

Developing Level 3 and 4 environmental indicators from FAPAR products

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The photosynthetic activity of vegetation is controlled by a number of environmental factors including solar radiation, temperature, soil properties, water and nutrient availability, as well as cultural practices in the case of managed ecosystems. The Fraction of Absorbed Photosynthetically Active Radiation (FAPAR) is a biogeophysical variable that directly measures the ability of plant canopies to absorb solar radiation. It thus provides a convenient, integrated source of information on the state and evolution of the vegetation. Since FAPAR has recently been reliably and accurately estimated from space measurements over large areas and extended periods of time, it is now possible to exploit this product further and analyse the entire record in terms of higher level synthetic information that may be closer to the needs of policy makers, project managers and other users of environmental information. This paper will describe the methodology to analyse multi-year global FAPAR Level-2 products and derive high-level synthetic diagnostic Level-3 and Level-4 information on the evolution of the vegetation cover, with direct relevance to issues such as environmental degradation and climate change. Examples of preliminary results will also be shown.