



BROCKMANN  
CONSULT



First End Users Meeting Ispra,  
June 20, 2007

# GLOBCOVER Products Validation

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# Introduction

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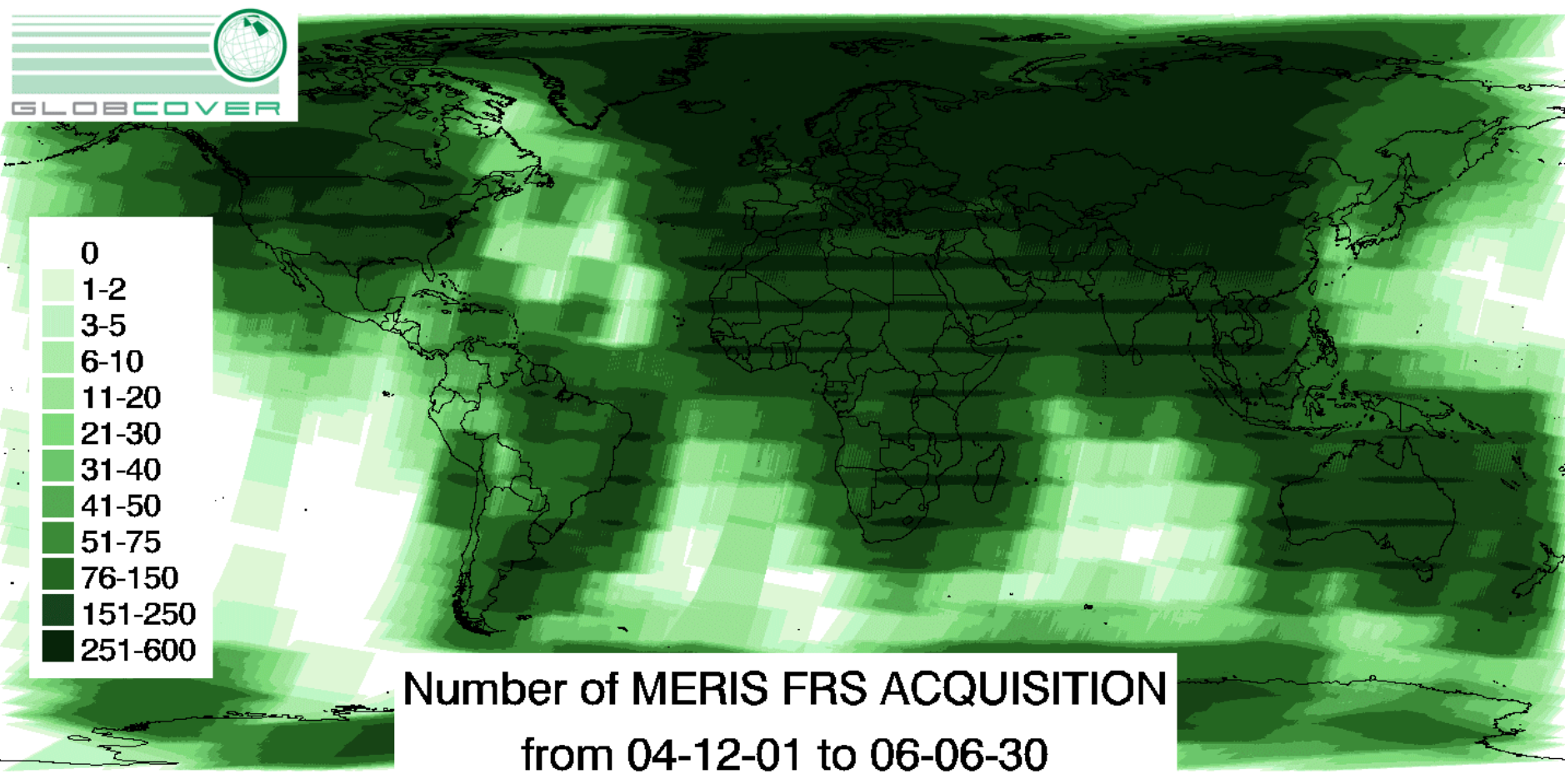
- ① **Bimonthly and annual composites**
- ① **Validation = look for known issues and unexpected feature and their algorithmical explanations**

# Main issues

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- ① **Lack of data**
- ① **Snow**
- ① **Water detection/coastline**

