

# Automatic Multi Modal Sea Ice Segmentation

## Current Input Data:

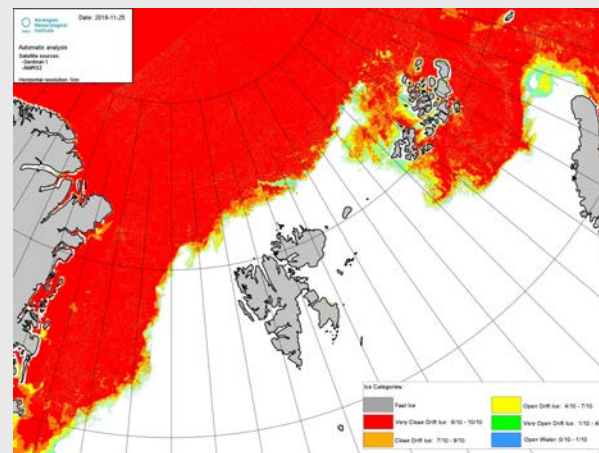
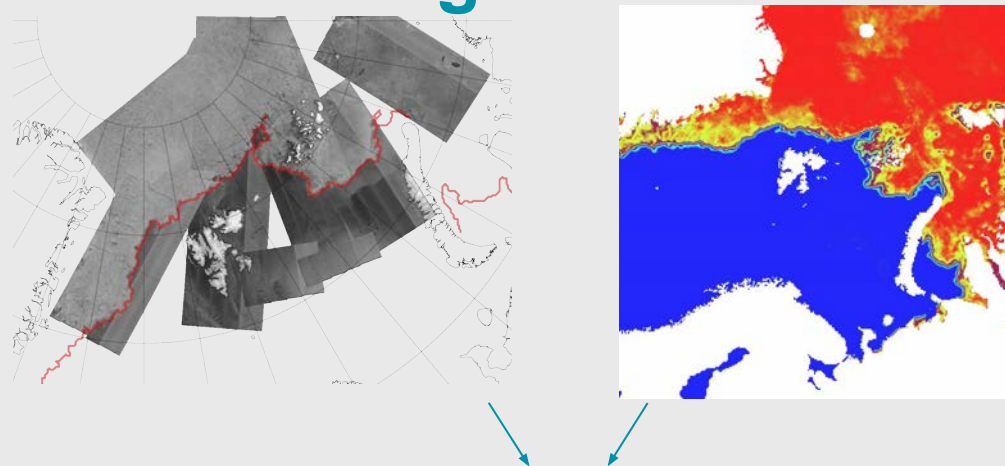
- AMSR2 Passive Microwave (5x5 km)
- Sentinel-1 SAR (100x100 m)

## Sea Ice Segmentation:

- Bayesian classification
- Merging of products
- Wind filtering (SAR)

## Result

Daily Multisensor Sea Ice Concentration product with high spatial resolution in certain areas.



