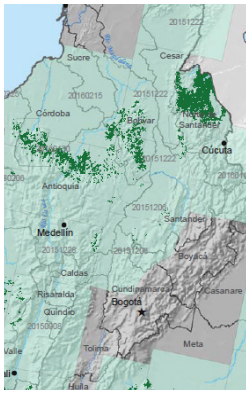
ILLICIT CROP MONITORING

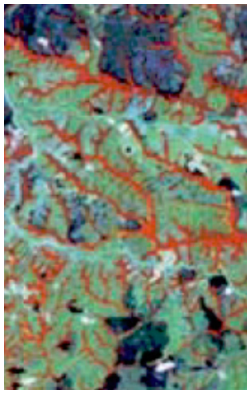
The United Nations Office on Drugs and Crime (UNODC) operates several projects that provide detection data to governments where illicit crops are grown including Colombia, Peru and Bolivia (for coca), Afghanistan, Laos, and Myanmar (for opium), and Morocco (for cannabis). Remote sensing technology plays a critical role in identification of illicit crops, and software such as Geomatica has been used in some of the countries listed above. The SIMCI project in Colombia leverages open source data and proven image processing methods in combination with expert knowledge and annual overflights over sample areas to estimate the extent of the coca plant growth.

Methodology and use of Geomatica

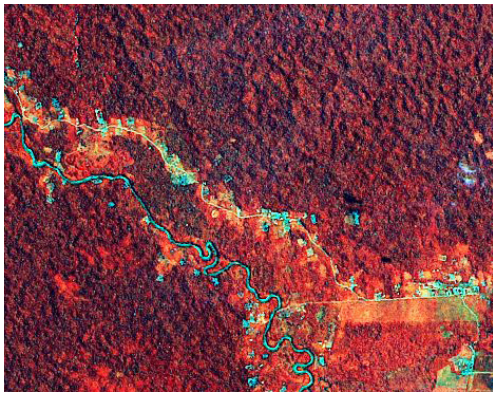
The UNODC makes use of Geomatica for several important steps in collecting information from earth observation for illicit crop monitoring. Mosaicking is performed using the best available and most recent imagery from Landsat using OrthoEngine. Other pre-processing steps are performed in Geomatica including pansharpening, radiometric corrections, creating multiple color composites, visual inspection, change detection, and land cover mapping. The UNODC makes use of some of the latest functionality in Geomatica including the Smart GeoFill tool to perform operations such as cloud patching. Combined with extensive airborne verification and integration of other sources of information, the UNODC has developed one of the most operational and efficient illicit crop monitoring systems.



Scene selection and mosaicking



Creation of multiple color composites



Visual interpretation and analysis

Visual overflight and confirmation

READ THE FULL REPORT:

"Monitoreo de territorios afectados por cultivos ilícitos 2015", **July, 2016**

UNODC
Oficina de las Naciones Unidas contra la Droga y el Delito

https://www.unodc.org/documents/crop-monitoring/Colombia/Monitoreo_Cultivos_ilicitos_2015.pdf

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