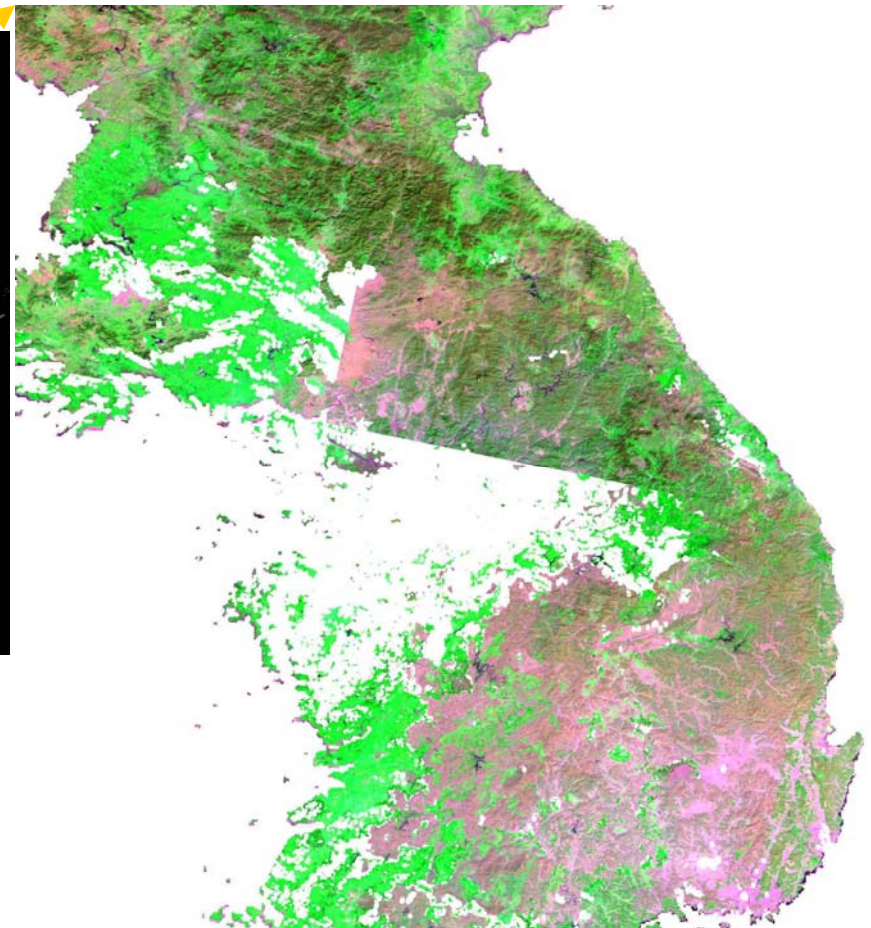
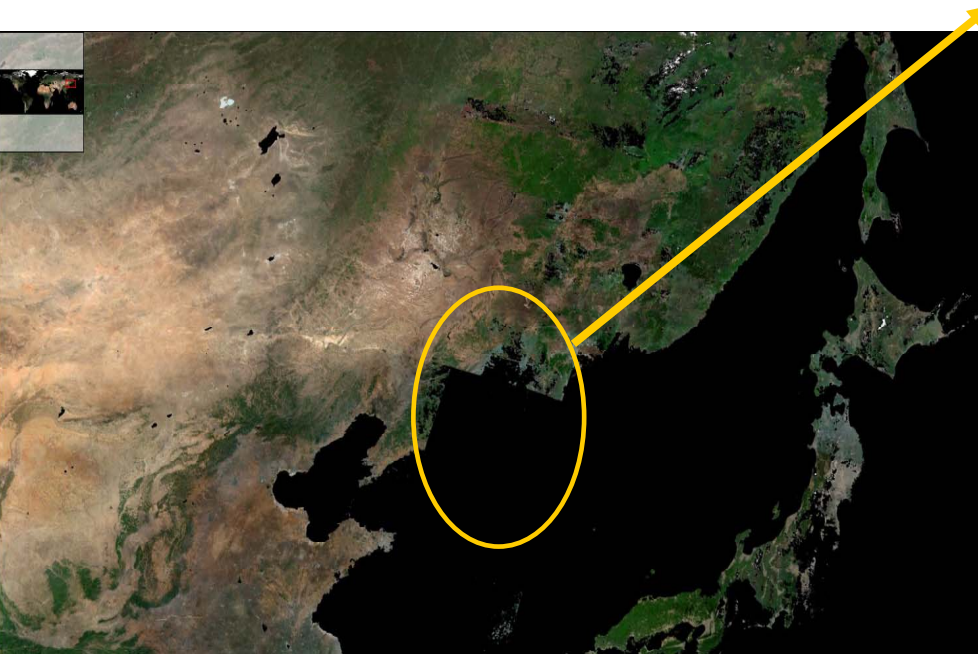
# MERIS\_FRS data Distribution



