

A world map showing land cover types. The map uses a color scale where green represents forest, yellow and orange represent agricultural land, and brown and grey represent urban and developed areas. The map is overlaid with a light blue grid.

***Collection 5 Refinements and Revisions***

***MOD12Q1: Global Land Cover Type***

***MOD12Q2: Land Cover Dynamics***

*Mark Friedl*

*Dept of Geography and Environment*

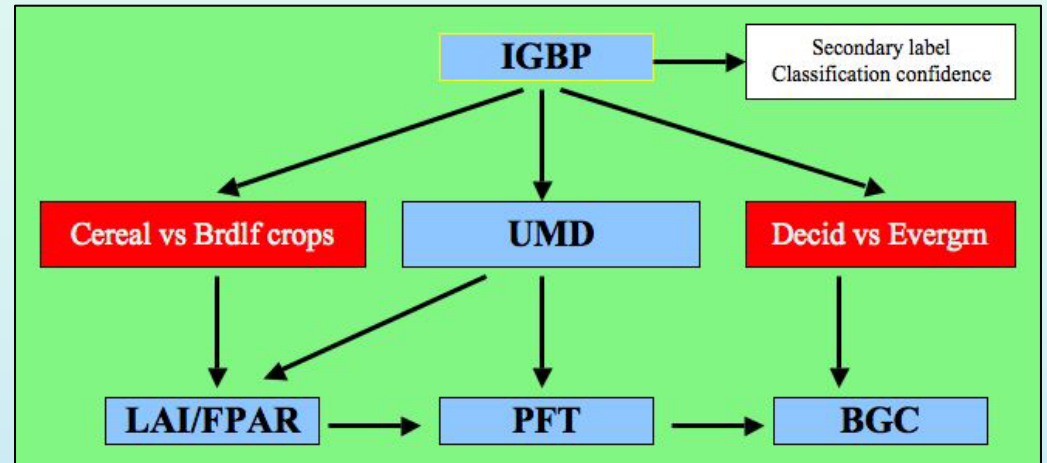
*Boston University*

*[friedl@bu.edu](mailto:friedl@bu.edu)*

*[www-modis.bu.edu/landcover](http://www-modis.bu.edu/landcover)*

# MOD12Q1 Overview

## Global Land Cover Type



- Thematic classification of land cover
- Five Classification Schemes
  - IGBP, UMD, LAI/FPAR, PFT, Biome-BGC
  - Internally consistent!
- Second most likely IGBP class
- Classification confidence
- C4: Global, 1-km, annual (2001-2004)

