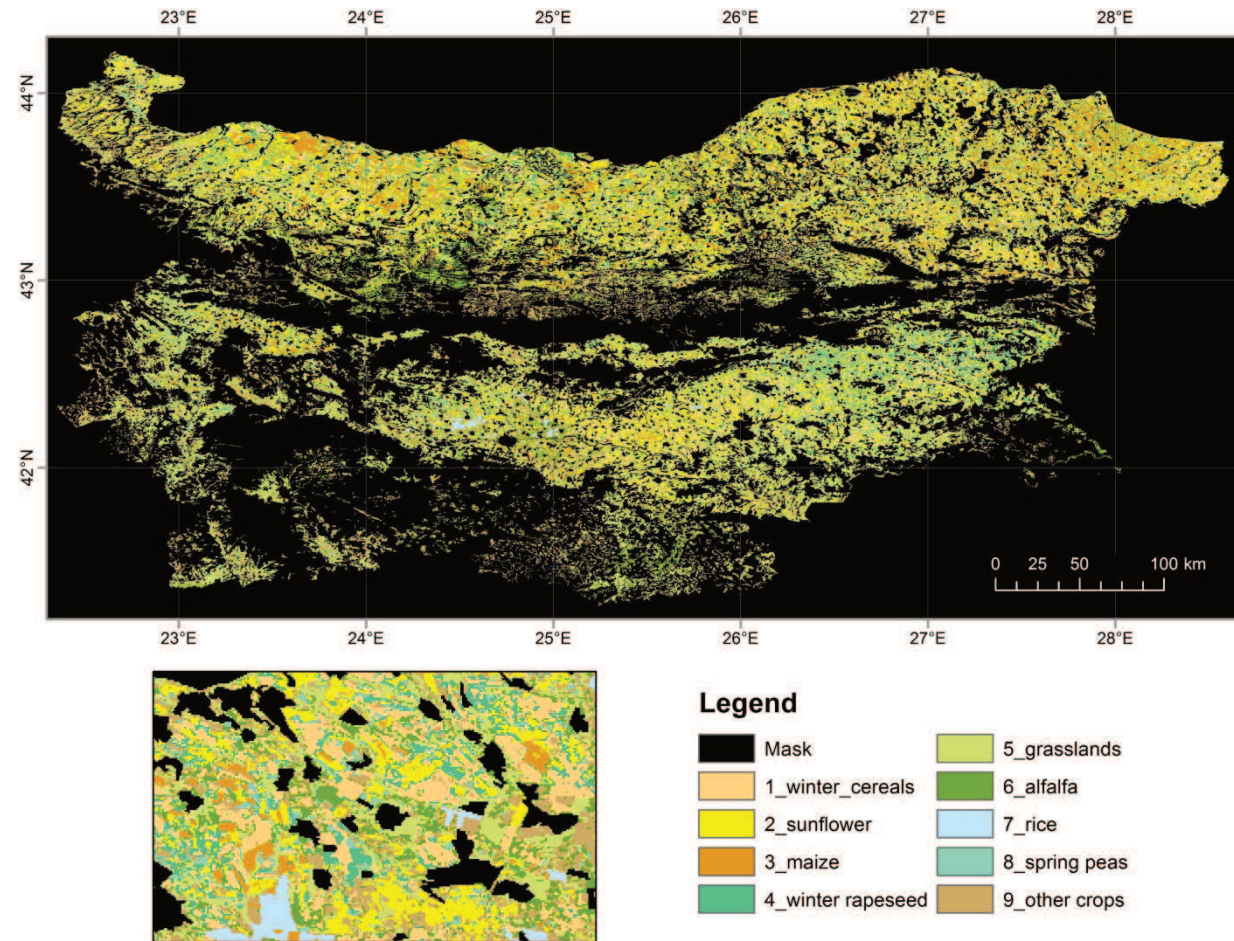


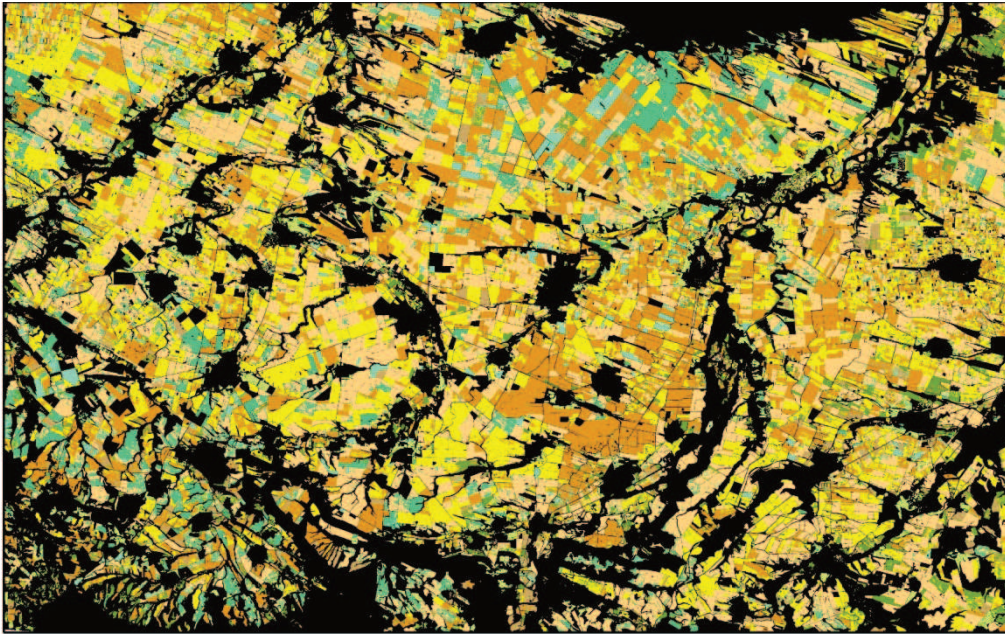
Sentinel-2 and PROBA-V 100 Crop Maps For The Territory of Bulgaria

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- Present study aims at producing and assessing the accuracy of a national crop types map based on PROBA-V 100 (VITO) data as well as more-detailed crop maps based on Sentinel-2 (ESA, Copernicus) data of two test areas in North and South Bulgaria. For that purpose ground truth data has been collected during the 2016/2017 agricultural year. For accuracy assessment of the Sentinel-2 crop maps the Ministry of Agriculture, Food, and Forestry (MAFF) shapefile of Bulgaria was used.



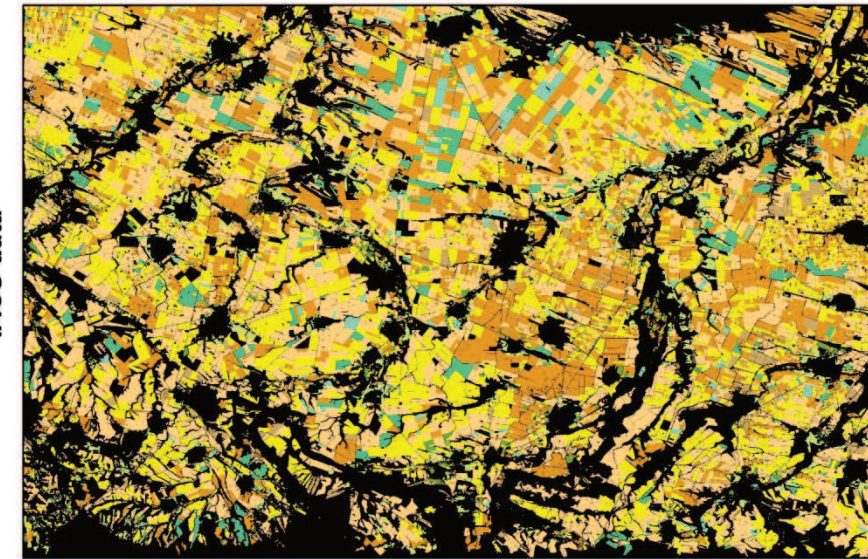
Sentinel-2 classification



- The monthly compositing tend to smooth the time series and to interpolate missing observations but this may not be sufficient in our case because March, April, and May 2017 are characterised with very usable Sentinel-2 data.
- Potential for improvement may lie in removing the class “Other agricultural areas”, which is quite heterogeneous. Some of the monthly composites (for example November and December 2016) could be omitted from the input time series because they carry little information for crop phenology.

The accuracy for the different classes varied significantly (between $\sim 30\%$ and $\sim 80\%$) and the overall accuracy is below the mapping accuracy of 85% but it is close to other studies from Central Europe and Ukraine using only Sentinel-2 data.

IACS data



Legend

	Unclassified		Grassland
	Winter cereals		Alfalfa
	Maize		Spring peas
	Sunflower		Other crops and fallow
	Winter rapeseed		Masked Pixels

0 5 10 20 km

