



Sentinel-2, a GMES mission for real time land observation.

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Sentinel-2 will be a twin satellite space mission of ESA, the second in GMES program. To be launched in 2012, this mission is expected to provide data continuity to Landsat and SPOT-type missions and enhance them to cover the user information needs expressed in the GSEs, GMES Land Fast Track Services, Framework Programme-VI Integrated Project Geoland and DUE (Data User Element) Projects Globcover, Globwetland and Desertwatch.

Sentinel-2 mission will consist of two similar satellites each of which would be placed in polar sun synchronous orbit at a phase difference of 180 Deg. Each of the Sentinel-2 satellite would be equipped with a thirteen band multispectral instrument sensitive to conditions on land .

One of the key goals of the mission is to provide a real time global synthesis of vegetation data at a very high spatial resolution (10 Mts., 20 Mts. 60 Mts.). The twin satellite system would have a revisit time of five days.

We present here an insight into how we plan to meet the key Sentinel-2 mission requirements viz a viz.

1. Data continuity from earlier vegetation missions.
2. Data Harmonization
3. Real time derivation of Bottom of Atmosphere Reflectance (Level 2A) from Top of the Atmosphere Reflectance (Level 1C).
4. Mosaicking and Synthesis of global products.

The high resolution real time data from Sentinel-2 is expected to be used in climate research, Weather Forecasting, Flood Monitoring Disaster Management etc