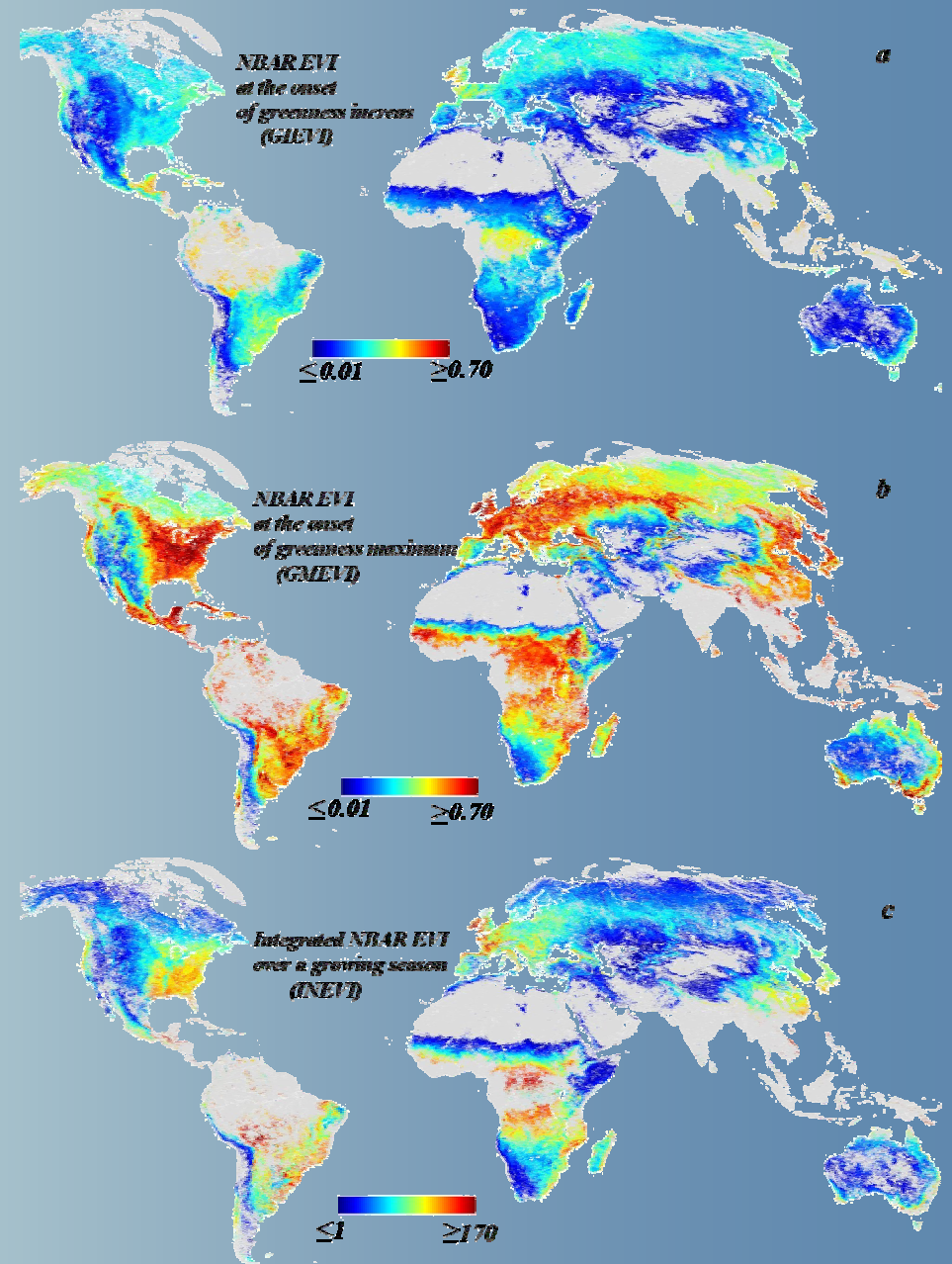
# MOD12Q2 Overview

## Land Cover Dynamics

- *Global database*
  - *Twice per year*
  - *12-month time periods*
- *Includes 7 metrics*
  - *Onset of EVI increase,*
  - *Onset of EVI maximum,*
  - *Onset of EVI decrease,*
  - *Onset of EVI minimum,*
- *Collection 4*
  - *Produced for 2001-2004*
  - *Available on the LP DAAC*

