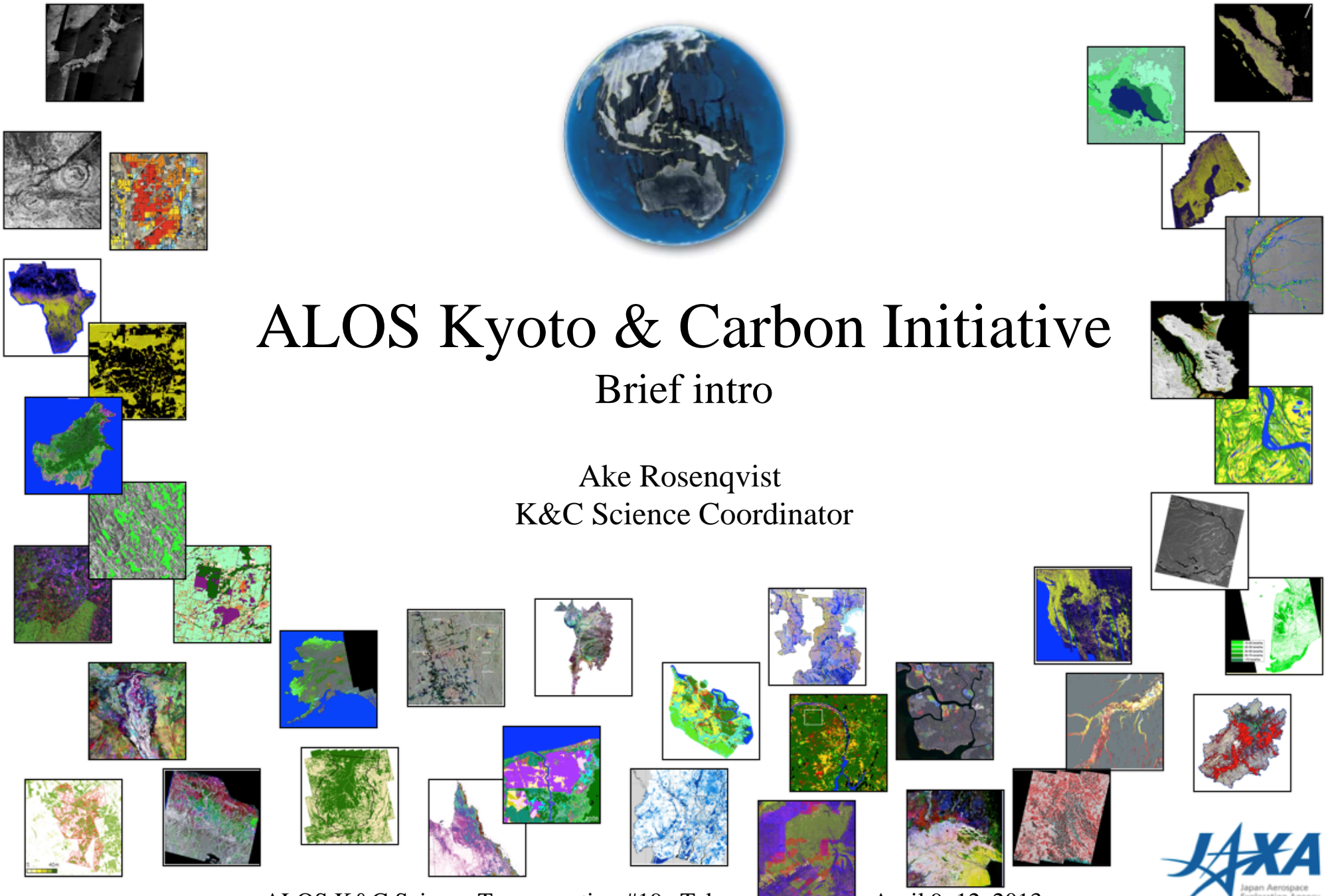




# ALOS Kyoto & Carbon Initiative

## Brief intro

Ake Rosenqvist  
K&C Science Coordinator



ALOS K&C Science Team meeting #19, Tokyo

April 9–12, 2013



## Outline

1. Heritage and objectives
2. Project organization
3. Data- and information requirements
4. Misc project information

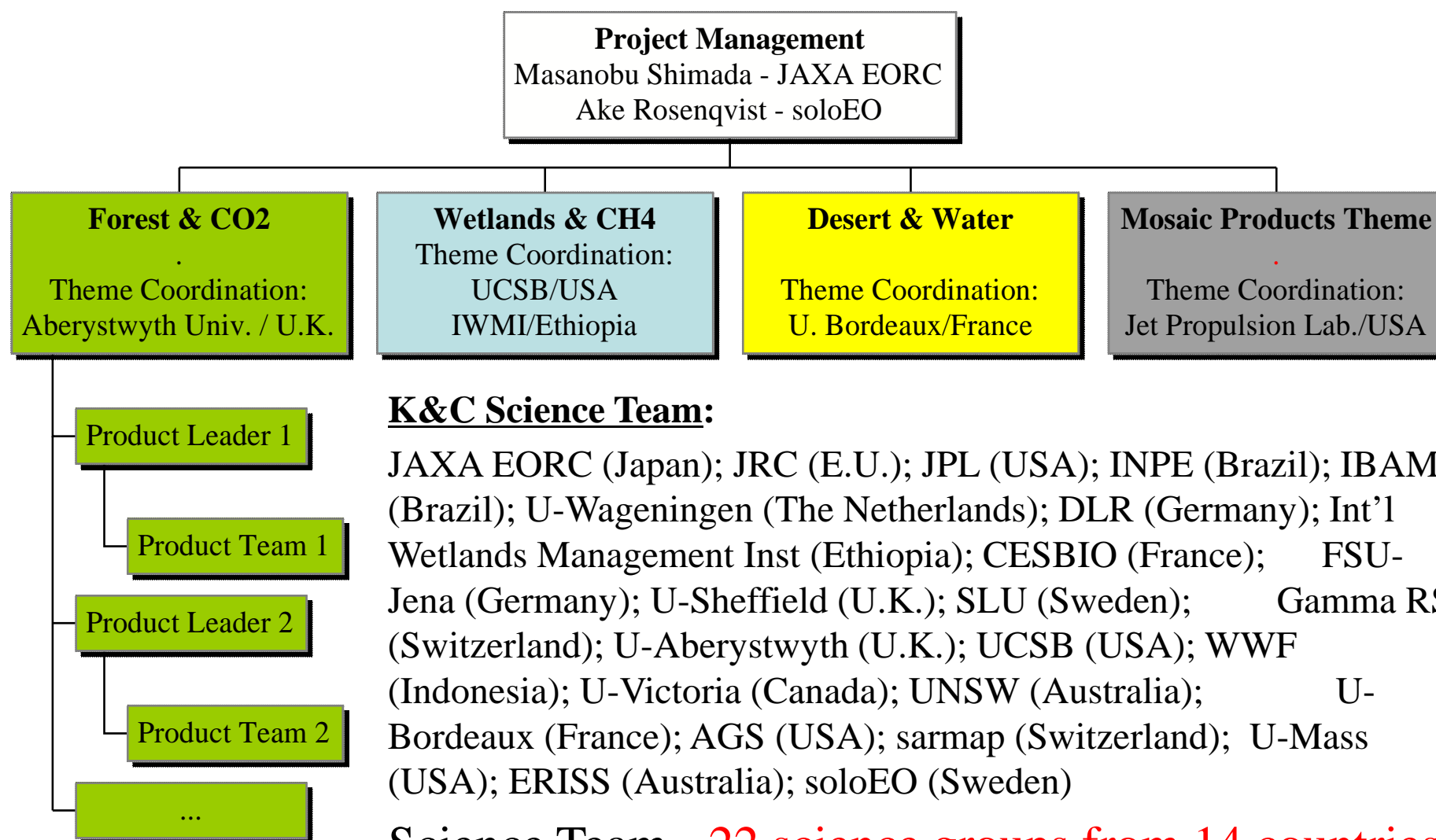
## Heritage and objectives

The ALOS Kyoto & Carbon Initiative is an international collaborative project forming the continuation and extension of the JERS-1 SAR **GRFM/GBFM** project into the era of ALOS and ALOS-2.

Aims to support information needs posed by the “3 C’s”:

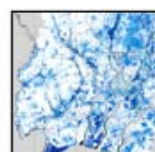
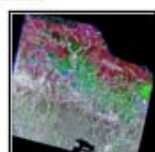
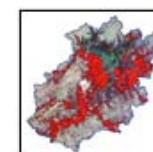
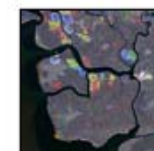
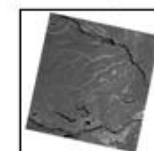
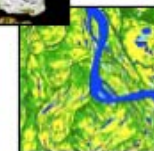
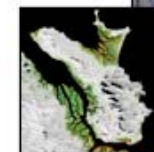
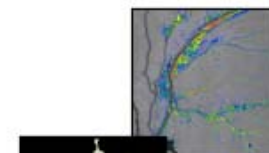
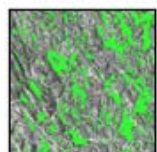
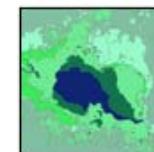
- The terrestrial **Carbon** cycle science community (CO<sub>2</sub> & CH<sub>4</sub> sources and sinks);
- Multinational Environmental **Conventions**:
  - UNFCCC Kyoto Protocol and REDD+ (Forest and Land Cover Change);
  - Ramsar Convention (wetland characteristics and disturbances);
- Environmental **Conservation**

## Phase 1 and Phase 2 - K&C Project organization





## K&C Phase 3 (2011 – March 2014)





## K&C Science Team Phase 3

32 members from 16 countries

Research institutes (5); Universities (10)  
National agencies for space/geo-spatial info (5)  
National forest mapping agencies (6)  
NGO's (4); Private companies (3)