1.5 km

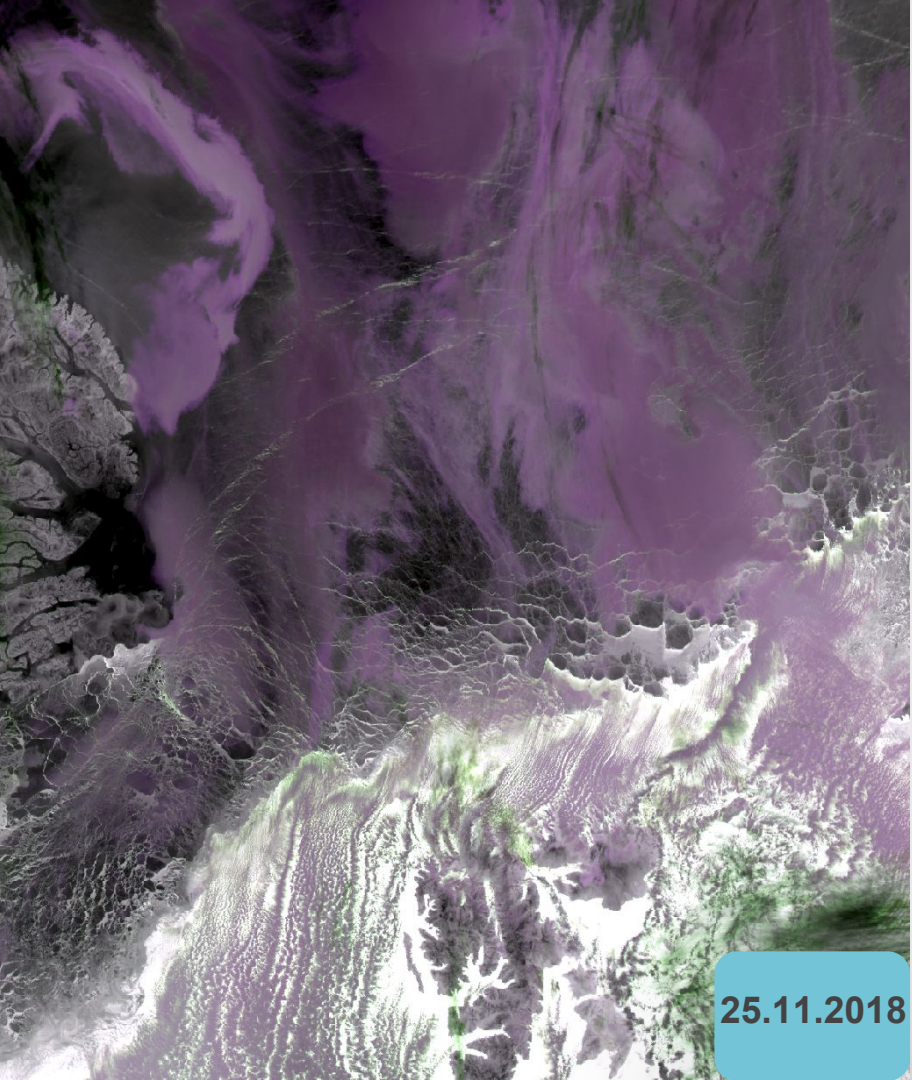


### **SAR challenges:**

- High surface wind speeds
- Misclassification
- Ambiguous signal (e.g. new ice/open water)
- Limited spatial coverage







# Adding Sentinel-3 data

## Advances:

- New data source
- “High” resolution (1x1 km)
- Segmentation to classification
  - Monitor leads
  - Snow on ice

## High spatio-temporal resolution

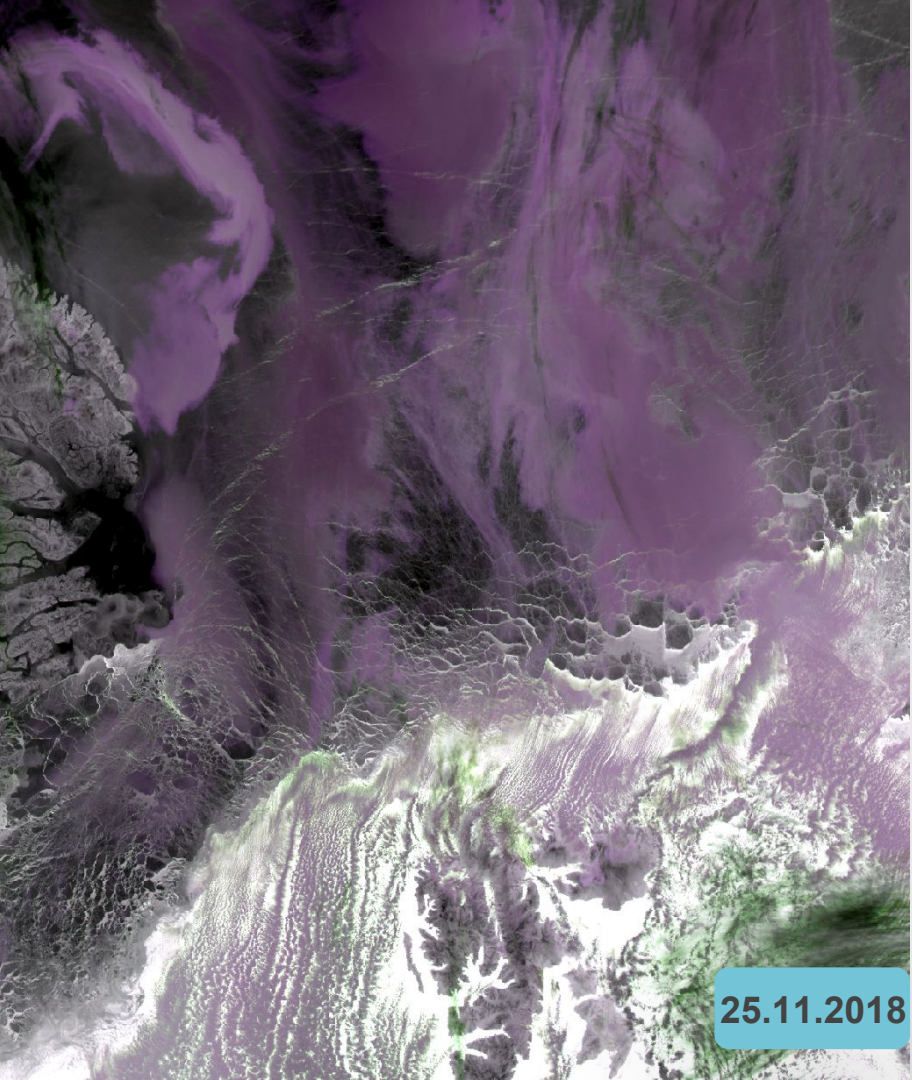
- ~60 products per day covering Norwegian AOI up north
- Double when S3B becomes operational

