

### Law Enforcement Deforestation Assessment- INDICAR System



INDICAR - "Deforestation Indicator using RADAR Images"

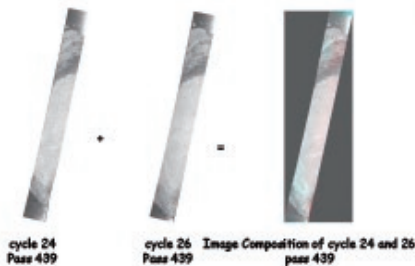
#### Project objectives

The ScanSAR mode of Palsar ALOS data will assist the identification of recent deforestation activities and also where the cloud cover is a limiting factor for the use of optical remote sensing as a resource to support field activities.

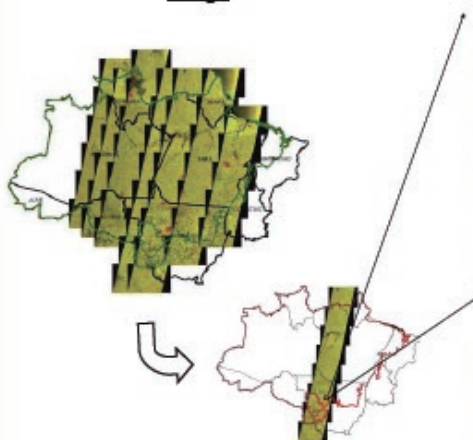
#### Methodology

ALOS ScanSAR images were orthorectified using a calculated orbit, used for faster image availability. They are being used to produce a multi-temporal color composition made with 2 images: an actual image and the same pass of the cycle before (using software PALSAR Viewer). They are registered using a image correlation for best spatial match. After that polygons bigger than 40ha are delimited using visual interpretation of the composites over a mask of old deforestation (PRODES, DETER, and INDICAR).

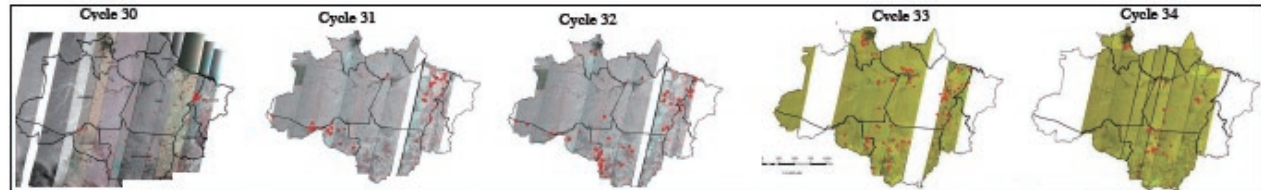
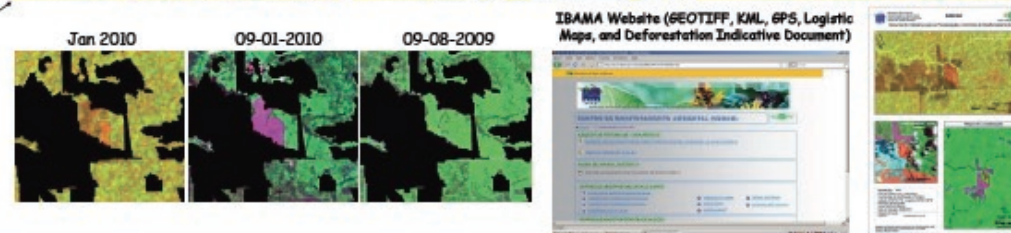
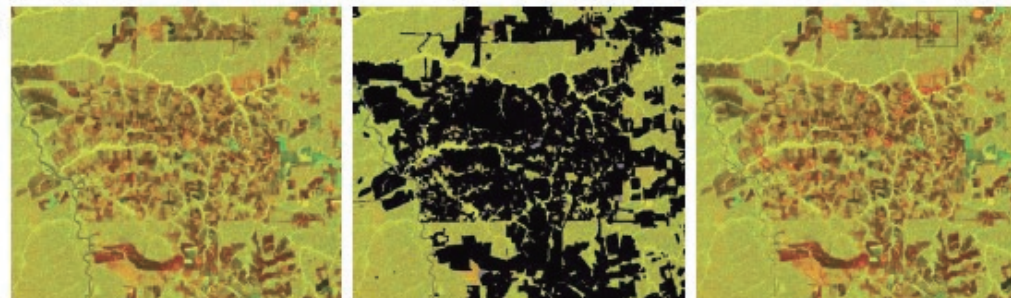
#### Multi-temporal Color Composition



#### Registering and Cutting the Strip Image



The Use of Old Deforestation Mask (PRODES-black, DETER-grey) to Visually Interpret the Composition, Delimit and Produce a Indicative Document to Environmental Enforcement Law Agent



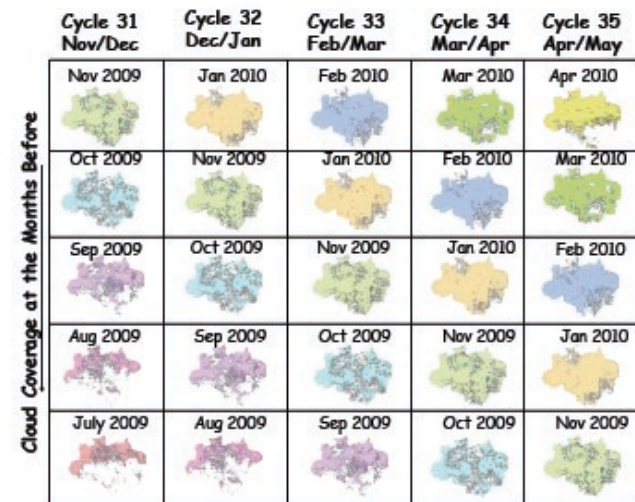
#### Number of Polygons Produced and Area

Cycle	Area km2	Number of Polygons
24	273	262
26-27	1251	430
28	38	32
30	226	137
31	87	77
32	114	88
33	125	113
34	84	65
35	28	46

#### Results

The beginning of operational results are 9 observations of all Amazonian Region. The latest 6 months were consecutive cycles and without temporal gap to now. It represents the beginning of the implementation of INDICAR System with use of PALSAR data to identify new polygons of deforestation.

#### Presence of INDICAR where optical based DETER are absent



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