## Phase 3 – Background

ALOS 2011: ALOS subject to a Public-Private Partnership (PPP) since April 2011. Stricter rules on PALSAR data distribution – data should primarily be made available through commercial channels.

Despite the PPP shift, JAXA management approved K&C Phase 3 – with a modified structure and new key objectives that are in line with the PPP changes at JAXA.



## Some points to keep in mind...

- K&C Initiative is not an AO programme or a data opportunity, but a scientific collaboration between JAXA and the K&C science teams (=you!).
- Sharing of satellite and in-situ data between JAXA and the K&C teams is of key importance. There should be a balance between amount of data provided by JAXA and the contribution by the K&C team.
- To justify its existence, we must assure that K&C provides feed-back to JAXA and provides results on a continuous basis. Visibility is important for both the K&C and for JAXA.



## Phase 3 objectives – K&C continuation

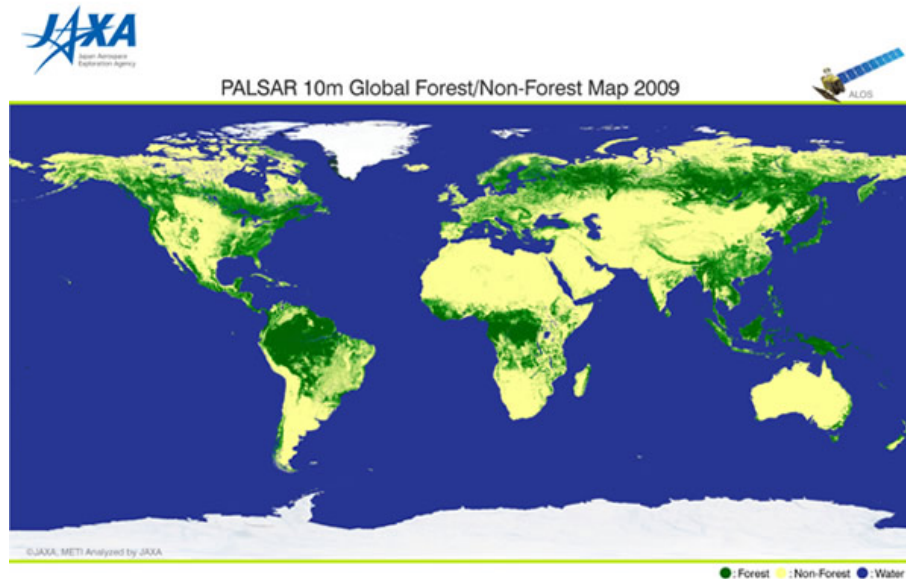
The continuation – and new establishment – of projects by the K&C Science Team is a natural component of K&C Phase 3.

As before, the individual K&C projects should comply with the original objectives of the K&C:

- development of regional-scale applications – **as far as possible based on 25m multi-annual mosaics**
- support to the 3 C's – Carbon, Conventions and Conservation

## Phase 3 goals

- support to the PALSAR global mapping effort



First version global FNF map, derived using decision tree classifier with -14 dB threshold (eCog).

KC Team to support EORC with refinement of methodology and adaption to regional forest types and definitions. Validation through the use of K&C member local knowledge and in-situ information. Generation of “K&C certified” global forest cover and stratified biomass maps.