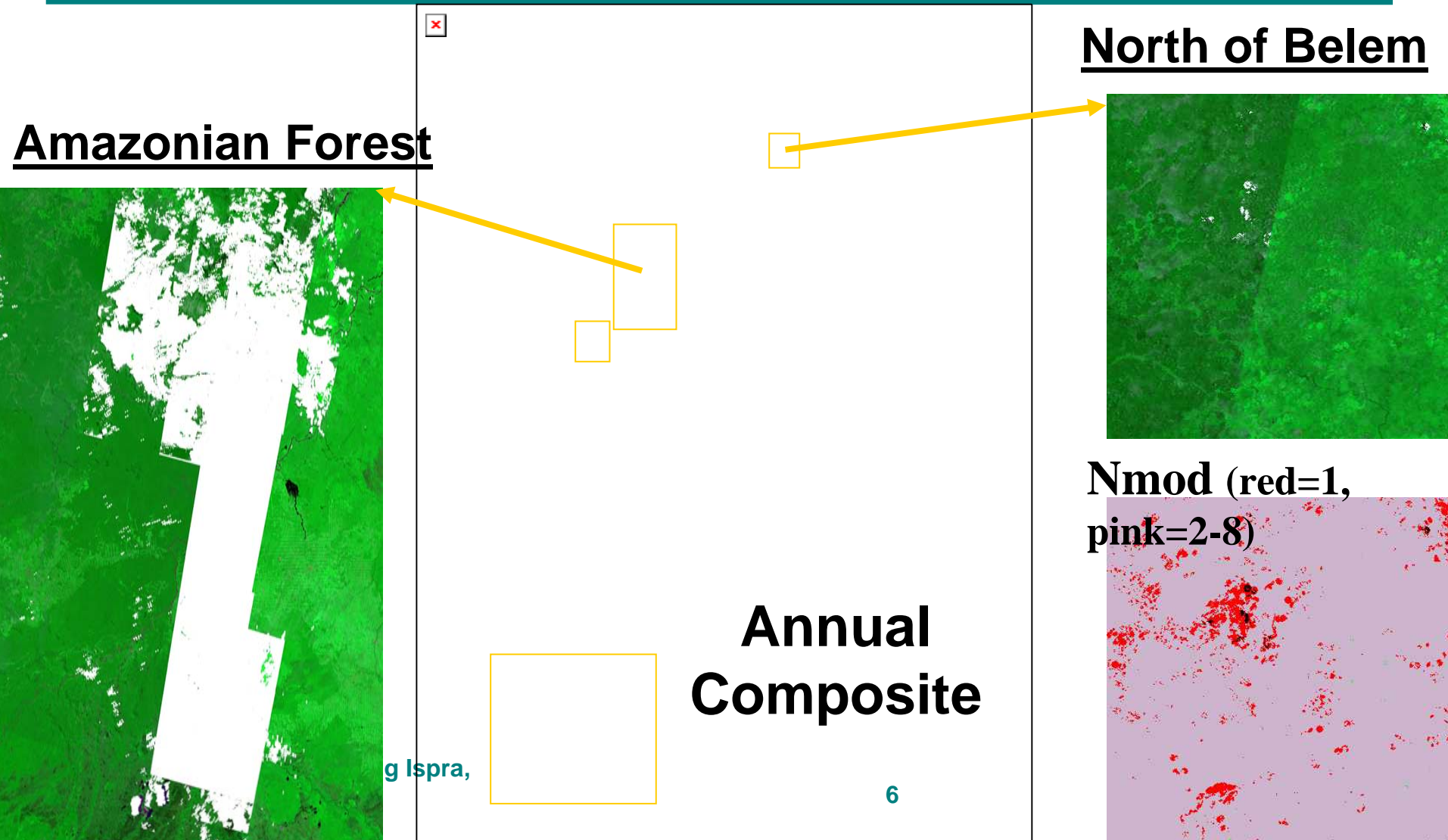
# Overview: lack of MERIS\_FRS data

**Bimonthly composite**

**Annual composite**  
Korea

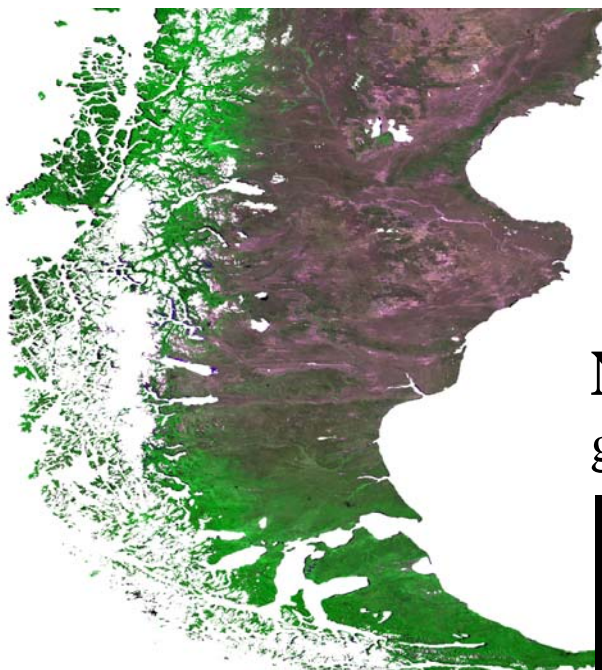
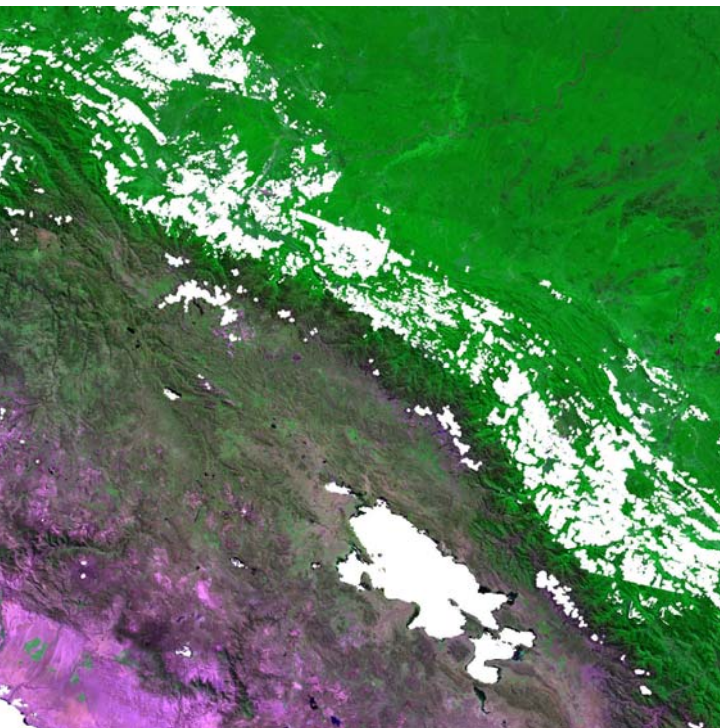


