

# 2009 GEO Forest Carbon Product Development Data Requirement Status - SAR -

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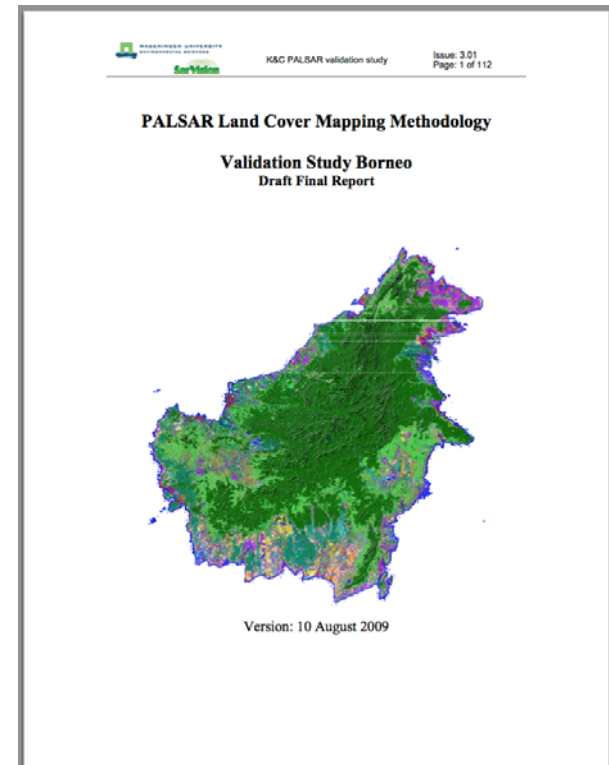
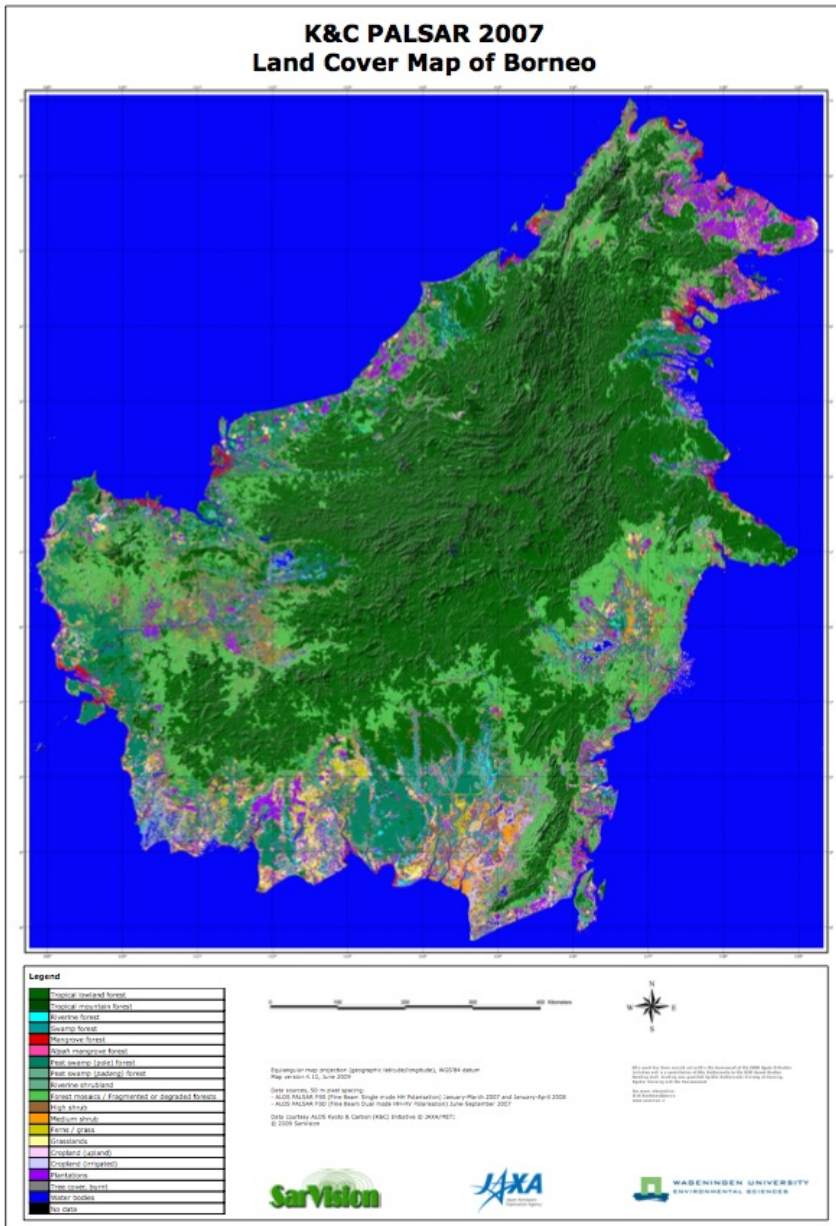
## GEO-FCT Product Development

- Ultimate responsibility for the release of forest- and carbon products lies with the ND Authorities of each of the 7 National Demonstrators (Mexico, Guyana, Brazil, Cameroon, Tanzania, Borneo island, Tasmania island).
- Each ND Authority is supported by a Product Development (PD) Team. Handles all technical/scientific aspects of forest information product development.
- Key Milestones:
  - FCT Science & Data Summit (SDS), May 11-12, 2010
  - FCT Space Data Coordination meeting (3rd SDC), May 13-14, 2010
  - GEO VII Plenary and GEO Ministerial