## Challenges:

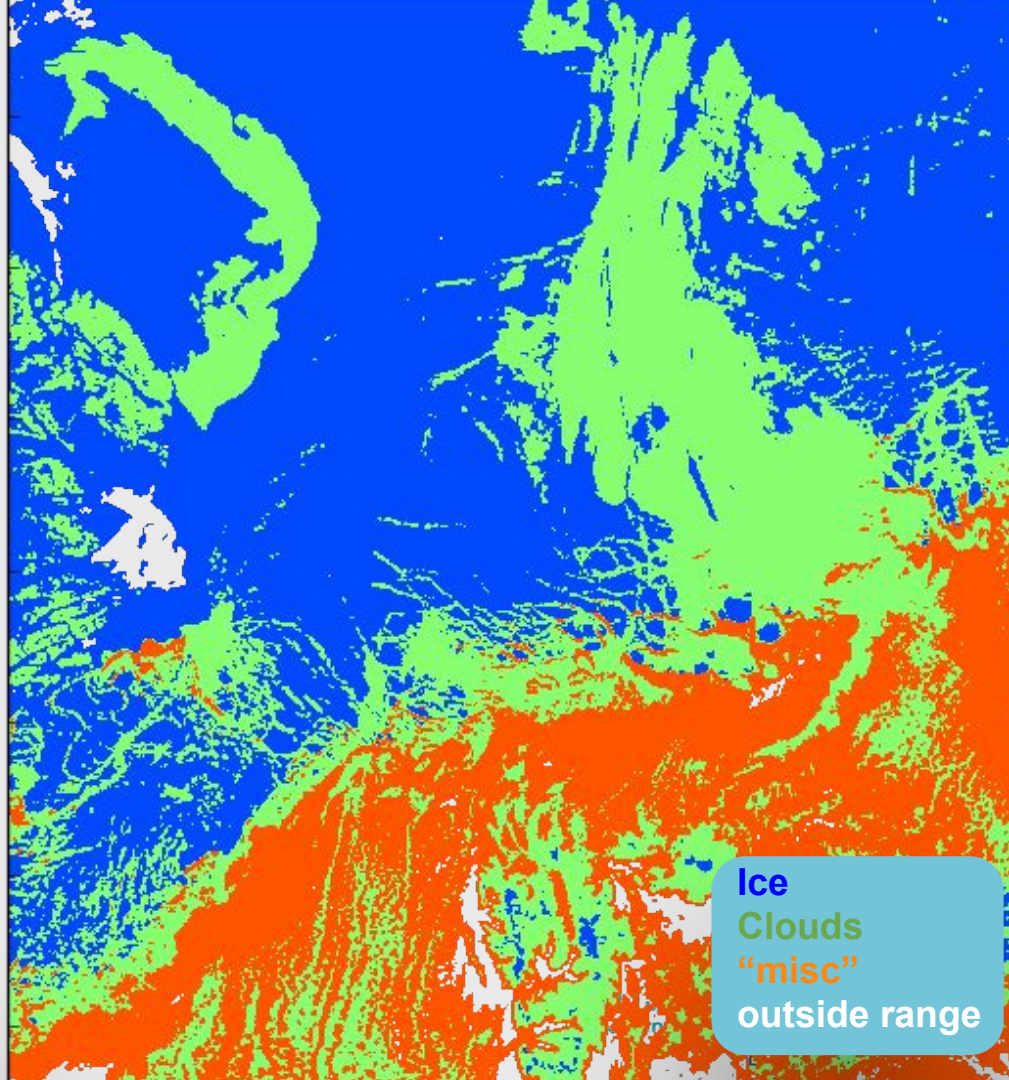
- Clouds

25.11.2018





25.11.2018



Ice  
Clouds  
"misc"  
outside range