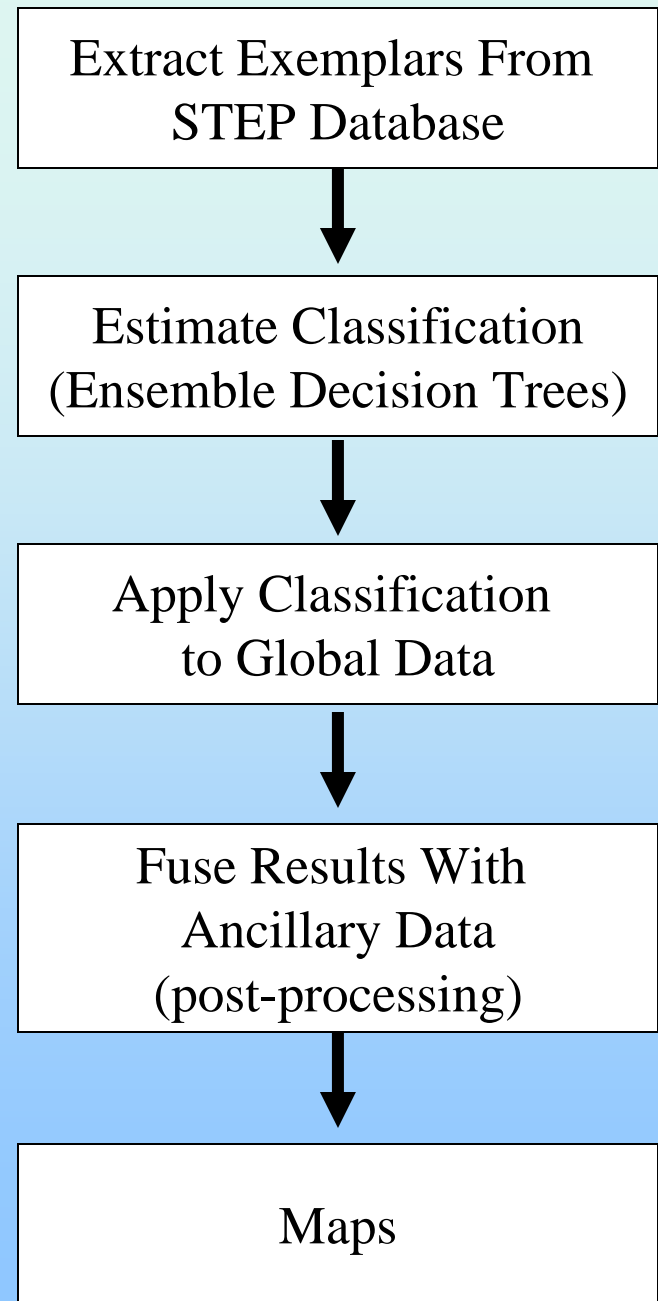
**Timing**

**Annual Metrics**

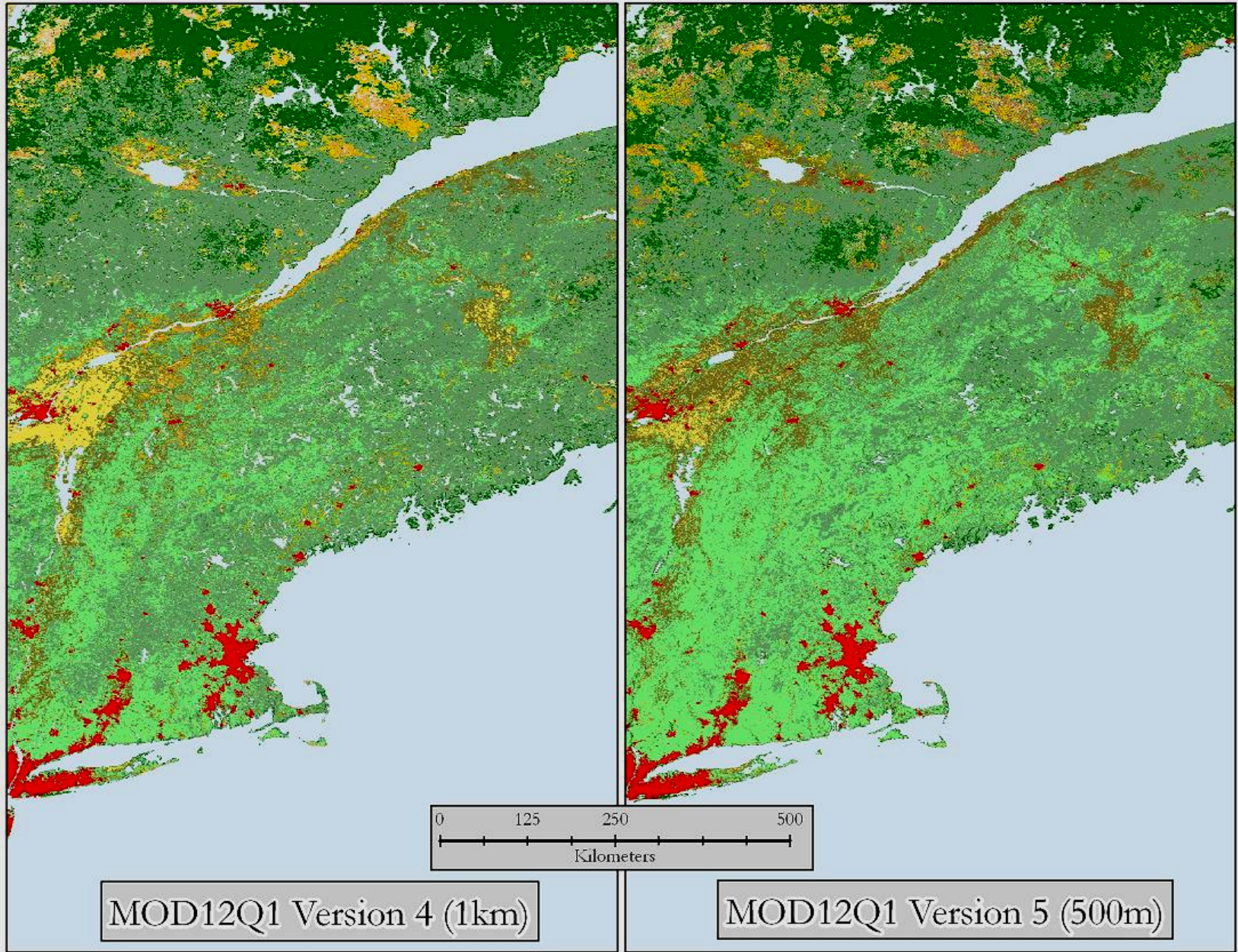


# MOD12Q1: Summary of Key Changes

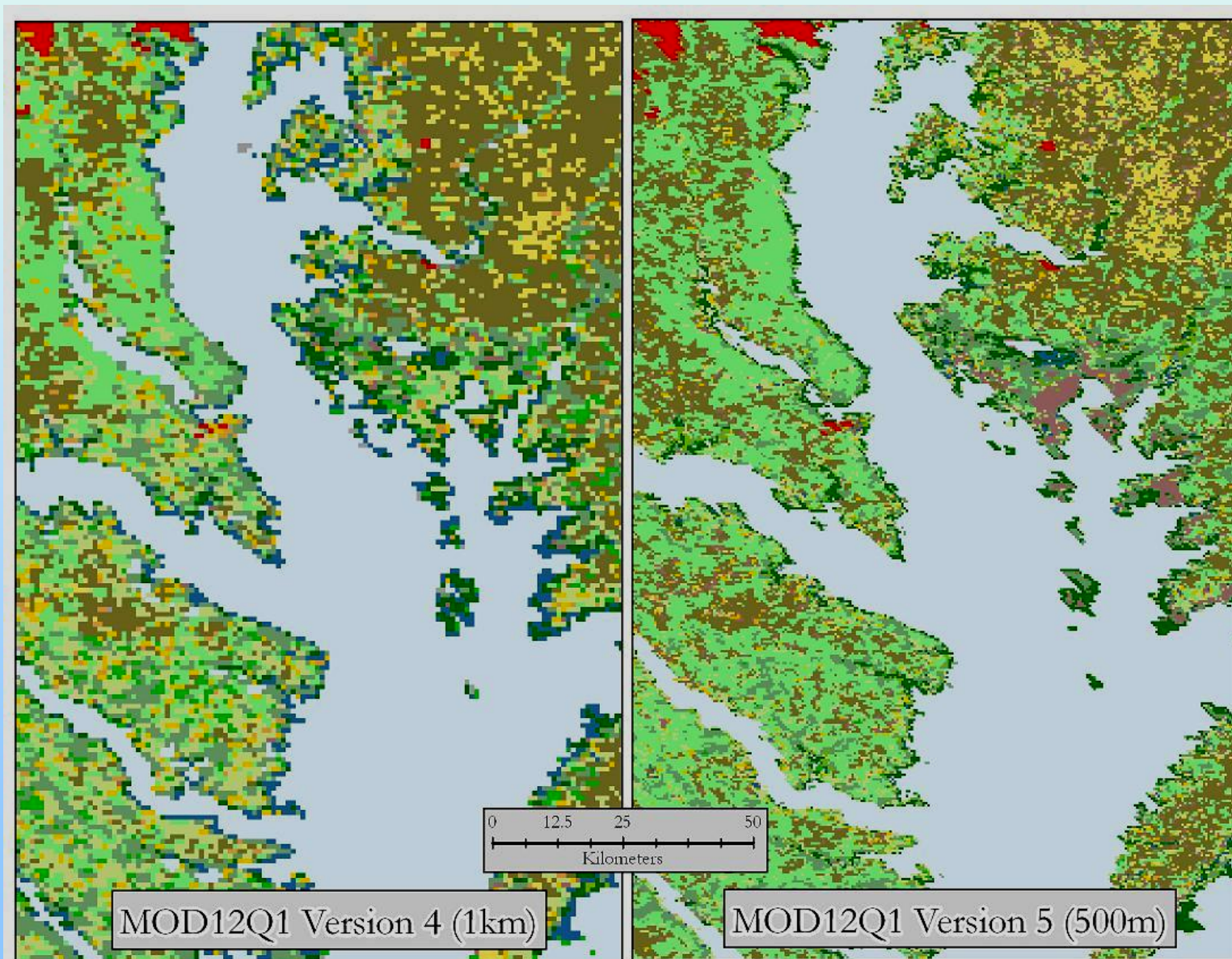
- *Revision of land cover training site database*
  - *Smaller, high quality sites (~1500)*
  - *More recent scenes (post-2000)*
- *Input features*
  - *8-day, 500-m NBAR data*
    - *aggregated to 32-day*
  - *EVI, LST (MOD11)*
  - *Annual Metrics*
- *Updated “priors” layers*
  - *Based on MOD12 C4*
  - *New global agriculture from inventory data*



