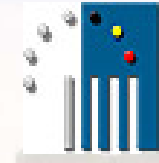


# ***GLOBAM – a Globally Distributed Agricultural Monitoring Experiment based on EO***

***4-y research project supported by  
Belgian Science Policy Office (2007-2010)***



***based on an international partnerships combining  
research labs, EO production entities and  
(pre-)operational systems (currently MARS-FOOD, GMFS)***



***INRA-Avignon***



***with close collaboration with national partners***

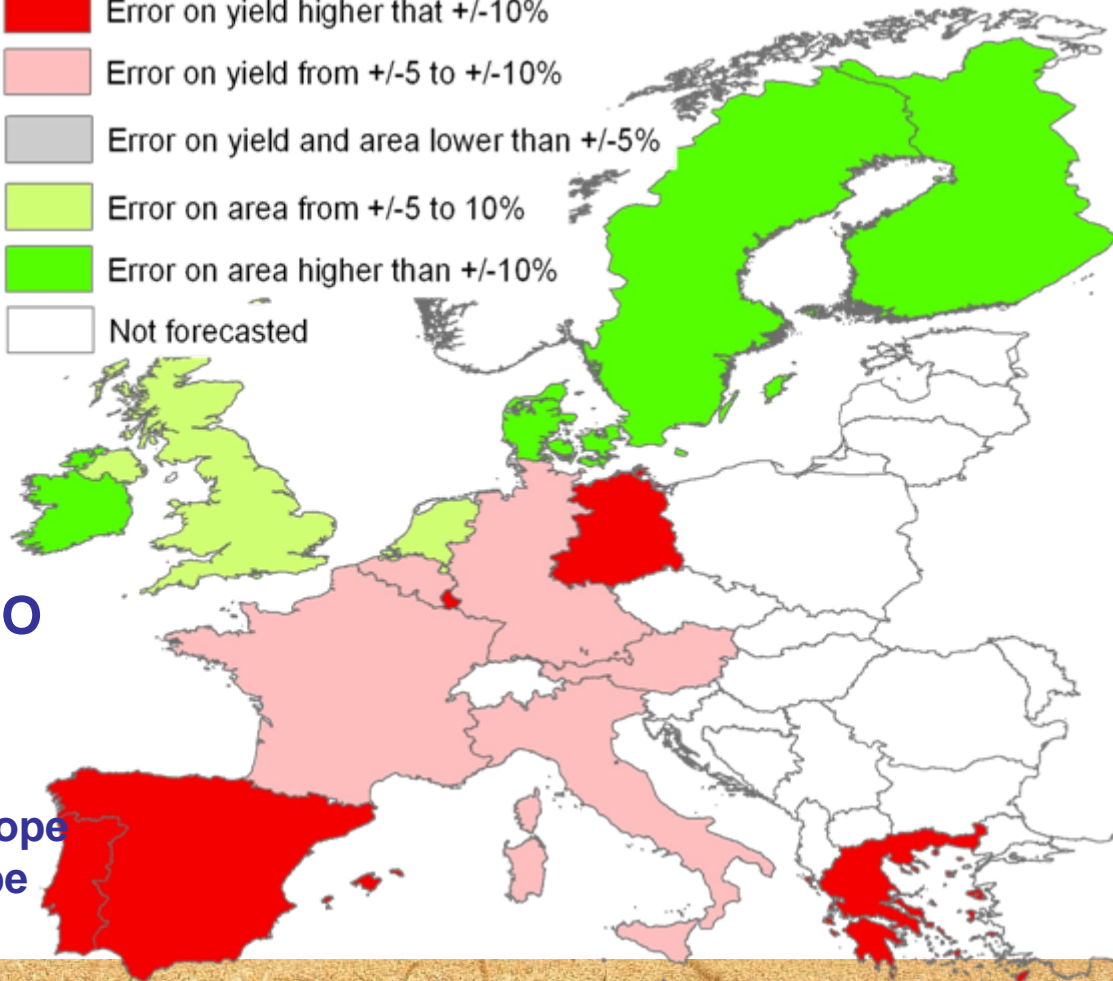
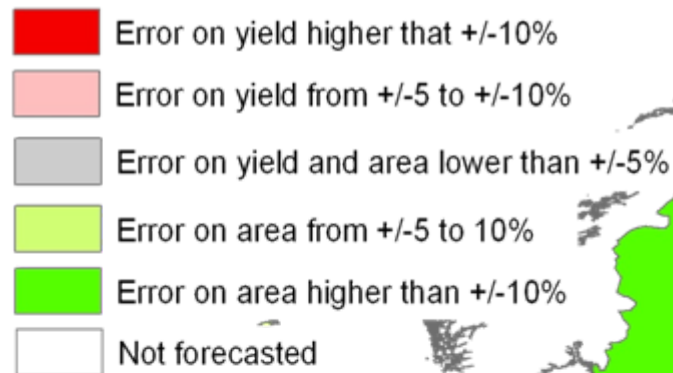
***Coordination : Pierre Defourny (UCL-Geomatics)***

