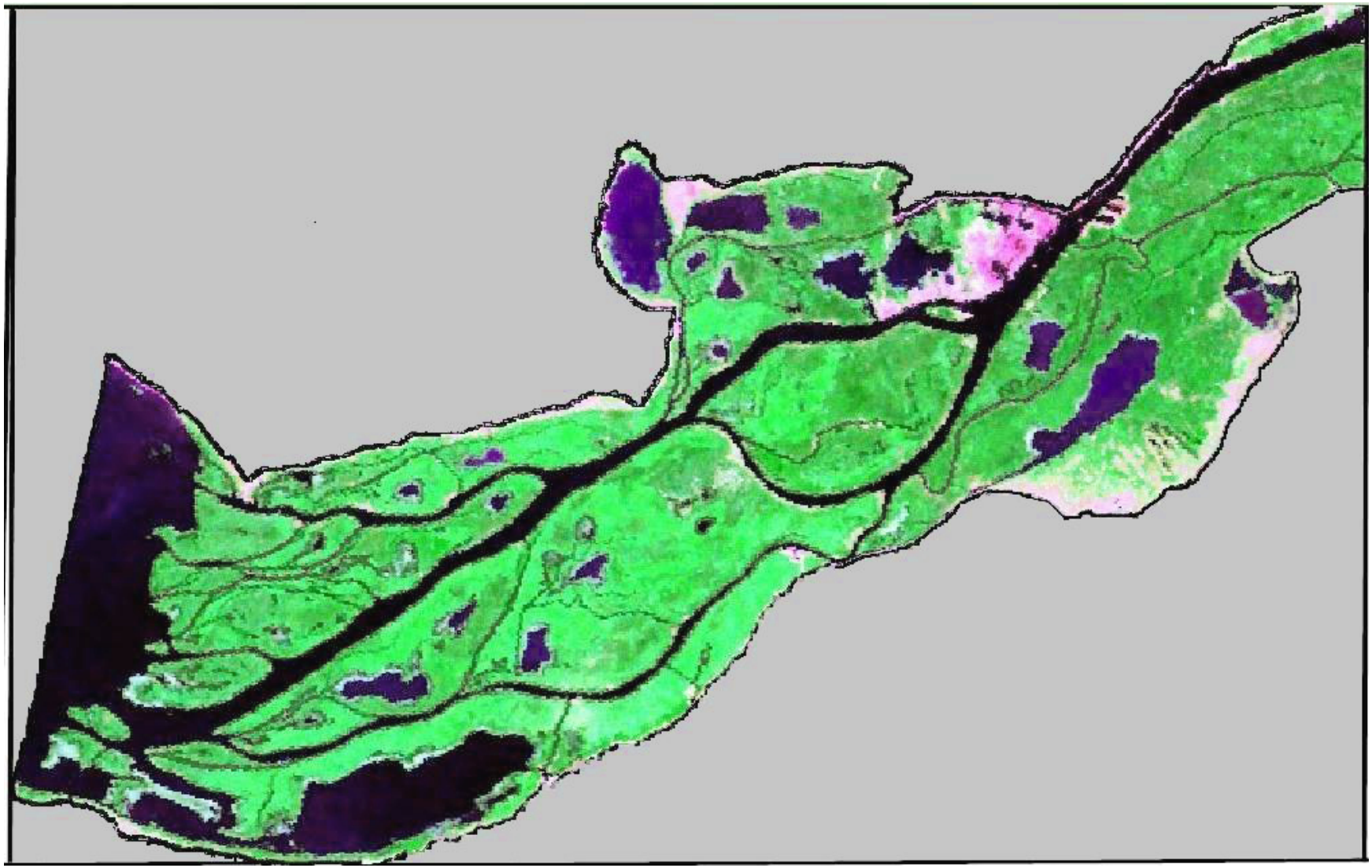
Dniester delta changes: 1975 and 2011