## Phase 3 goals

### K&C Mangrove Watch

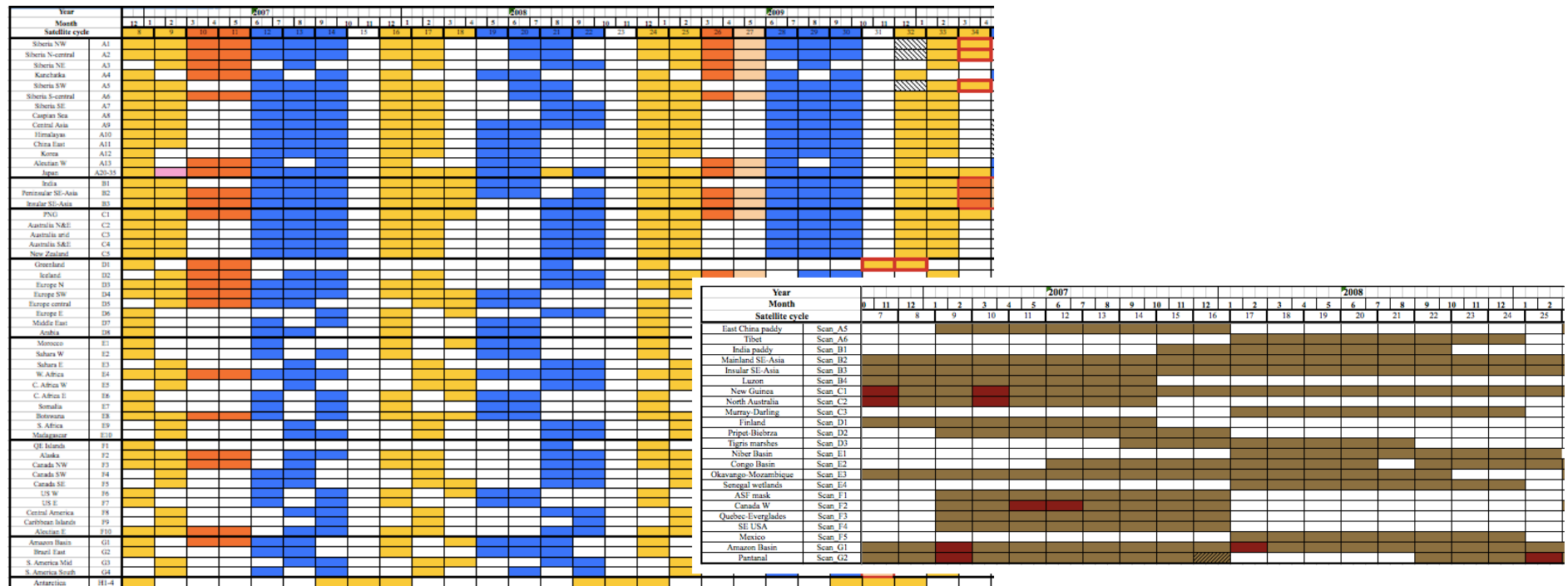
- Use of ALOS PALSAR data for mapping the extent and annual changes in global mangrove cover.
- Feeds directly in to the EORC Forest/Non-forest mapping effort.
- Support to the Ramsar Convention “Global Wetlands Observation System” (GWOS)
- K&C Mangrove Watch special session on Thursday



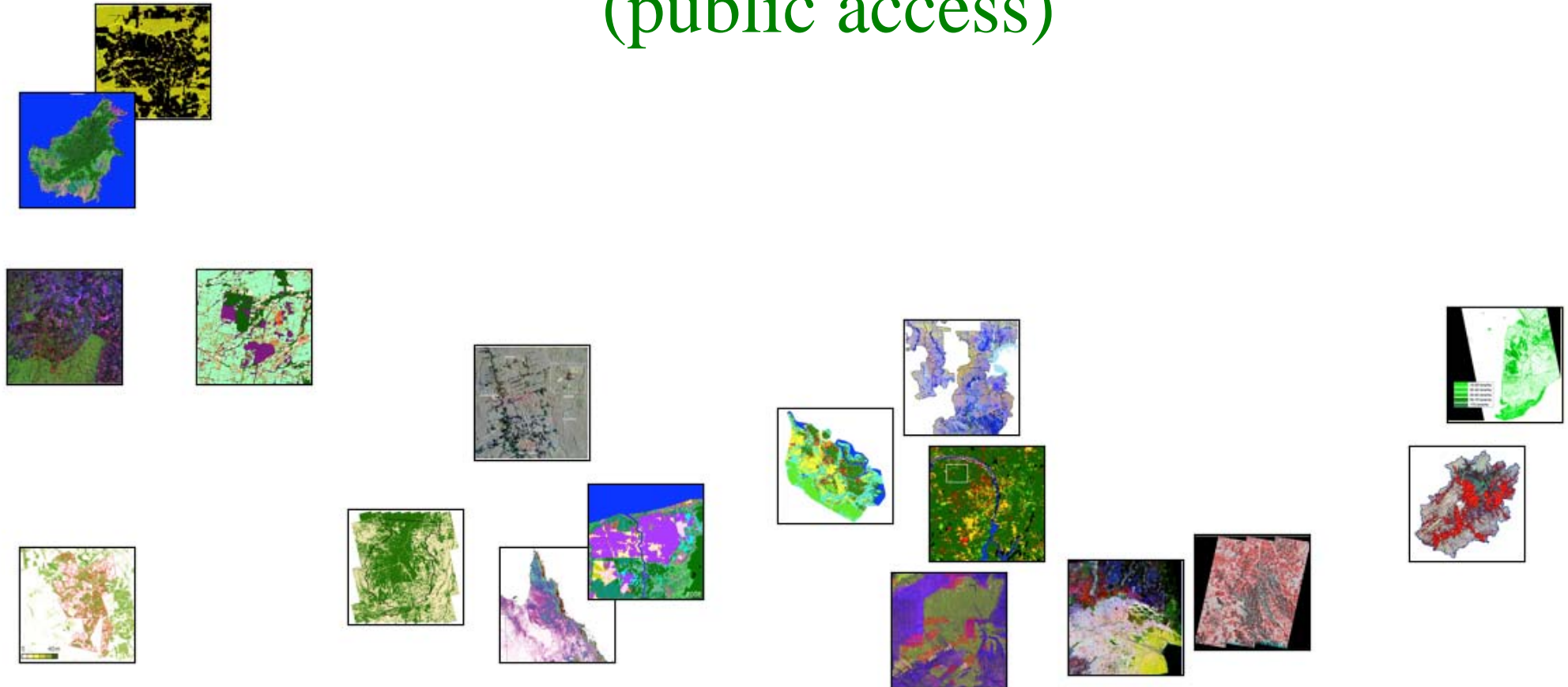
## Phase 3 goals

- support to ALOS-2 mission development

K&C Science Advisory Panel (SAP) tasked to provide scientific support for the definition of the ALOS-2 systematic acquisition scenario (BOS).