# Overview: lack of MERIS\_FRS data:



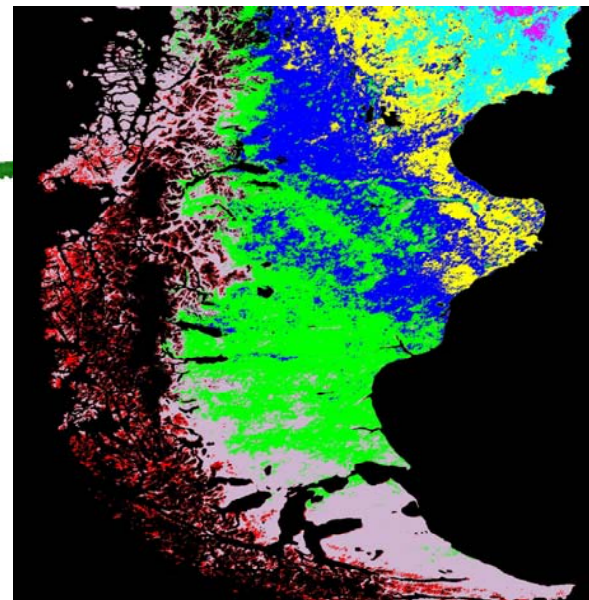
# Overview: cloudy coverage on annual composite