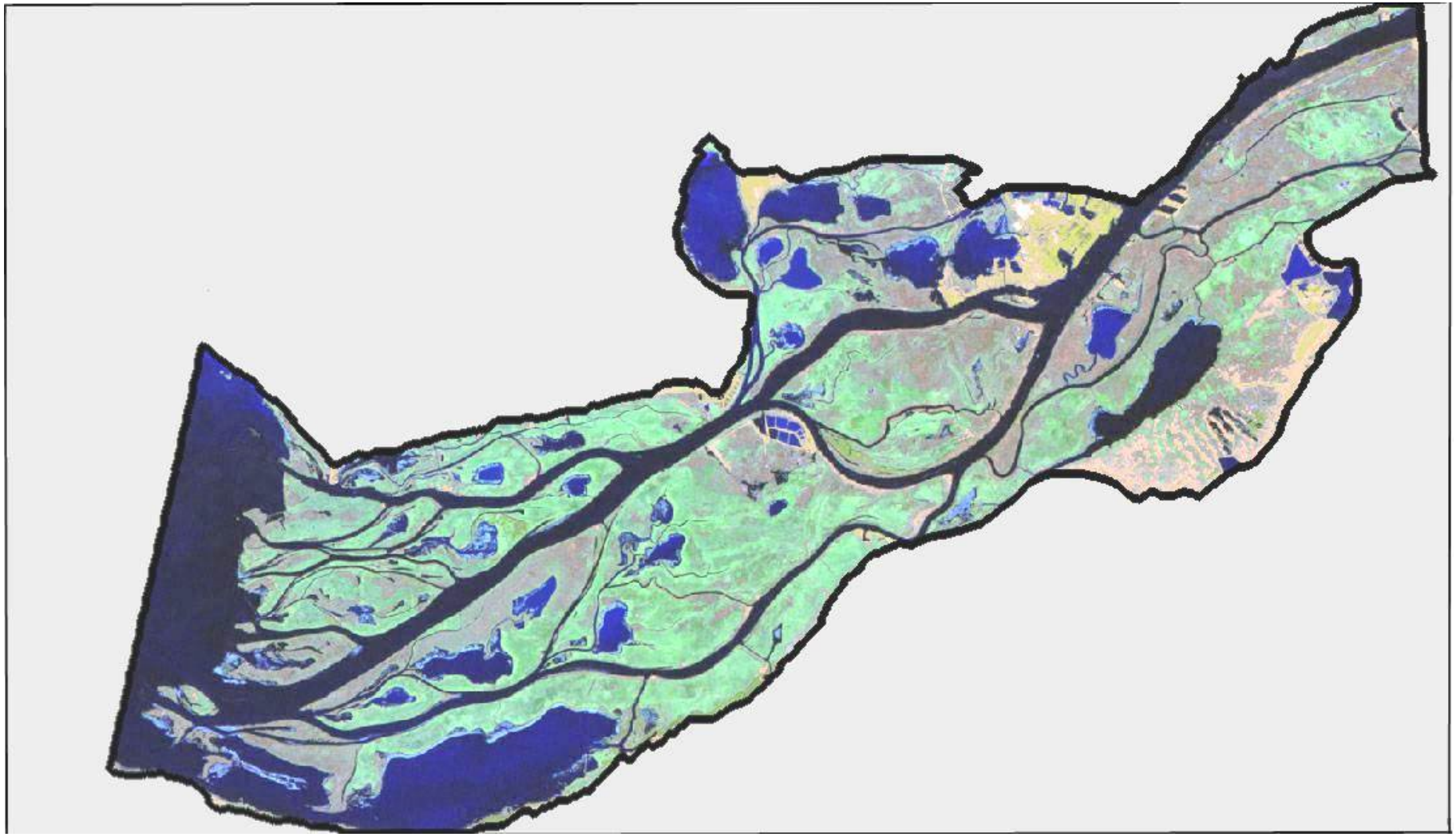


Dnipro (Dnieper) river basin

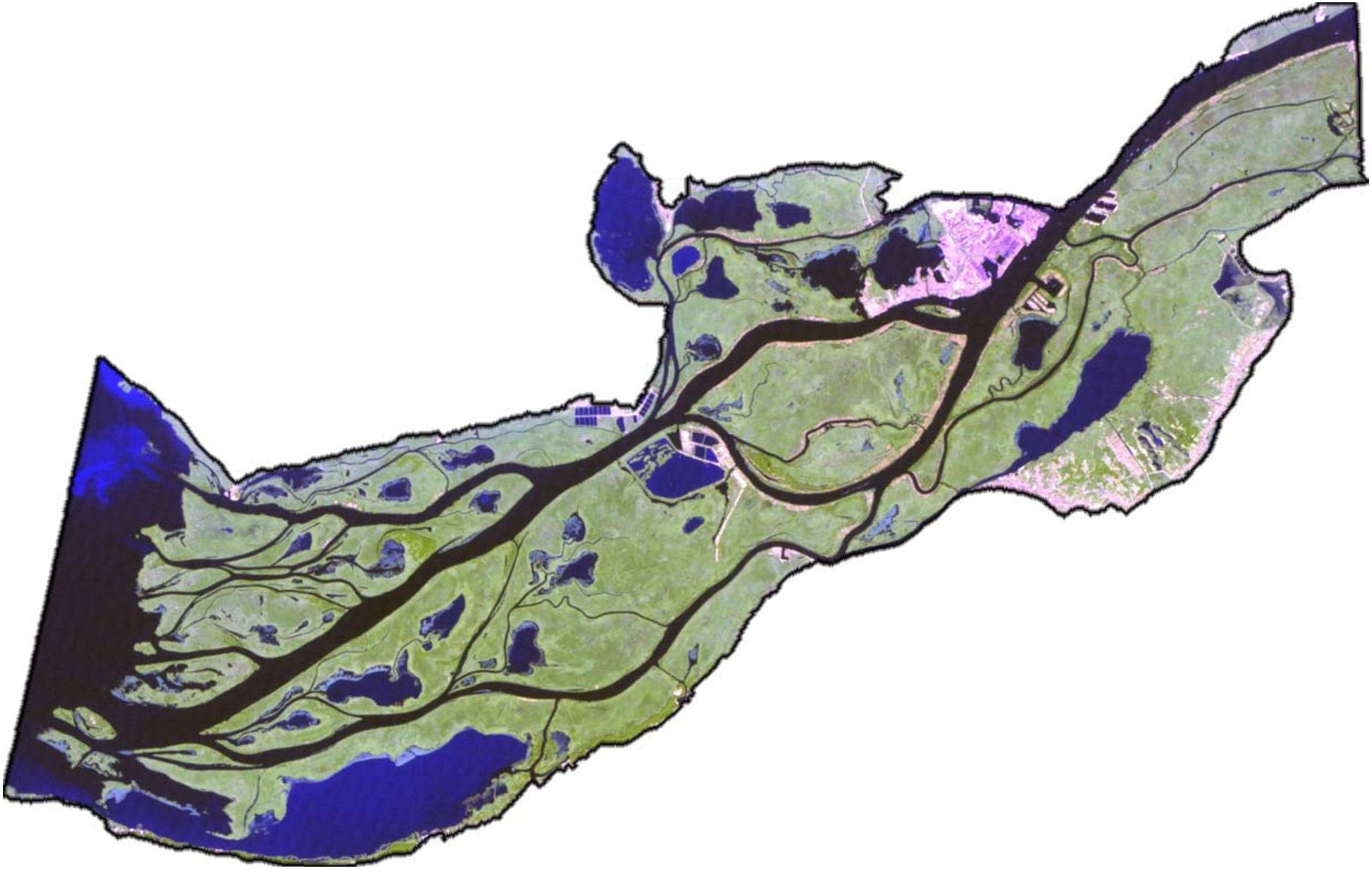
