

# **UPDATE ON THE DMC SATELLITE CONSTELLATION, INCLUDING NEW SATELLITES LAUNCHED IN 2011 AND FUTURE SATELLITES**

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**ABSTRACT:** This paper presents an update on the Disaster Monitoring Constellation (DMC) including two new satellites launched in 2011.

The original DMC consisted of five small satellites, each carrying a wide swath (650km) optical sensor, launched 2003-2005. It is an international programme with joint campaigns being coordinated centrally by DMC International Imaging (DMCii). The constellation provides a daily global imaging capability at 32m resolution in three spectral bands (G, R, NIR) for applications requiring large area coverage and rapid repeat. In 2009 two new 22m resolution satellites, UK-DMC 2 and Deimos-1, launched into the constellation, adding much more imaging capacity to the constellation as well as enhanced resolution. These satellites are exploited by both public and private organisations for applications such as precision farming, forest monitoring, land cover mapping, agricultural statistics and disaster response.

The two new DMC satellites for 2011 are NigeriaSat-2 and NigeriaSat-X. NigeriaSat-2 is a much bigger and highly agile satellite, carrying both a VHR sensor as well as a wide swath 32m sensor. The VHR sensor provides 2.5m panchromatic and 5m multispectral imagery with 4 spectral bands (B, G, R, NIR) and is capable of up to 80x80km imaging area in a single pass and along-track stereo imaging. The 32m sensor provides the same 4 bands and a swath width of 330km, providing data continuity with previous DMC satellites. NigeriaSat-X is very similar to UK-DMC2 and Deimos-1, and adds another wide-swath 22m sensor to the growing constellation, providing data continuity and extra capacity to support the continental-scale multitemporal capability.

In 2014 DMCii will launch a constellation of three satellites which will provide 1m panchromatic and 4m multispectral data. Together these highly agile satellites will provide a daily revisit opportunity over almost the whole world.