## Andean Piedmont



## Patagonia

**Nmod** (red=1, pink=2-8,  
green=9-17)



# Overview: cloudy coverage

## Annual Composite

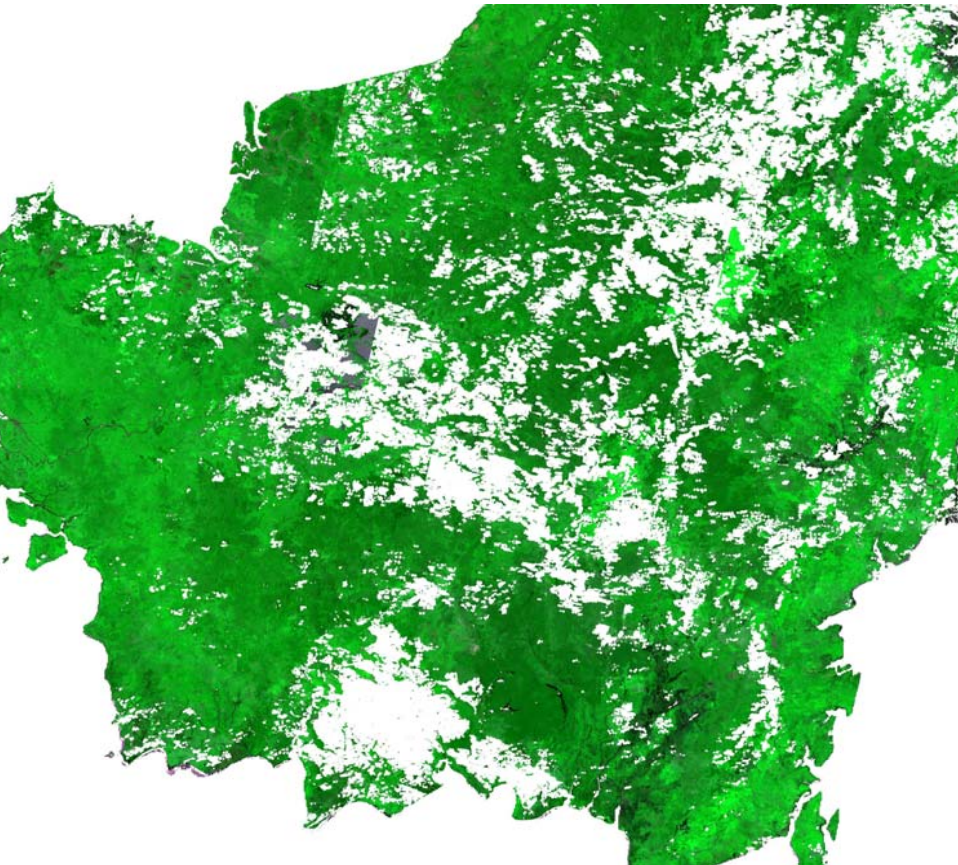


**South East Asia**

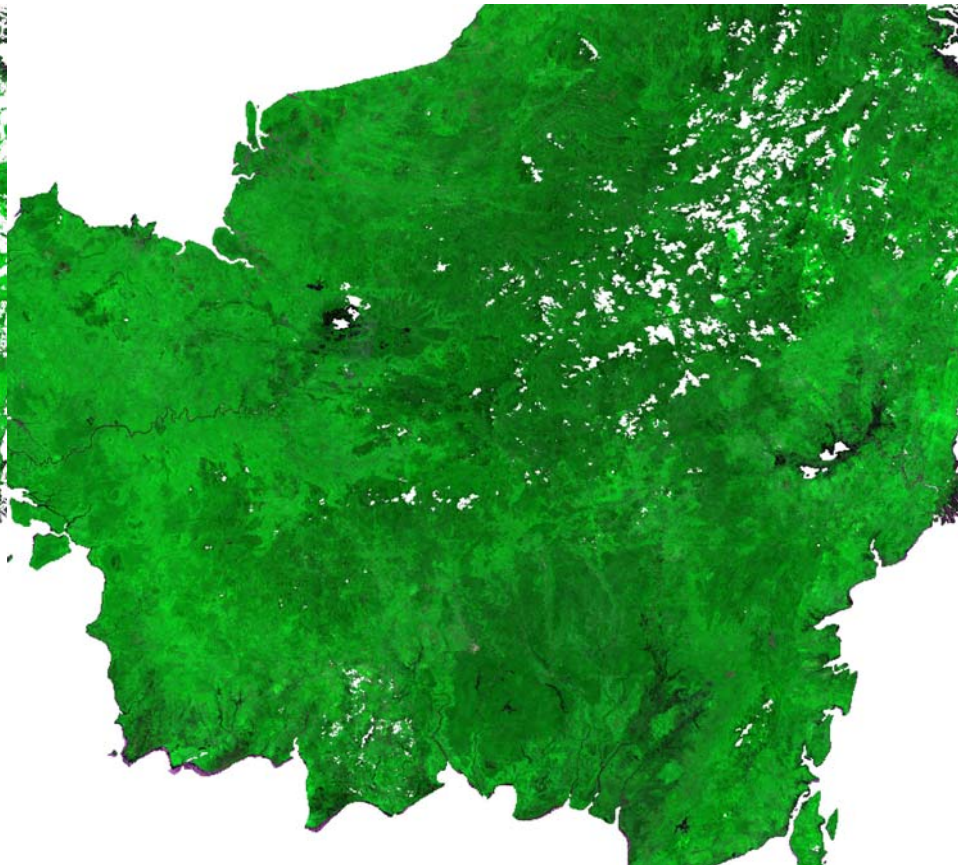
# Overview: cloudy coverage

## Borneo



### Bimonthly composite



### Annual composite



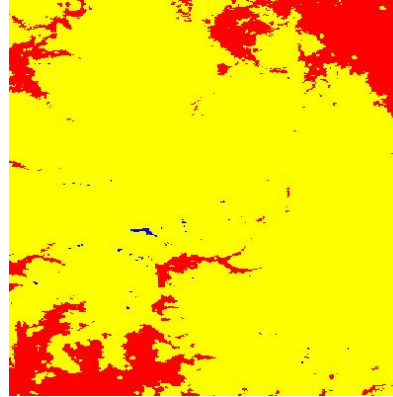
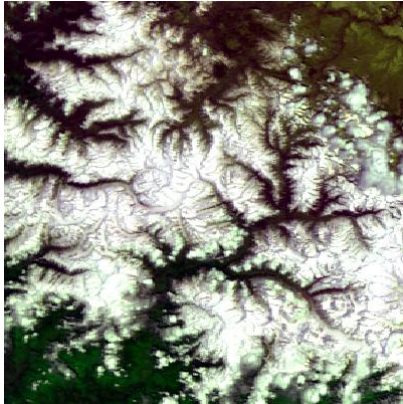
## Snow detection

-  Implementation correct only for V1.0.1 (May/June 2005 Comp. )
-  Not detected at high altitudes