Dnipro delta in 1975



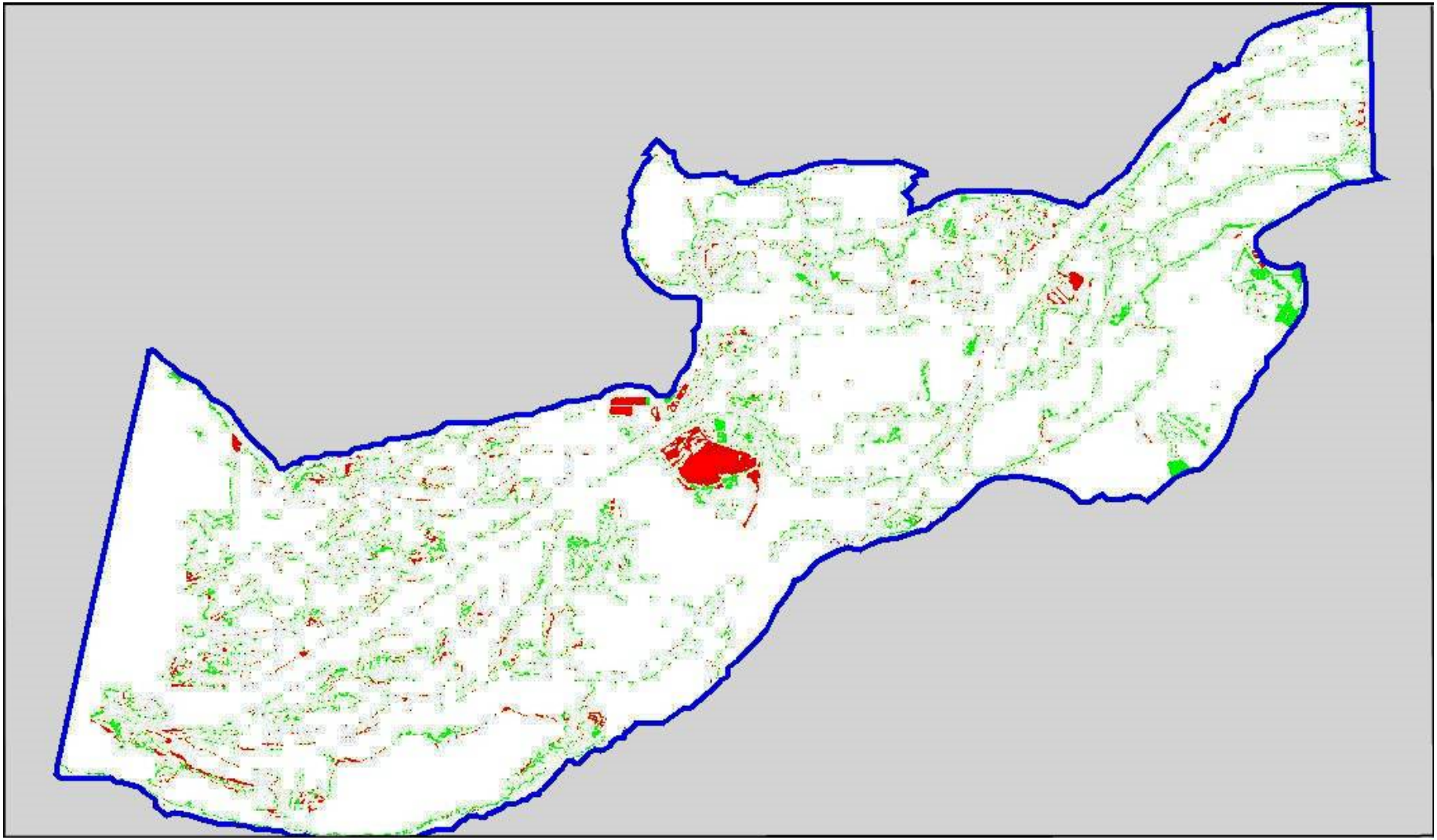
