The maps displayed above show different representations for global land cover and vegetation included in the MODIS global land cover product. Top panel: International Geosphere-Biosphere Programme (17 classes); 2nd from top: University of Maryland classification (14 classes); 3rd from top: Six biome classification based on vegetation structural properties used on MODIS LAI/FPAR retrieval algorithm; Bottom panel: Plant functional types (8 PFTs) used in the NCAR Community Land Model. Note that these maps are designed to be internally consistent (e.g., forest cover is consistent across all map layers).

These maps show global estimates for the “onset of greenness” and the “onset of dormancy” derived from MODIS data. These results are preliminary and require further analysis. However, broad patterns, especially in temperate regions, are encouraging. Full details regarding the specific methodology are proved in Zhang et al (2002).

Conceptual representation used by model: an idealized trajectory of vegetation index values with multiple growth periods described using logistic functions.

Sample MODIS EVI data and estimated phenological transition dates for a mixed forest pixel in New England. The dashed line with diamonds is original EVI data and the solid line with stars is the fitted using logistic models.

These maps show global estimates for the “onset of greenness” and the “onset of dormancy” derived from MODIS data. These results are preliminary and require further analysis. However, broad patterns, especially in temperate regions, are encouraging. Full details regarding the specific methodology are proved in Zhang et al (2002).

Sample MODIS EVI data and estimated phenological transition dates for a mixed forest pixel in New England. The dashed line with diamonds is original EVI data and the solid line with stars is the fitted using logistic models.

Change vector analysis computes the magnitude and direction of year to year variation in multidimensional data sets. In this case, we compare 16-day EVI observations from two years of MODIS data. In the long term, this type of analysis will yield insight into inter-annual variation in biophere function arising from climate forcing.

Further Reading