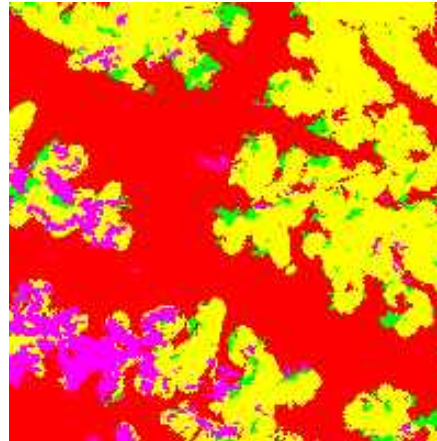
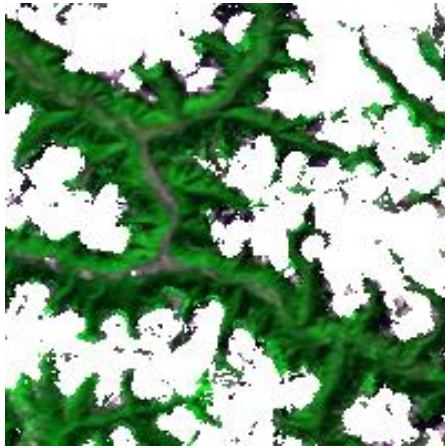
## Snow radiometry : imposed spectrum (changes in V2)

# Snow detection at high altitudes (Himalaya)

Level 2



Annual  
composite

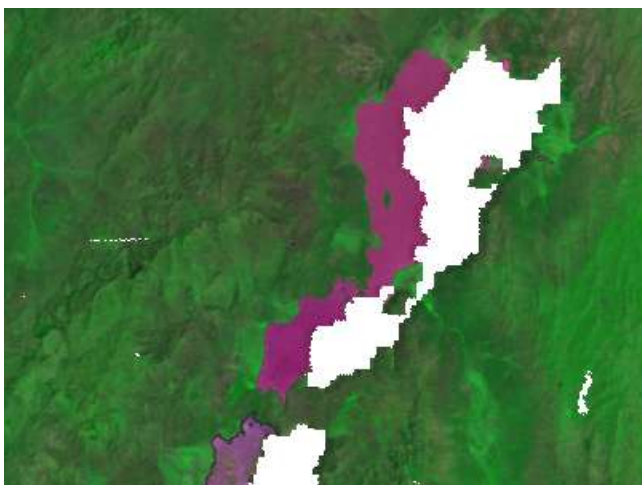


Status Map  
(magenta=snow;  
yellow=cloud; red=la

# Radiometry: lake and river at Level 2

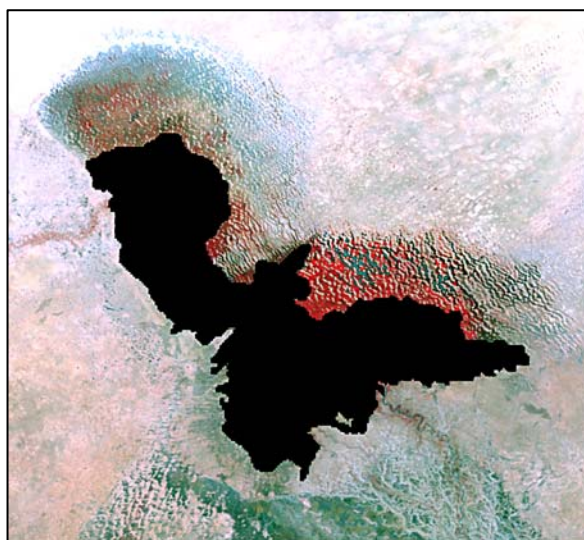
- Geolocation of the 'water' mask derived from MERIS\_FRS sometimes incorrect (either spatial shift or out of date)