## Project information resources (public access)



# ALOS

K&C Initiative  
An international science collaboration led by JAXA

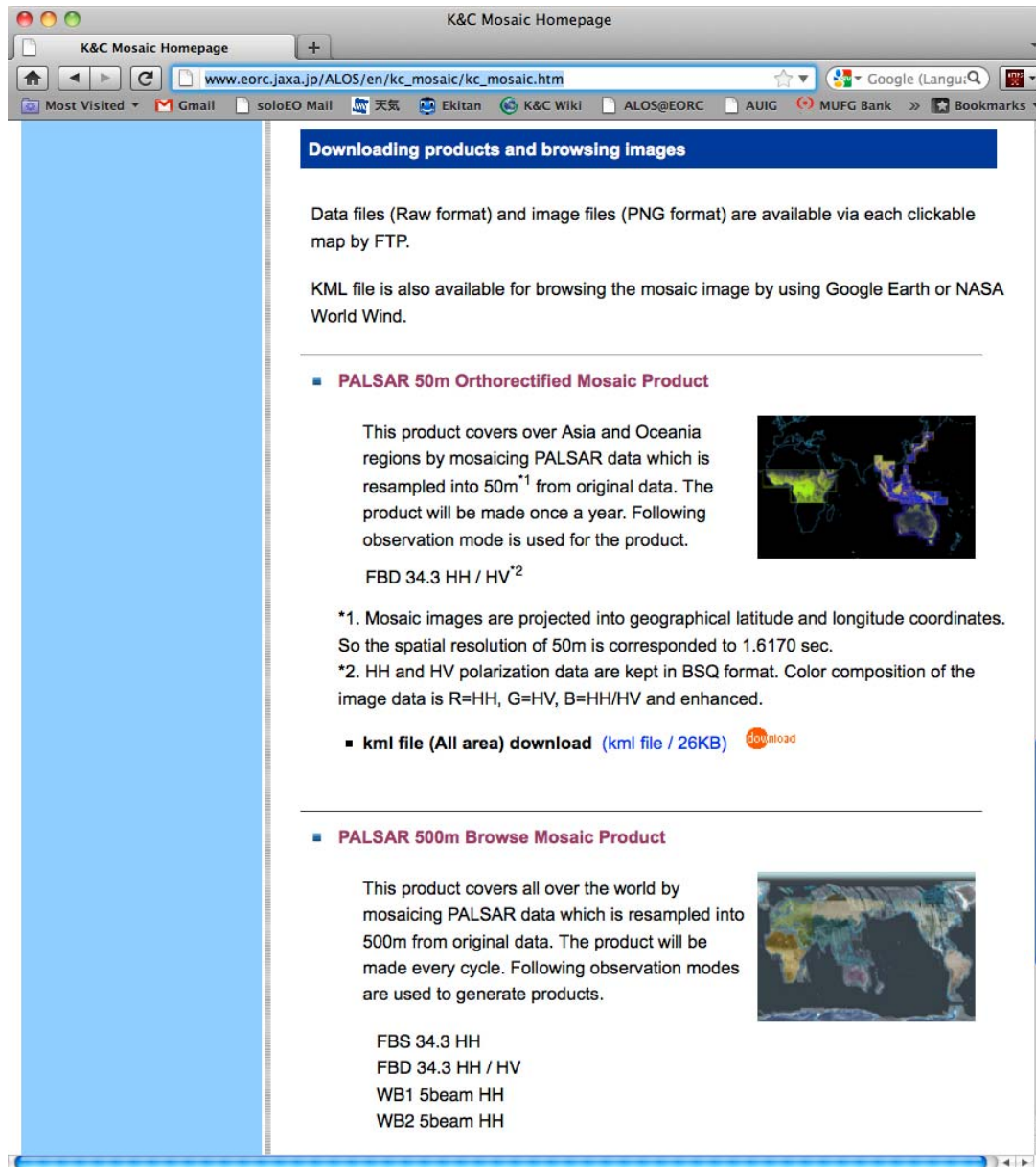
## JAXA EORC K&C Homepage



- K&C background information
- Agendas and **presentation material** available from all previous K&C Science Team meetings (KC#1 – KC#18)
- PALSAR systematic observation strategy (BOS)

[http://www.eorc.jaxa.jp/ALOS/en/kyoto/kyoto\\_index.htm](http://www.eorc.jaxa.jp/ALOS/en/kyoto/kyoto_index.htm)



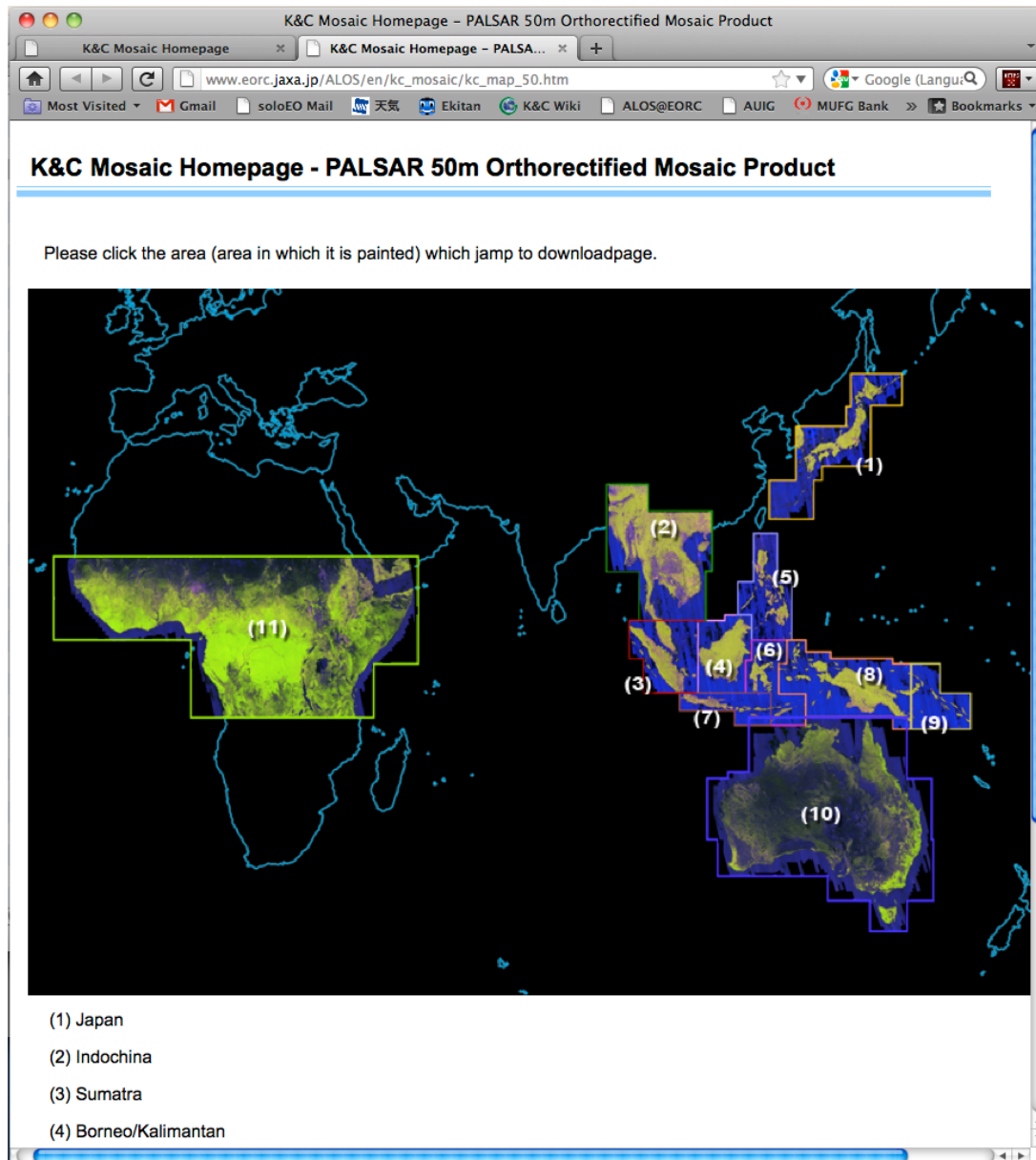


## JAXA EORC K&C Mosaic Homepage

K&C 50 m and 500 m resolution  
mosaic products online

- 50 m FBD and FBS mosaics
- 500 m browse mosaics (each 46-day cycle)
  - FBD/FBS
  - ScanSAR