Dnipro delta in 1986



Dnipro delta in 2010

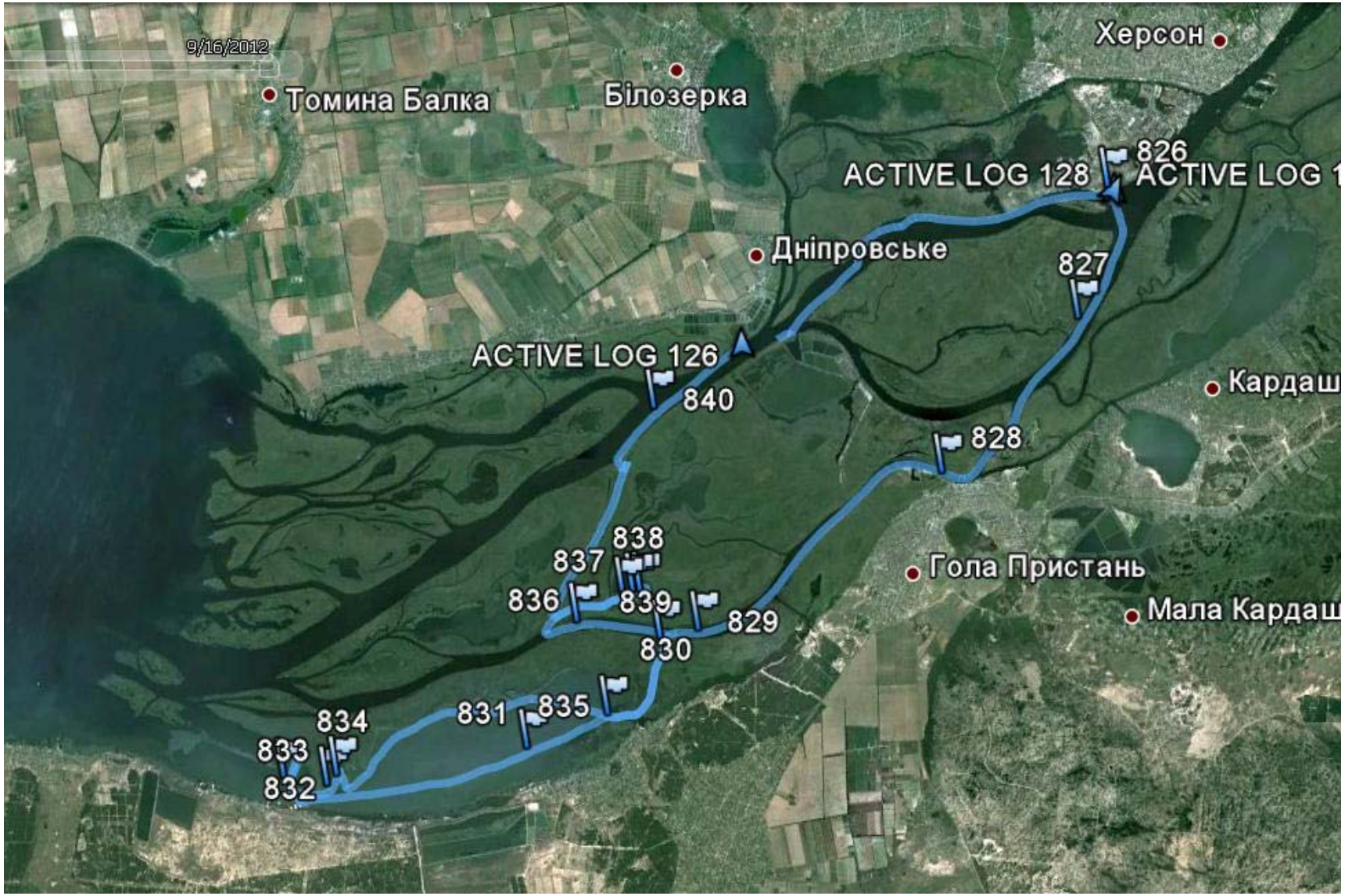