# Time series analysis of **acreage** and **yield** nat. statistics (15 EU countries) to estimate the accuracy required from EO to replace trends analysis in operational forecasting systems ?

## Wheat Error Map

Maximum error of estimation using trends analysis in a forecasting mode occurring either on

- on the Area estimate or
- on the Yield estimate



Findings : not a single answer but challenging for EO

For EU focus first on

- **yield** for wheat
- **area** for potato and sunflower
- **area** for maize in the South of Europe
- area** or **yield** in the North of Europe

# GLOBAM – a Globally Distributed Agricultural Monitoring Experiment to develop generic methods for advanced EO use while recognizing local diversity of ag. practices

**EO**

*Spatial resolution*

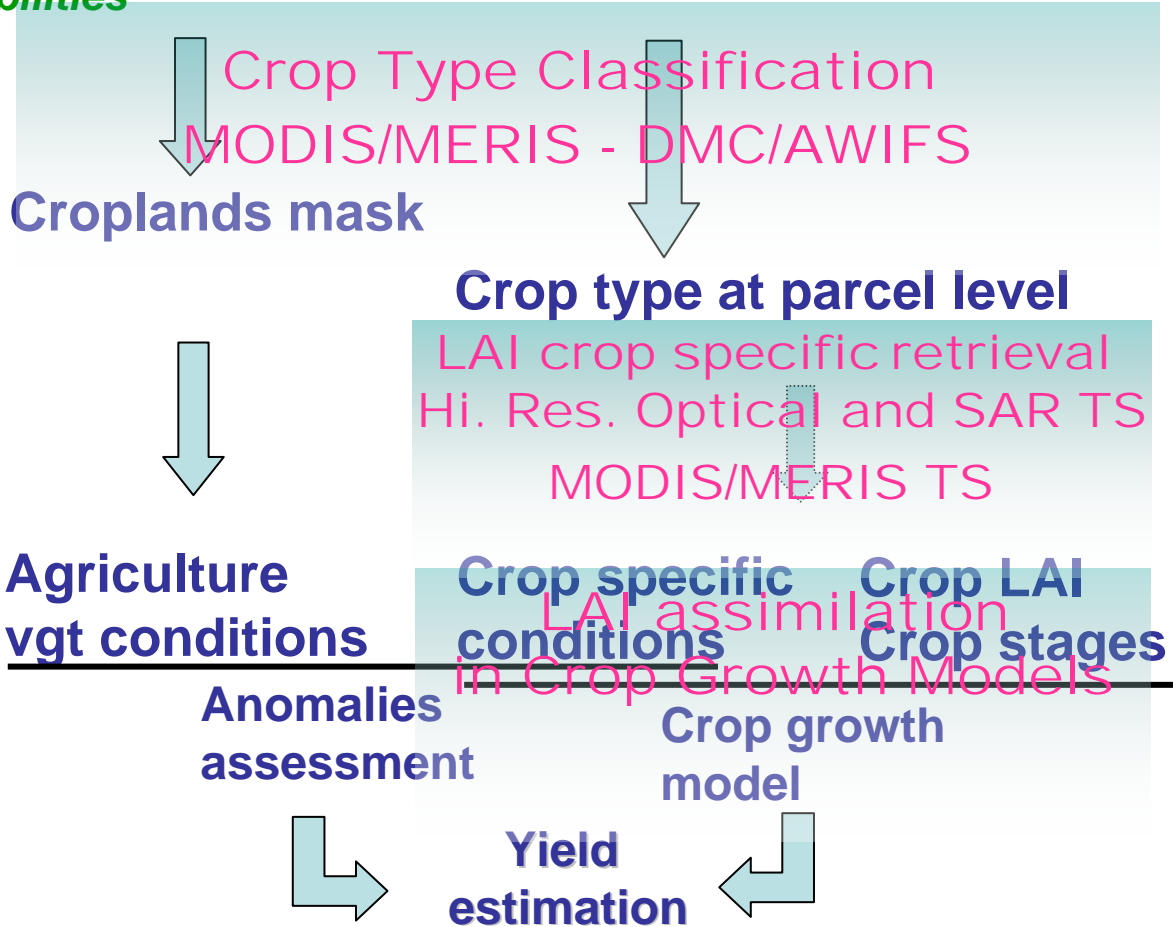
*Revisiting capabilities*



Entire region

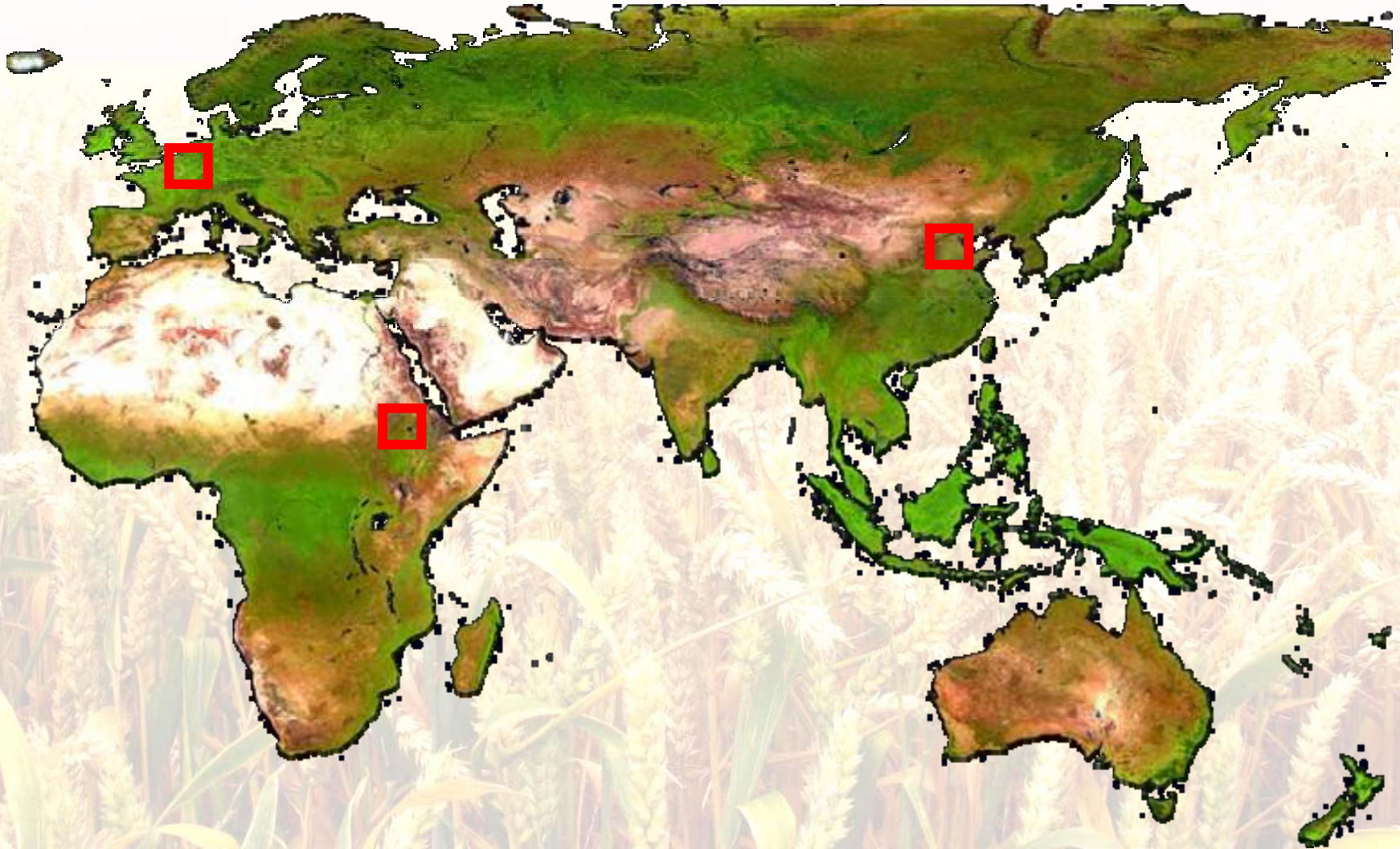


Overall vgt conditions