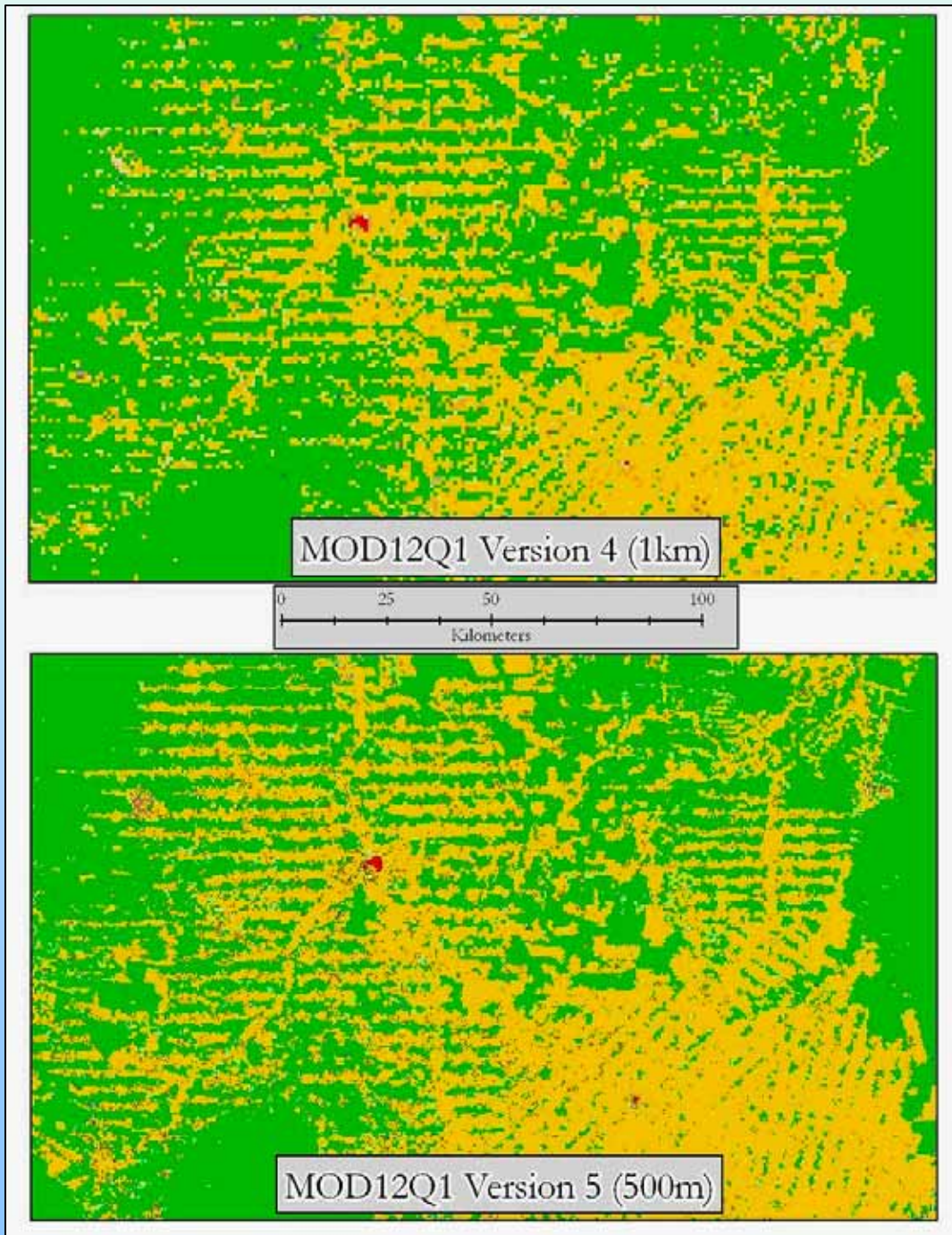
# Preliminary C5 Results



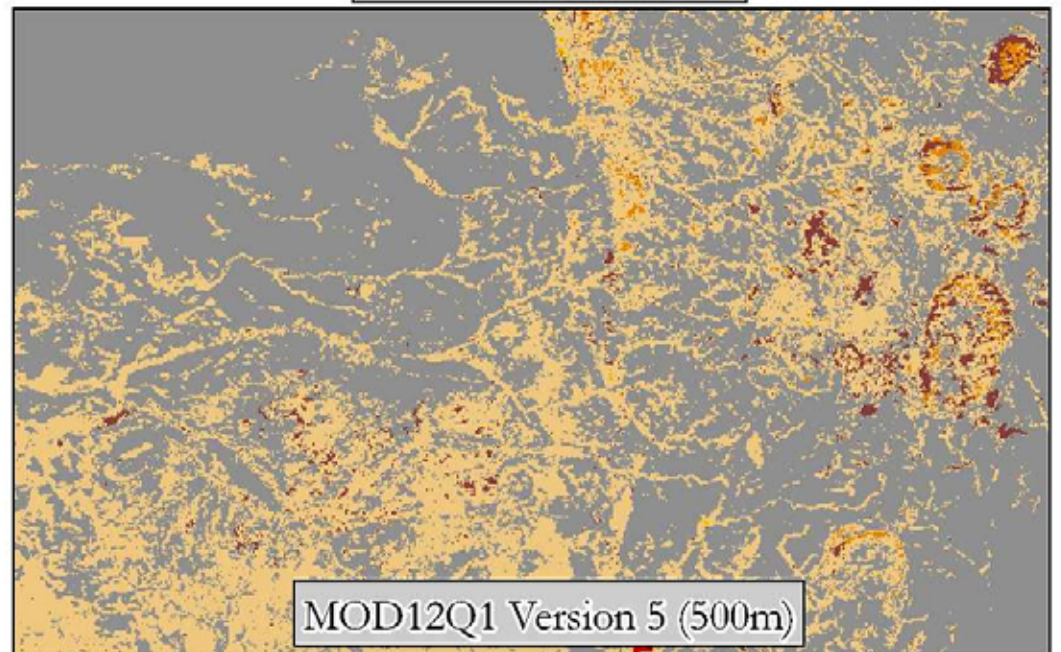
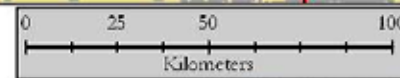
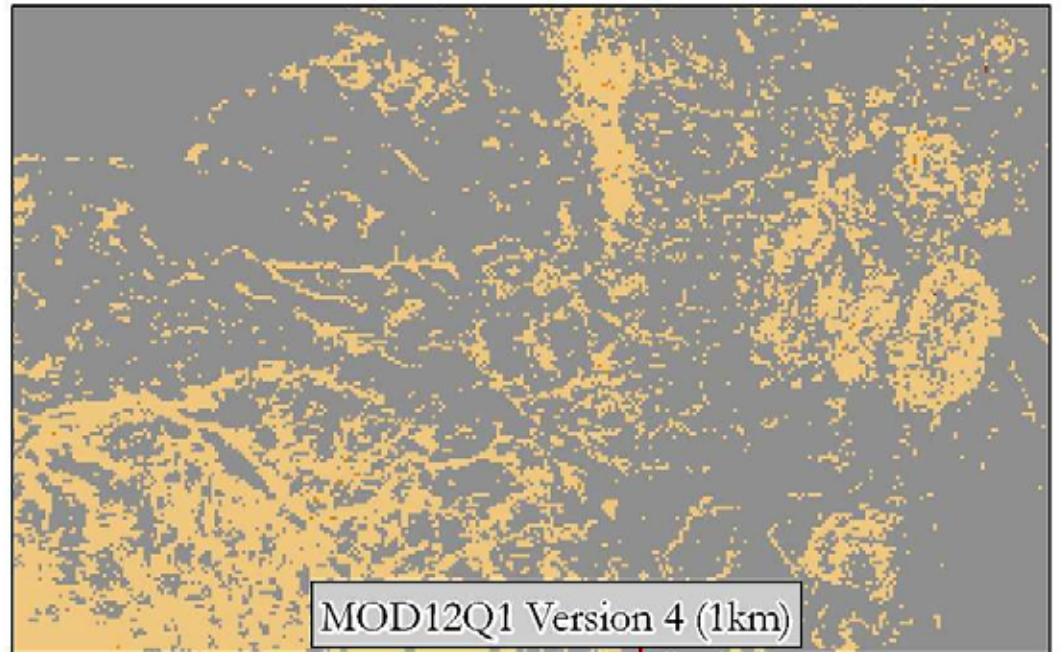
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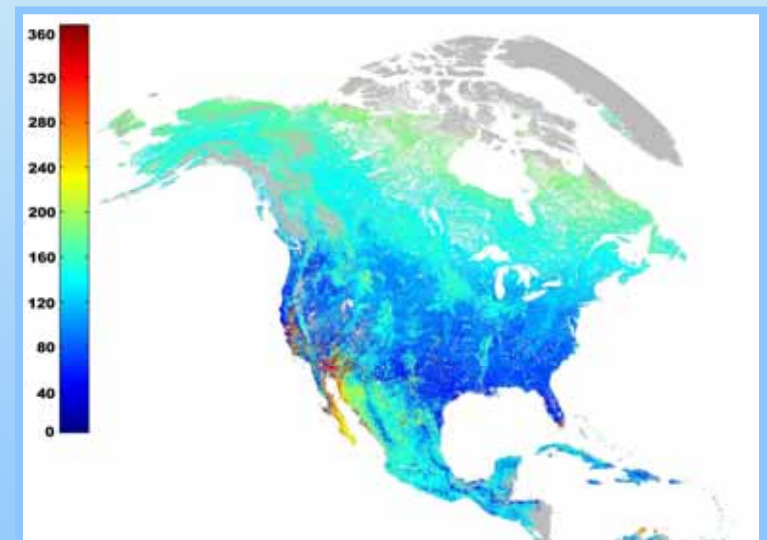
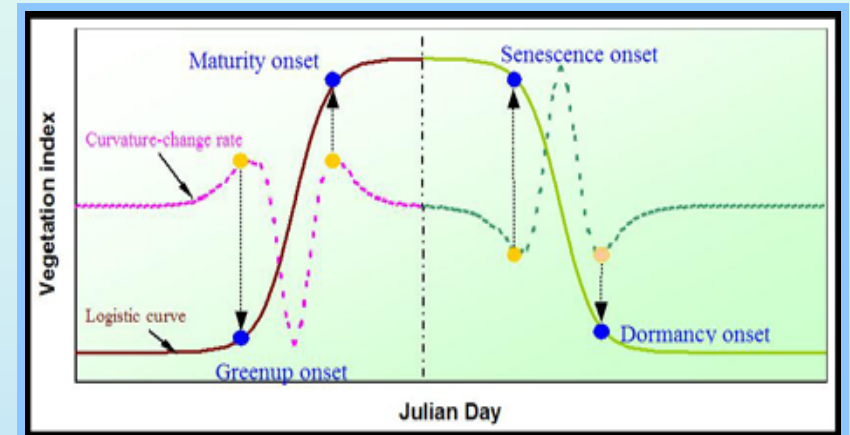
# Preliminary C5 Results





# MOD12Q2: Summary of Key Changes

- *Temporal resolution*
  - Using 8-day EVI
- *Spatial Resolution*
  - 500-m NBAR inputs
- *Improved screening for snow*
  - Using NBAR snow-flag in combination with LST (MOD11)
- *Identification and correction of several minor bugs in code.*



# Summary

- *Key Results from Changes*
  - *Improved spatial resolution (MOD12Q1, Q2)*
  - *Improved temporal resolution (MOD12Q2)*
  - *Fewer missing values (MOD12Q1, Q2)*
- *Most importantly*
  - *Improved thematic quality for MOD12Q1*
  - *Improved accuracy & precision for MOD12Q2*
- *Ongoing and Future Activities (C6)*
  - *Focus on problematic classes; FAO LCCS*
  - *Stabilization across years*
  - *Smoothing and interpolation (clouds) for MOD12Q2*
  - *Validation for C5 versions of both products*
  - *Creation of 1-km and CMG for C5*