Dnipro delta: change detection 2010 /1986

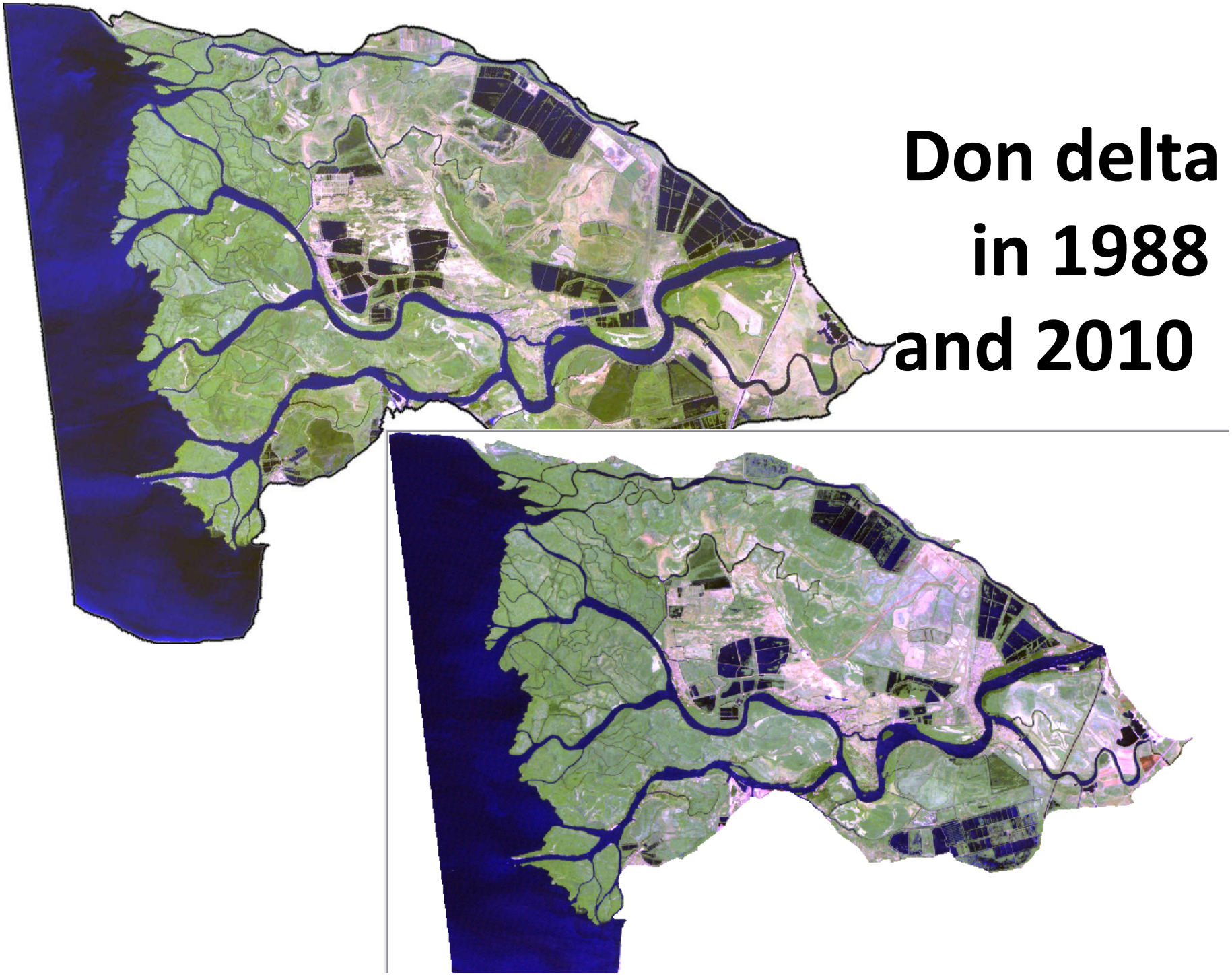


Eutrophication in the Dnipro delta and estuary

Terrestrial research in the Dnipro delta, 2012.