Lake Abaya

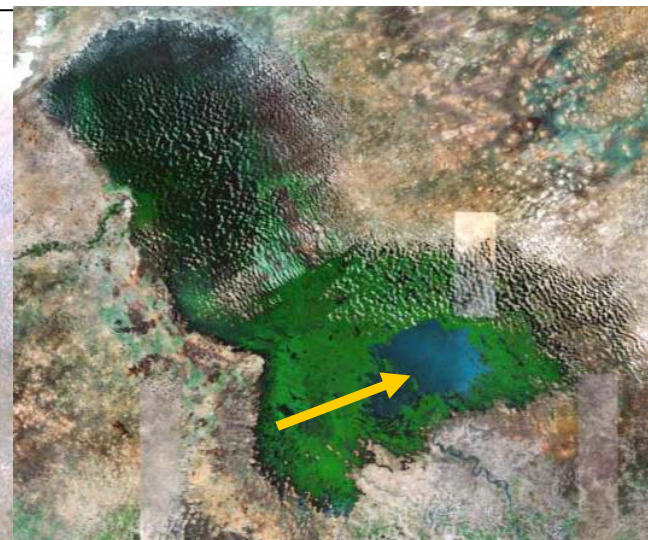


Lake Tchad

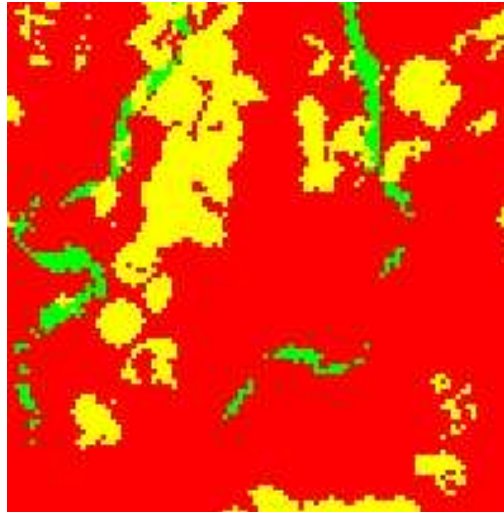
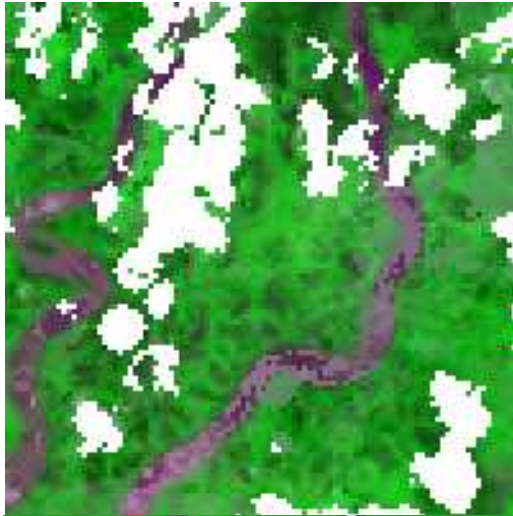
Meris composite



Landsat Image



# Radiometry: water at Level 3



## Bimonthly Composite

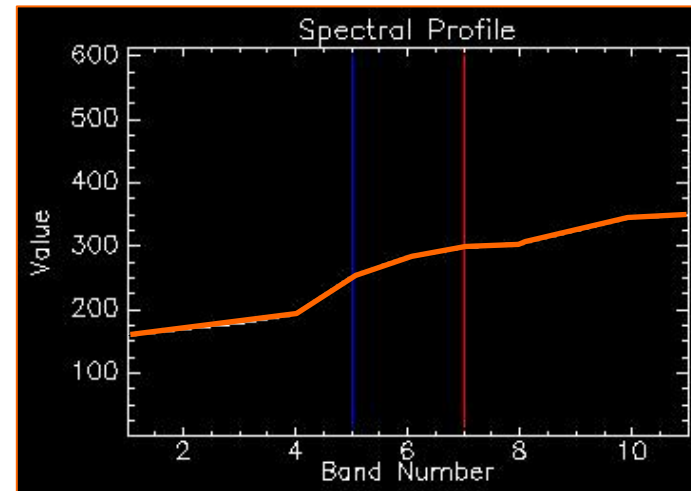
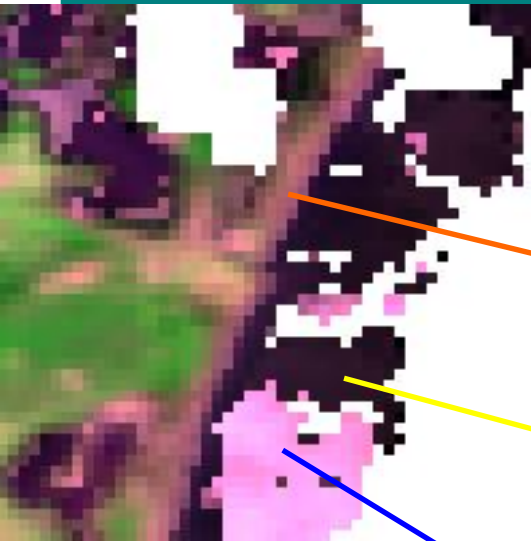
Red = land  
Green = flooded  
Yellow = cloud