[http://www.eorc.jaxa.jp/ALOS/en/kc\\_mosaic/kc\\_mosaic.htm](http://www.eorc.jaxa.jp/ALOS/en/kc_mosaic/kc_mosaic.htm)



## JAXA EORC K&C Mosaic Homepage

K&C 50 m orthorectified  
and 500 m resolution browse  
mosaic products online

- 16 bit products
- kml files for Google Earth
- To be updated (currently only South-East Asia and Central Africa online)

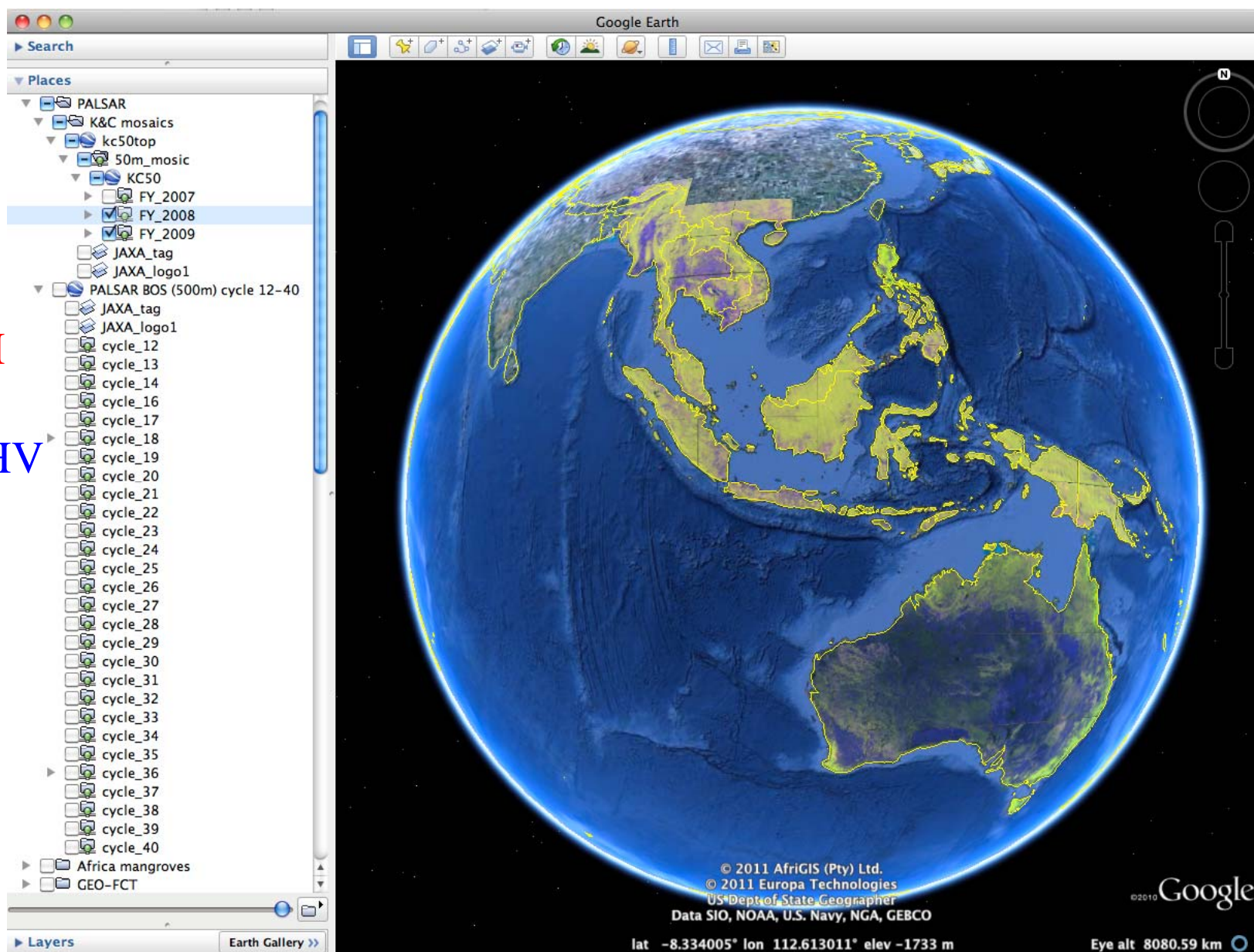
[http://www.eorc.jaxa.jp/ALOS/en/kc\\_mosaic/kc\\_mosaic.htm](http://www.eorc.jaxa.jp/ALOS/en/kc_mosaic/kc_mosaic.htm)



# ALOS

K&C Initiative  
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R: HH  
G:HV  
B: HH/HV