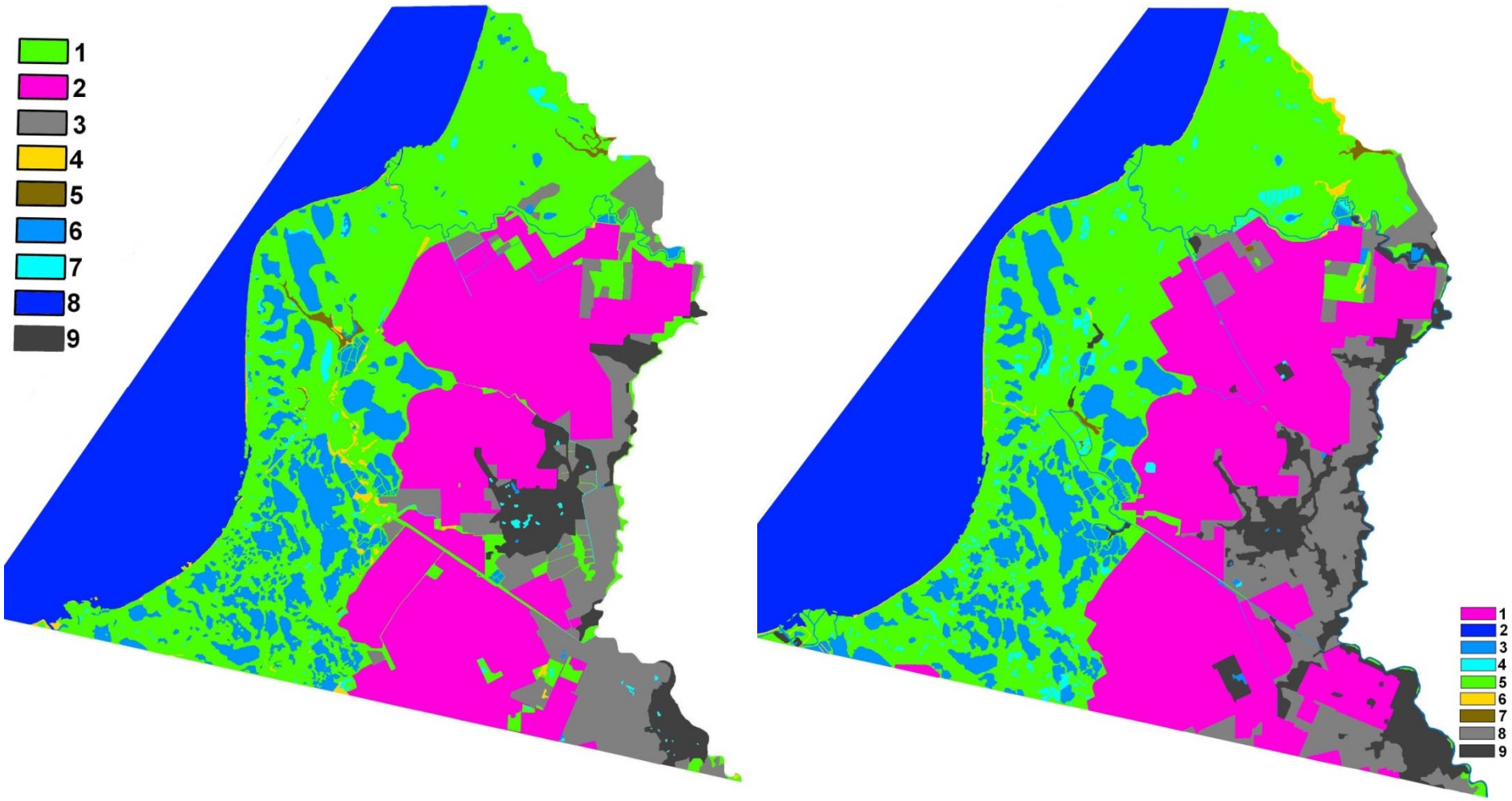


DON (1) and KUBAN' (2) deltas



Don delta in 1988 and 2010

Kuban' delta in 1986 and 2010



Thank you!

- Дякую за увагу !