# ***GLOBALAM – a Globally Distributed Agricultural Monitoring Experiment***

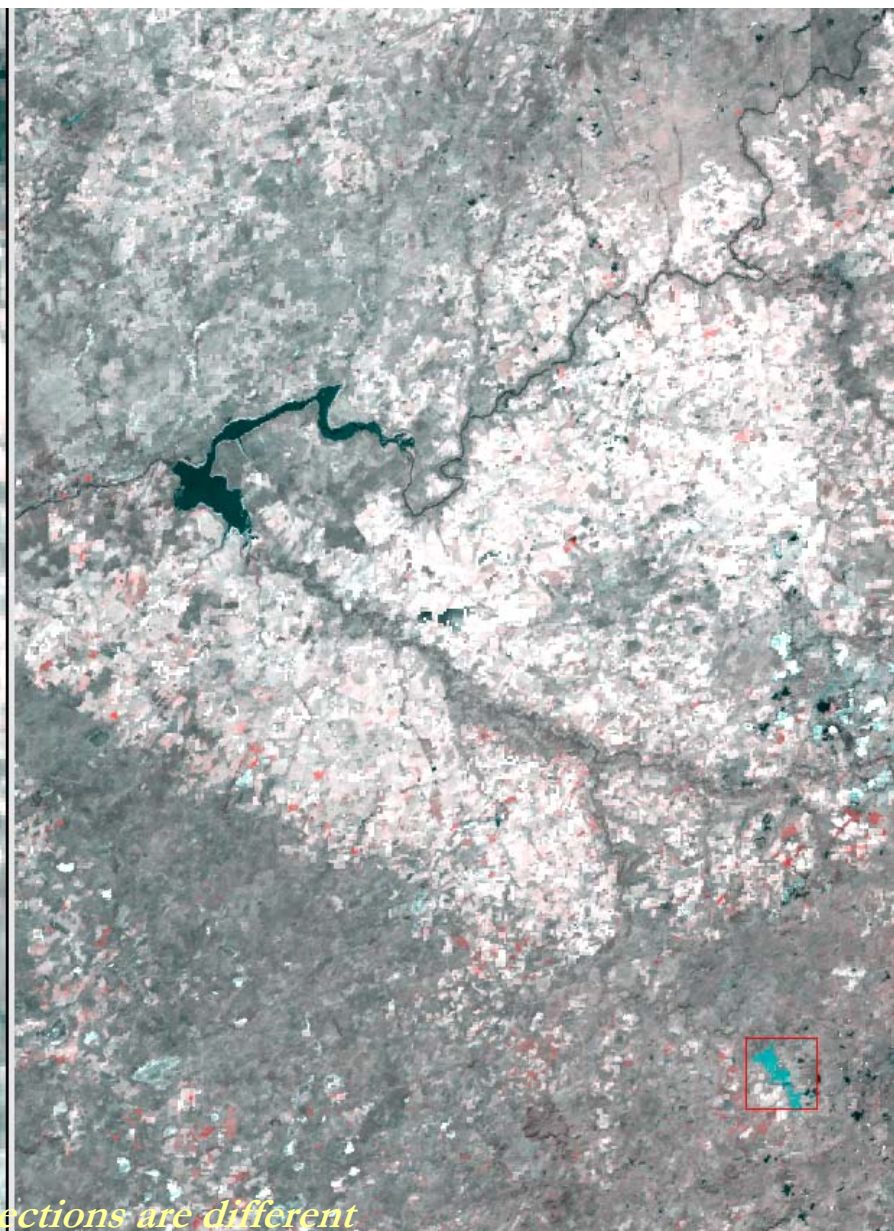
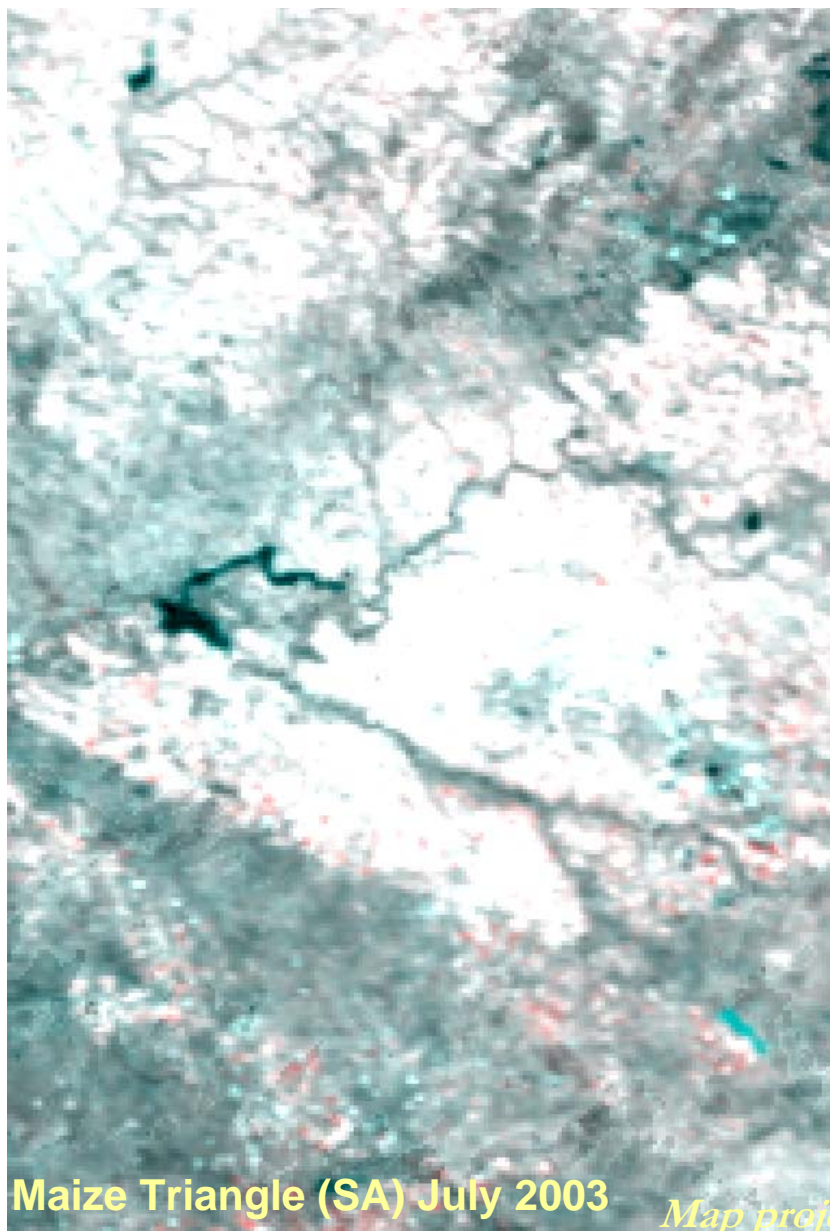
***3 study sites of 300 x 300 km in Northern Europe, China and Ethiopia  
joint field and EO data collection during the 2007 growing season  
for cereals and maize***