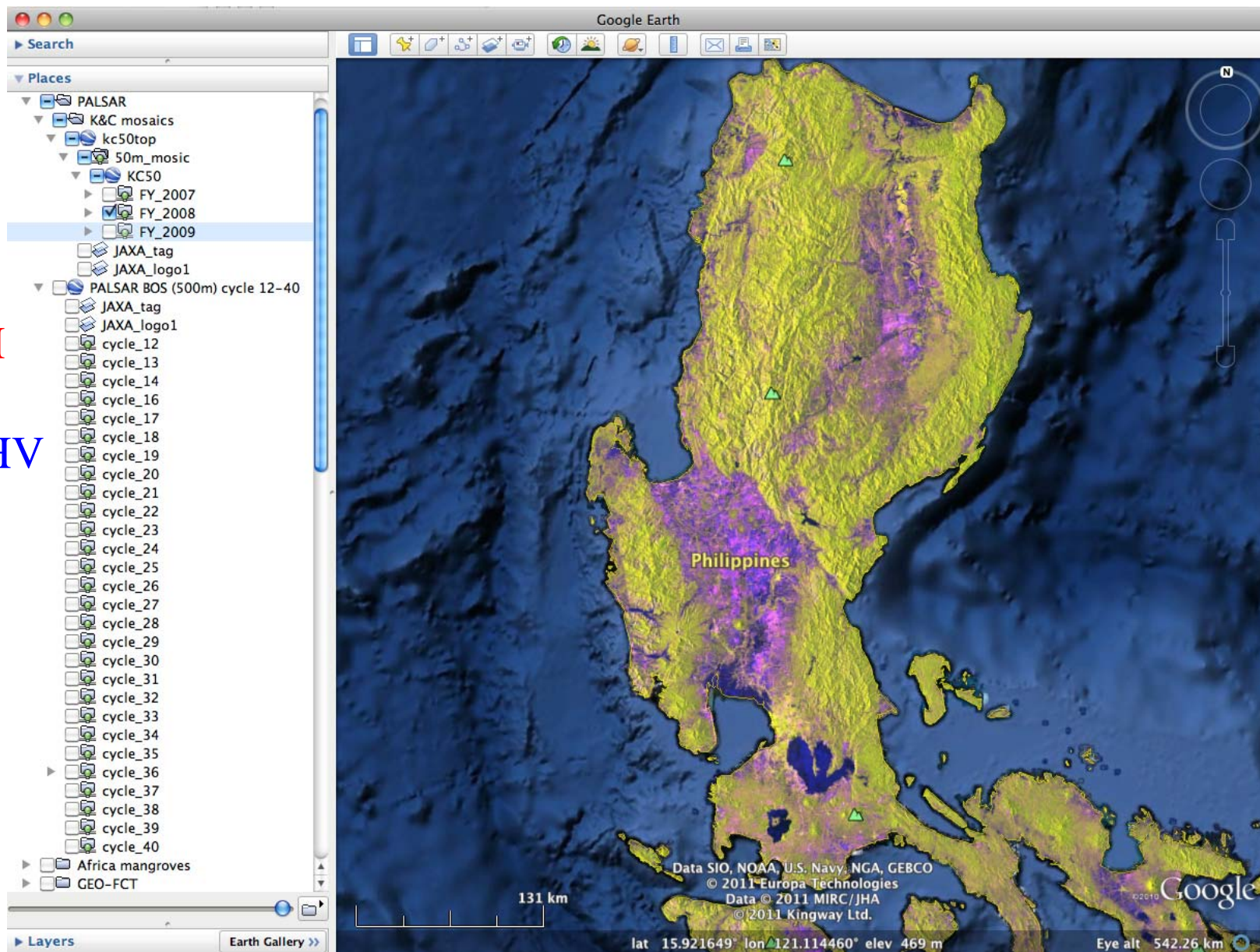




# ALOS

K&C Initiative  
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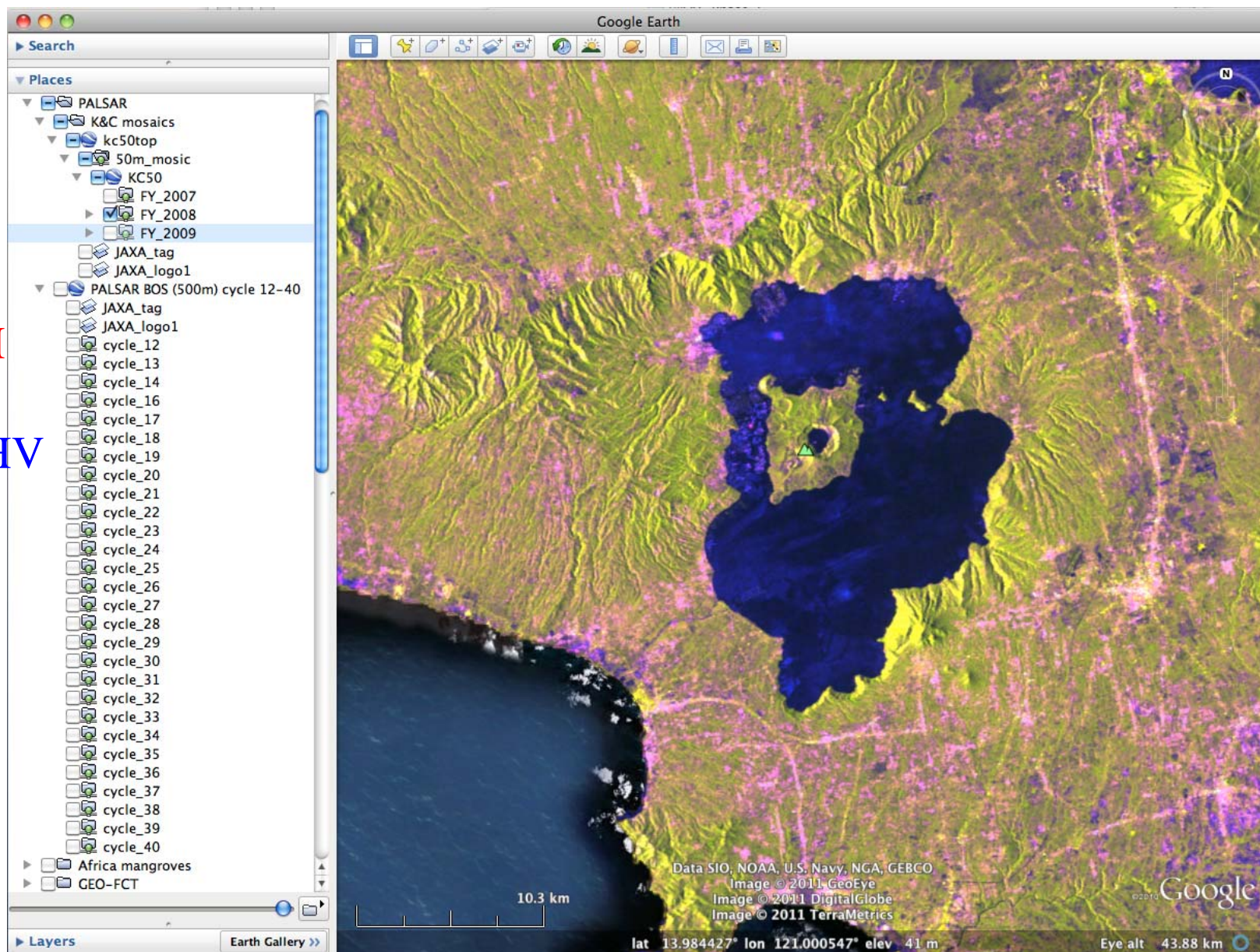




