

# Finnish Environment Institute (SYKE)

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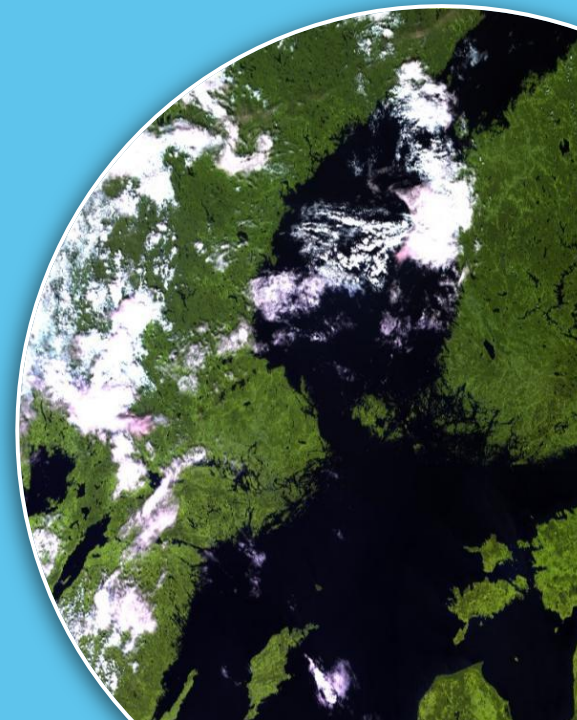
# **SYKE is an expert organisation of 700 people**

**Climate change mitigation • Green economy • Sustainable use of natural resources • Biodiversity • Ecosystem services • Baltic Sea •**

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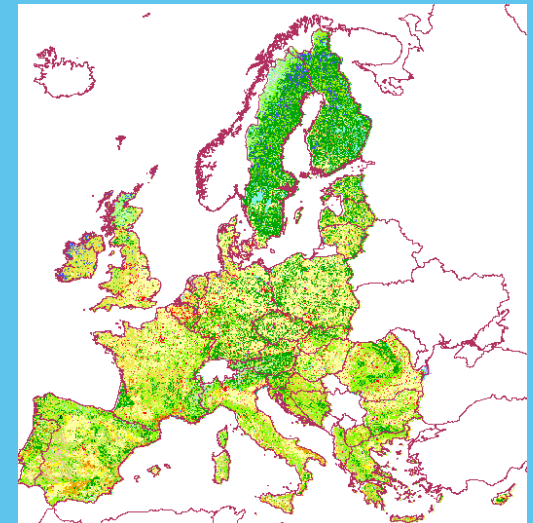
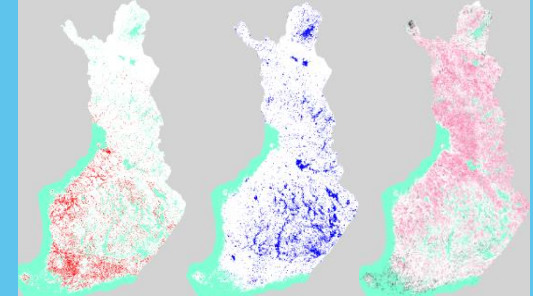
Specializing in Arctic RS development:

- Development of satellite-based snow mapping particularly in high-latitude forests
- Improvement of Northern Hemisphere snow mapping procedures for NPP Finland/VIIRS
- Development of ice monitoring on arctic lakes
  - Based on optical EO data (MODIS, Sentinels)
- Development of methods for land cover change in the arctic
  - Wetlands, boreal forests and fjelds particularly targeted
- Development of Essential Biodiversity Variables (EBV) for Arctic ecosystems



# Monitoring of biodiversity, land cover changes, and ecosystem services

- Particular interest in Land cover and its change in boreal and (sub)arctic zone
  - Classification of peatbogs and wetlands
  - Characterization of vegetation/forest cover and structure (also laser scanning)
- Modelling the effects of land use and climate change on DOM and biogeochemical cycles in the Arctic catchments
- Modelling the effects of climate change on biodiversity and ecosystem services



International collaboration of Finnish Environment Institute (SYKE):

- Participating in AMAP report (2017): "Adaptation Actions for a Changing Arctic – AACA"
- Coordinating the BPAN (Barents Protected Area Network) & LTER Finland
- Providing EEA (European Environment Agency) Corine Land Cover and Land Cover changes for Finland  
Versions 2000, 2006, 2012, next 2018
- Part of Copernicus programme

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