

CAPABILITIES OF THE DMC CONSTELLATION AND APPLICATIONS OF ITS IMAGERY FOR TROPICAL FOREST MAPPING AND MONITORING

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ABSTRACT: The Disaster Monitoring Constellation provides worldwide daily revisit capability and delivers high temporal resolution imagery for many applications including the forestry sector: monitoring of tropical forests, deforestation, degradation and illegal logging.

The high resolution 22m and 32m imagery with 650km swath and up to 4100km along track allows repeated monitoring of vast areas. The daily revisit of the satellites of the DMC Constellation increases significantly the ability to reduce the cloud contamination in the imagery, which is extremely important in tropical regions. DMCii offers an end-to-end capability from reliable image acquisition to expert image analysis, to meet the forest monitoring requirements of government authorities, international organisations and private companies.

The paper presents the examples and ability of the Constellation to cover vast areas in the tropical regions with cloud free imagery, such as Amazon, Guyana, Democratic Republic of Congo, India and Malaysia.

In 2010 DMCii launched new services for forestry, such as forest/non-forest classification, estimation of clear-cut and change detection using multi-temporal NDVI. This demonstrates that the Constellation's imagery can be exploited successfully in forestry applications. The basic approach for the value-added products will be presented.