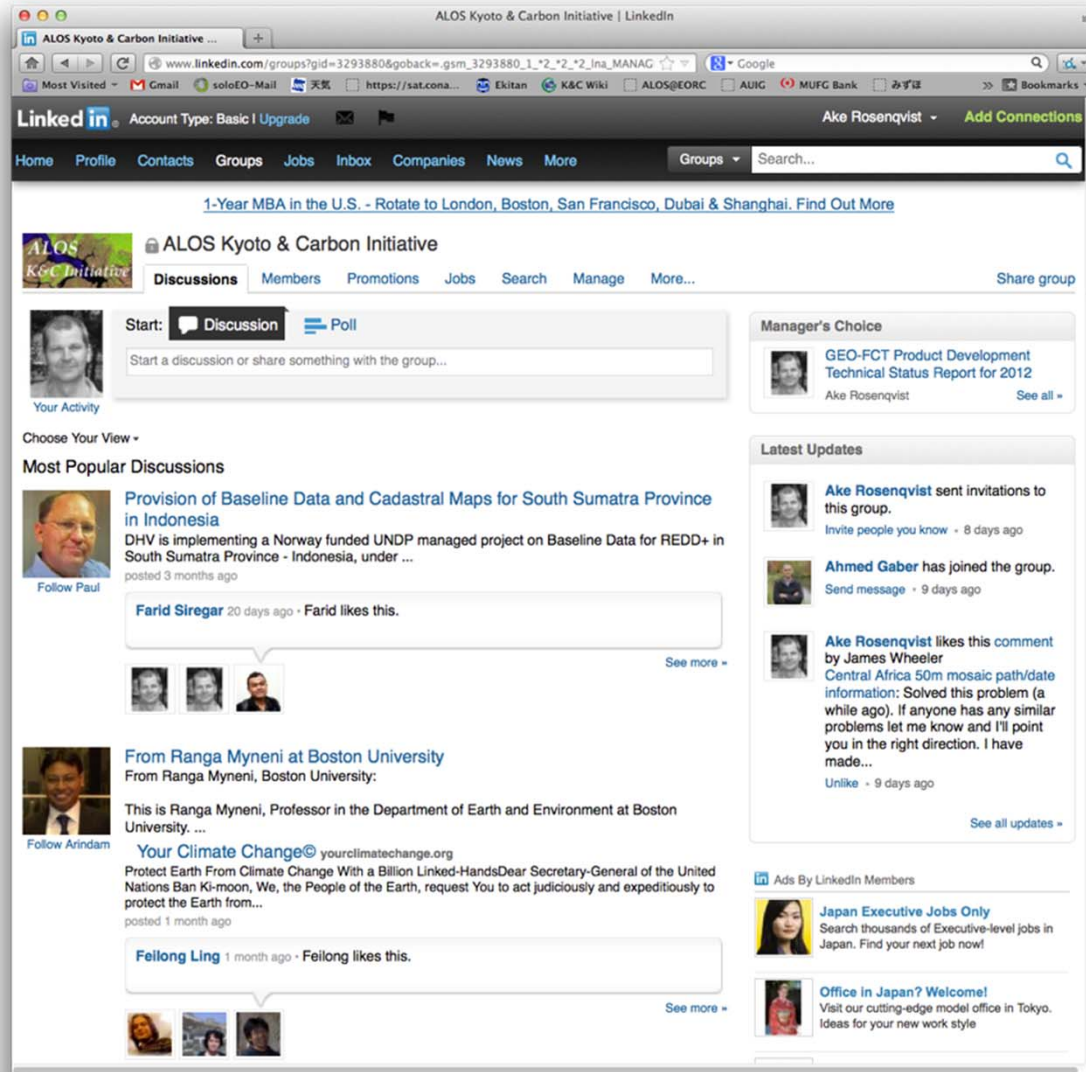
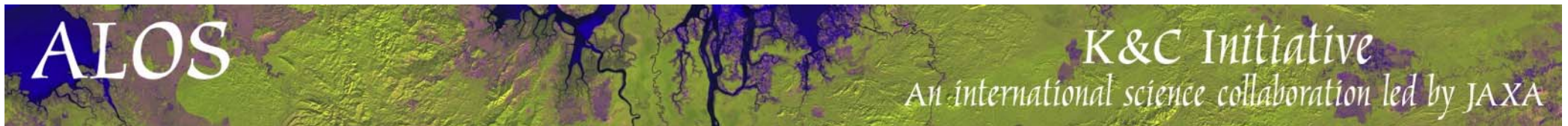
# ALOS

K&C Initiative  
An international science collaboration led by JAXA

R: HH  
G:HV  
B: HH/HV







Interest group on the [LinkedIn](#) network with news on publications and other events.

Aim to disseminate K&C info to broader community.  
175 members thus! (+27 since KC#18!)

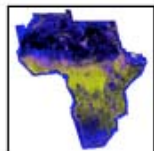
Group name:  
[ALOS Kyoto & Carbon Initiative](#)

Request membership directly at group page at  
<http://www.linkedin.com>  
OR send email to  
[ake.rosenqvist@soloEO.com](mailto:ake.rosenqvist@soloEO.com)

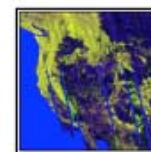
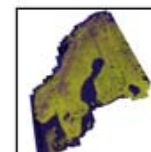


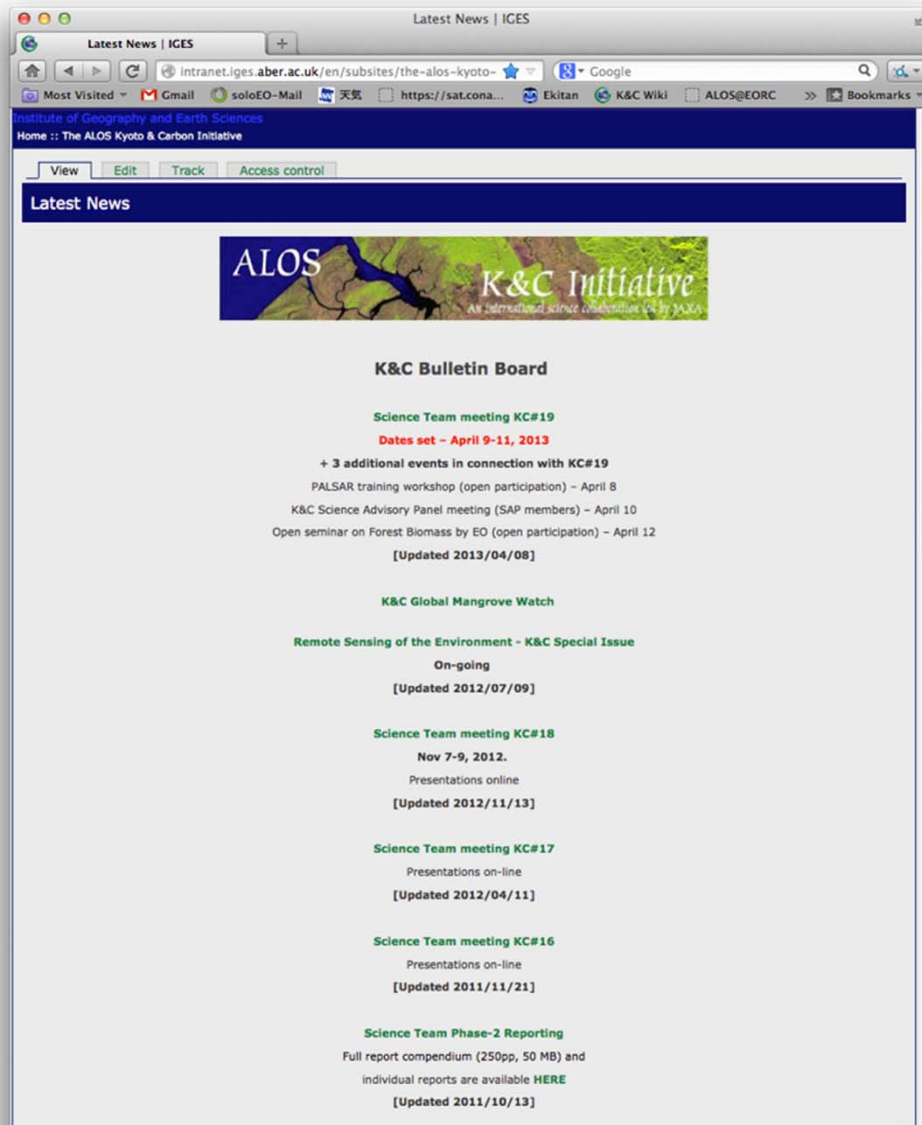
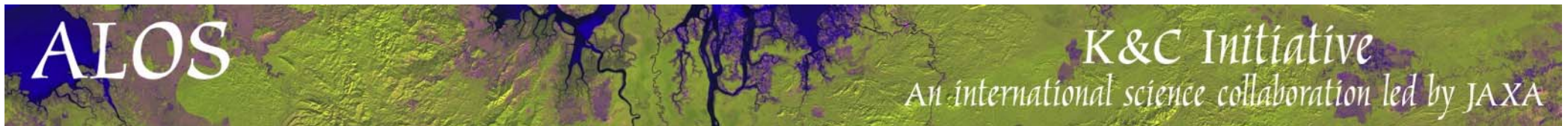
# ALOS

K&C Initiative  
*An international science collaboration led by JAXA*



## Project information resources (project team access)





## Project info resources

### The K&C Wiki Site

Hosted by Aberystwyth Univ.