# Product Development

- Forest information products to constitute spatial input to national MRV systems
- FCT product levels:
  - Annual Forest/Non-forest cover maps (Horizon 1a)
  - Land Cover maps (Horizon 1b)
  - High frequency change maps, degradation,... (Horizon 2a-f)
- Validation:
  - Prototype products: Partially validated
  - Final (Released) products: Fully validated

*“Horizon 1b product”*  
*Borneo 2007 Land Cover*  
*Map @ 250m*  
*(from K&C)*



*Validation report (110 pages)*

## *Demo Products foreseen for GEO Ministerial*

### **Mexico:**

- *ND: Horizon 1b (LC) and 2 (LCC)*
- *VS: Horizon 1a (F/NF) and 1b (LC)*

### **Guyana:**

- *ND: Horizon 1a (F/NF) and 1b (LC)*

### **Brazil:**

- *Amazon: Forest Cover, Degradation, Selective logging (operational INPE)*

### **Brazil Xingu:**

- *Horizon 1a (F/NF) and 1b (LC)*

### **Cameroon:**

- *ND: Horizon 1a (F/NF) and 2 (LCC)*

### **Tanzania:**

- *ND: Horizon 2 (LCC)*
- *VS: Horizon 1a (F/NF)*

### **Borneo:**

- *ND: Horizon 1a (F/NF) and 1b (LC)*

### **Tasmania:**

- Horizon 1b (LC) and 2 (LCC)*
- Horizon 2 (LCC)*

## 2009 FCT Product Development Data Requirements

Science & Data Summit (May 2010) – science evaluation & prototyping

GEO Ministerial (Nov 2010) – demonstration products

Suite of Optical, L-band, C-band, X-band data over each ND for evaluation of:

- Interoperability: Capacity to produce *same thematic* information – e.g. forest/non-forest – with *different sensors* (optical-optical; SAR-SAR; optical-SAR)
- Synergy/complementarity: Improving thematic information retrieval by using sensors with different characteristics (e.g. L-band: forest structure; C-band: lower vegetation; X-band: fine spatial details)

VHR data for validation purposes (large volumes NOT required)

# ALOS PALSAR (JAXA)

## 2009 Data Access Status

### **Acquisitions:**

- Wall-to-wall coverage over all 7 NDs (bi-annual 2007-2010)

### **2009 Data Commitment for FCT:**

- Verification Site data time-series
- 50m wall-to-wall over 2 NDs (GUY, BOR)

### **Processing:**

- Completed by JAXA (late March)

### **Delivery to PD Teams:**

- Completed by JAXA (late March)

### **Actions:**

- Consider access to 2009/2010 ND wall-to-wall data.  
Highly required to reach spatial accuracy requirement of FCT products.

# Envisat ASAR (ESA) 2009 Data Access Status

## **Acquisitions:**

- Wall-to-wall coverage over 4 NDs  
+ High temporal frequency acq's over VSs

## **2009 Data Commitment for FCT:**

- ND wall-to-wall + Verification Site time-series

## **Processing:**

- On-going

## **Delivery to PD Teams:**

- VS data completed by ESA (April)
- ND w2w deliveries foreseen by SDS

## **Actions:**

- Rapid completion of processing and dissemination



# Radarsat-2 (CSA/MDA)

## 2009 Data Access Status

### **Acquisitions:**

- Wall-to-wall coverage over 4 NDs  
+ High temporal frequency acq's over VSs

### **2009 Data Commitment for FCT:**

- ND wall-to-wall + Verification Site time-series

### **Processing:**

- Finalised by CSA/MDA (late March)

### **Delivery to PD Teams:**

- Delivery “imminent”

### **Actions:**

- Commence data deliveries. Urgent, as only 4 weeks to SDS/SDC

# COSMO-SkyMed (ASI) 2009 Data Access Status

## **Acquisitions:**

- Wall-to-wall coverage over 4 NDs  
+ High temporal frequency acq's over VSs

## **2009 Data Commitment for FCT:**

- ASI-GEOSEC agreement discussions stalled (Aug 2009)

## **Processing:**

- Pending

## **Delivery to PD Teams:**

- 4 demo scenes (March 5)

## **Actions:**

- Urgent completion of ASI-GEOSEC agreement
- Provision of w2w data acquired over FCT NDs

# TerraSAR-X (DLR)

## 2009 Data Access Status

### Acquisitions:

- Wall-to-wall coverage over 4 NDs +  
High temporal frequency acq's over VSs

### 2009 Data Commitment for FCT:

- 100 scenes in total for FCT (<10 scenes/ND)

### Processing:

- Pending

### Delivery to PD Teams:

- Pending

### Actions:

- Complete processing and delivery prior to SDS
- Increase scene allocation

# Summary

## 2009 Data Access Status

### **L-band:**

- VS access over all National Demonstrators. Delivery completed.
- W2W access at 50m (2 NDs) and small NDs (TAS, BRA-Xingu VS)
- Good situation for SDS/SDC
- Fair situation for GEO Ministerial demo
- ACTION: Consider access to full ND w2w coverage.

### **C-band:**

- W2W ND and VS access over all National Demonstrators
- Good situation for GEO Ministerial demo
- ACTION: Conclude delivery prior to SDS/SDC [ESA and CSA]

### **X-band:**

- ACTION: Resolve ASI-GEOSEC agreement [ASI]
- ACTION: Conclude delivery prior to SDS/SDC [DLR and ASI]