# Medium resolution EO to deliver crop specific information everywhere?

SPOT VGT 10-d Reflectance Composite

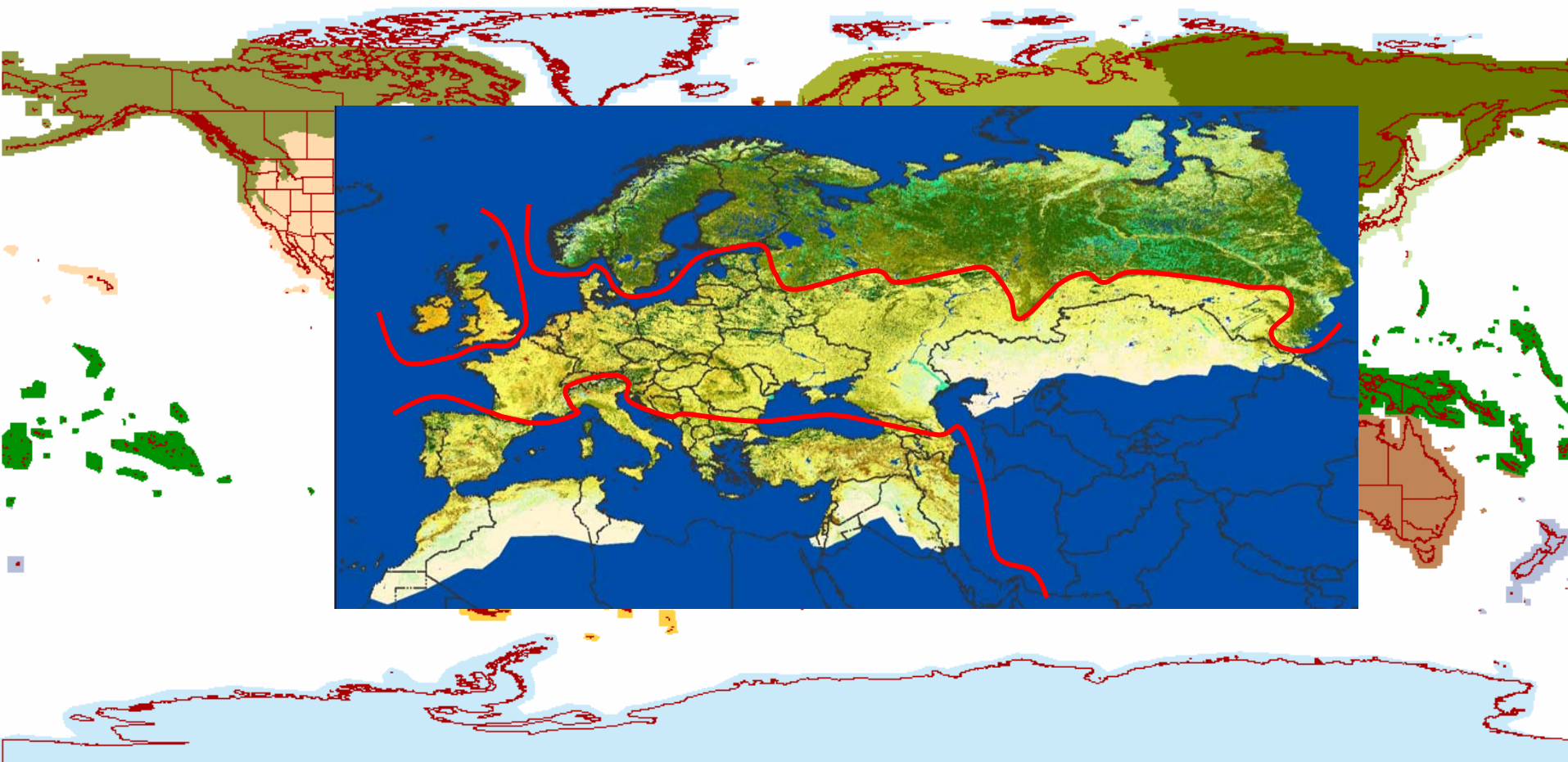
MODIS 10-d Reflectance Composite

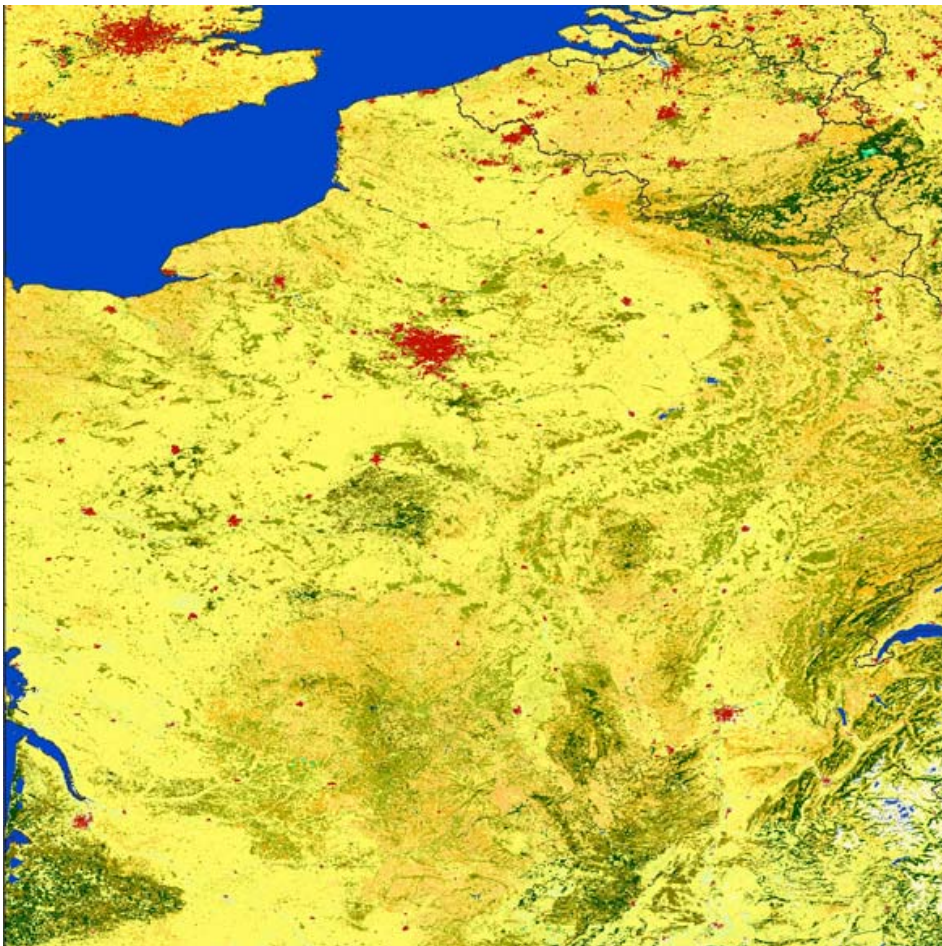


Maize Triangle (SA) July 2003

*Map projections are different*

# GLOBCOVER first land cover classification results from 300 m MERIS time series (June 07)





- 10 - Cultivated areas
- 11 - Post-flooding or irrigated croplands
- 14 - Rainfed croplands
- 20 - Mosaic cropland - vgt
- 21 - Mosaic cropland - grassland
- 30 - Mosaic vgt - cropland
- 31 - Mosaic grassland/shrubland - cropland
- 32 - Mosaic forest - cropland
- 50 - Closed broadleaved deciduous forest
- 70 - Closed needle-leaved evergreen forest
- 90 - Open needle-leaved deciduous or evergreen forest
- 92 - Open needle-leaved evergreen forest
- 100 - Closed to open mixed forest
- 101 - Closed mixed broadleaved forest
- 110 - Mosaic forest/shrubland and grassland
- 130 - Closed to open shrubland
- 131 - Closed to open evergreen shrubland
- 140 - Closed to open grassland
- 141 - Closed grassland
- 150 - Sparse vgt
- 151 - Sparse grassland
- 180 - Flooded grass/shrub/woody vgt
- 190 - Urban areas
- 200 - Bare areas
- 210 - Waterbodies

Globcover 2005-2006

(23 LCCS classes - 300 m)



***more GLOBAM results in the coming years....***

***... and any scientific collaboration/exchange welcome  
to extend this Ag. Experiment.***