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ESA-JRC FAPAR: Overview and outcome

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Data from MERIS on board ENVISAT provide accurate spectral reflectances measurements and allow us for providing consistent geophysical measurements at global scale.
The resulting time series of the Fraction of Absorbed Photosynthetically Active Radiation (FAPAR) over the land surface, identified as one Essential Climate Variable (ECV) by the Global Climate Observing System (GCOS) for characterizing the state of the global climate system and its variability, is used for monitoring land surfaces change and improving carbon cycle understanding.
Attention is given here to FAPAR because it is directly linked to the photosynthetic activity of vegetation, and therefore is a good indicator of vegetation activity and phenology.

This presentation overviews 1) MERIS land products (retrieval and validation), 2) illustrates various applications in the carbon cycle domain and 3) examines changes in regional and global patterns of terrestrial vegetation activities over the last 12 years. The latter analysis is based on monthly and seasonal FAPAR results from SeaWiFS and MERIS, including anomalies detected with reference to the 12-year mean.