

## **GMES Sentinels 4 and 5 – Global atmospheric data for environmental applications**

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Atmospheric chemistry observations from space have been made for 30 years with instruments designed mainly for scientific research, to improve the understanding of processes that govern stratospheric ozone depletion and tropospheric chemistry. So far, long-term continuous time series of atmospheric trace gas data have been limited to stratospheric ozone and a few related species. A reliable long-term space-based monitoring of atmospheric constituents, of quality adequate to serve atmospheric chemistry applications, still needs to be established. A need for regular, reliable and comprehensive data addressing issues in relation with climate-chemistry interactions, air quality and stratospheric ozone / surface UV irradiance has been identified in the context of the GMES initiative. Applications have been identified and geophysical requirements established. The consolidation of measurement requirements is ongoing. Mission concepts have been identified. Following the decisions of the recent Council meeting at Ministerial level, the space part of these requirements will now be implemented with instruments onboard the Meteosat Third Generation (Sentinel 4) and on a post-EPS platform (Sentinel 5). To bridge the gap between currently ongoing research missions such as Envisat and EOS-Aura and the launch of the post-EPS mission, a Sentinel 5 precursor with reduced payload will be flown with a planned launch in 2014. The presentation will outline the derivation of the mission requirements and the status of the programme.