## Annual Composite

June 20, 2007

# Radiometry: lake and river at Level 3

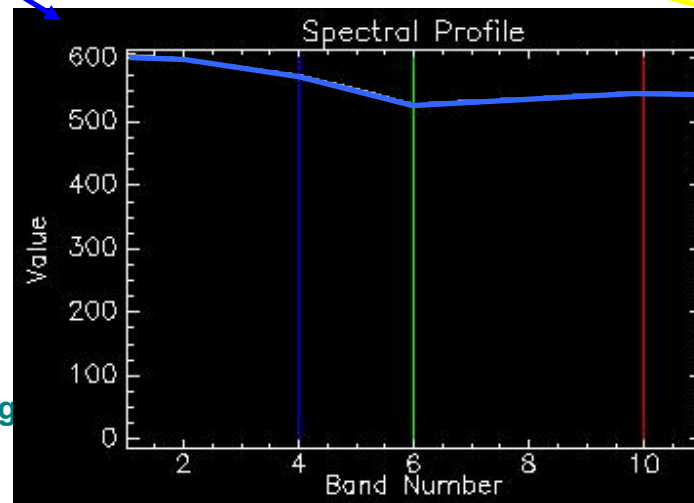


Sand

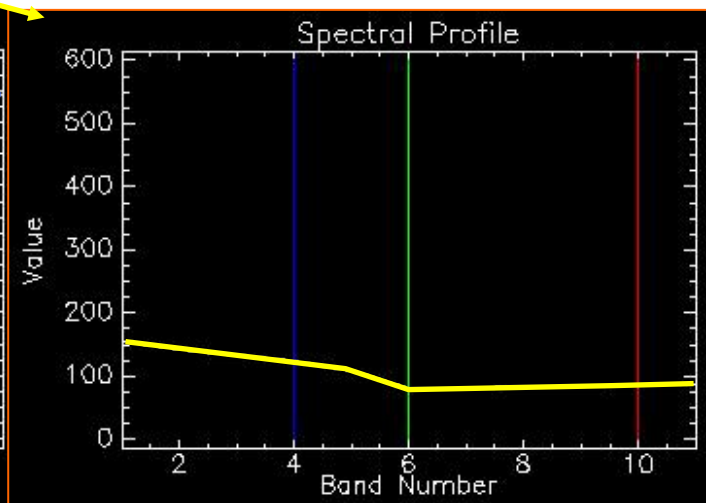
**Status Map**



'Mist'

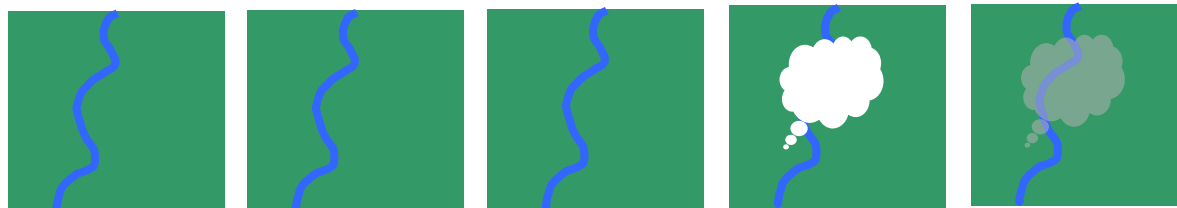


'Water'

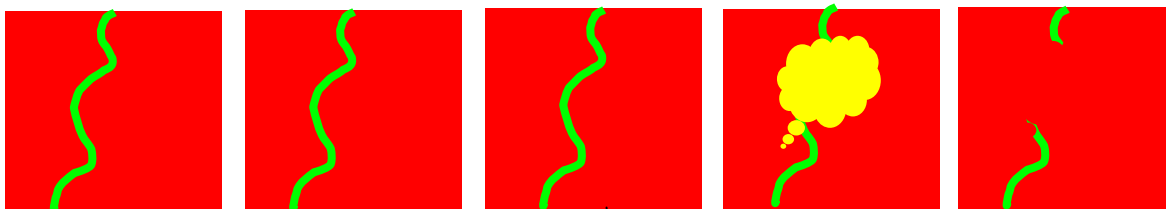


# Radiometry: water misclassification

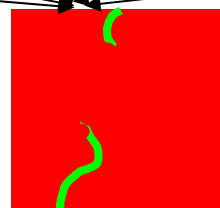
L2  
reflectances



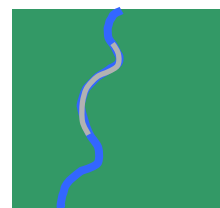
L2 status  
map



L3 status map

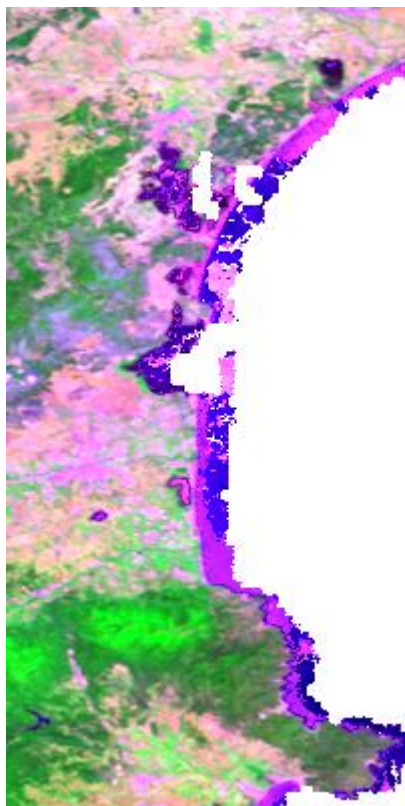


L3  
reflectance



# Radiometry: water misclassification correction

Before  
correction



After  
correction



# Other issues

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- **Overestimated NDVI values**
- **Missing tiles inside Greenland**
- **Peculiar status map linked to data scarcity**
- **Unexpected lack of data over some zones**