



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

M. Bali and M Nieuwette  
VEGA Deutschland GmbH & Co. KG

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 revist 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