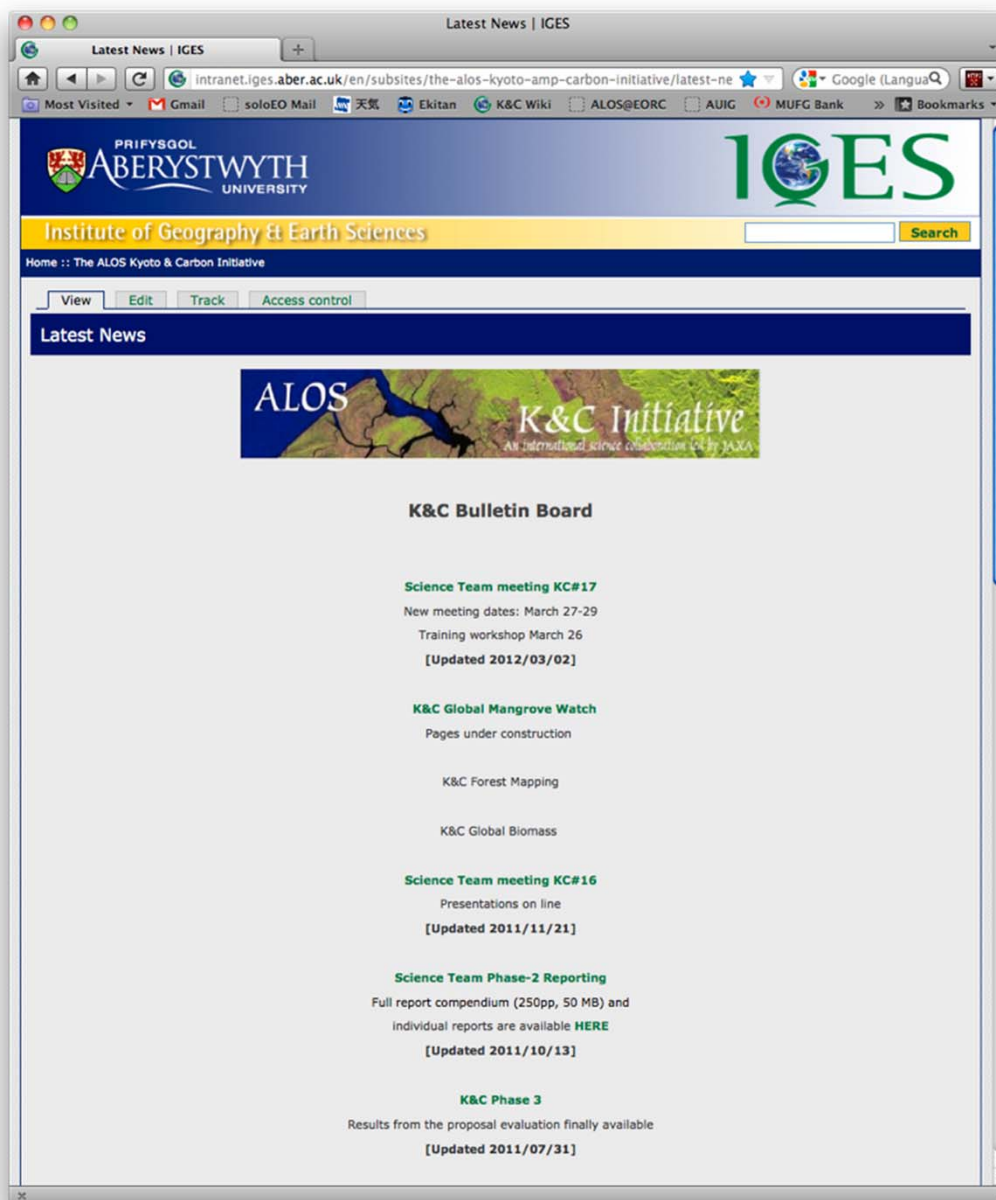
A place for exchange of project information and data.

Keep an eye on it!

<http://intranet.iges.aber.ac.uk/en/subsites/the-alos-kyoto-amp-carbon-initiative/latest-news>

Log in ID: **ALOS-KC**

Passwd: **ALOS-KC**



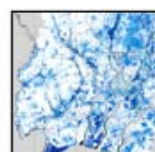
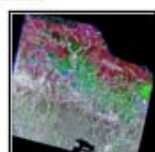
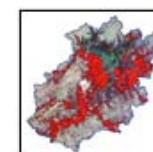
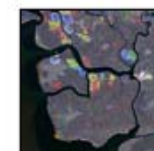
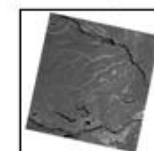
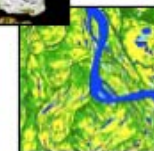
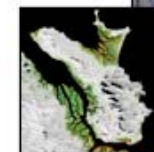
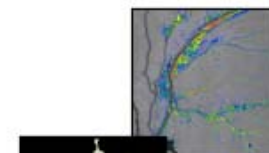
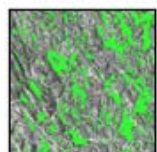
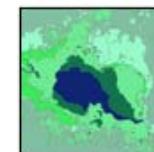
## Establishment of **K&C library** on the K&C Wiki

Please provide **PDF copies** of your published papers that are based on ALOS data obtained through the K&C

During KC#19: please provide directly to Ake.  
Or by email by **April 30.**



## Reports and Publications



## Reports and publications

*K&C Science Plan, v.3.1 (March 2008, 105 pp)*

*K&C Science Team Reports **Phase 1** (Jan 2010, 230 pp)*

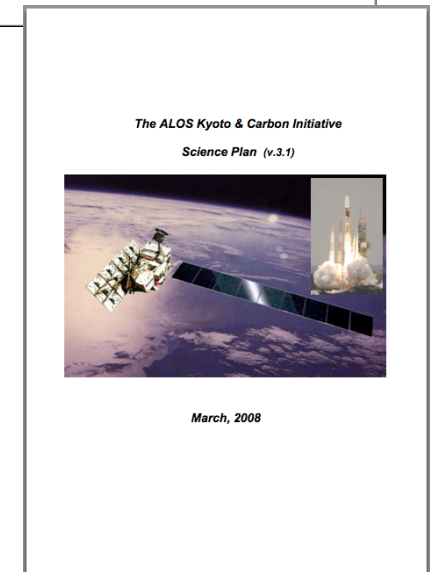
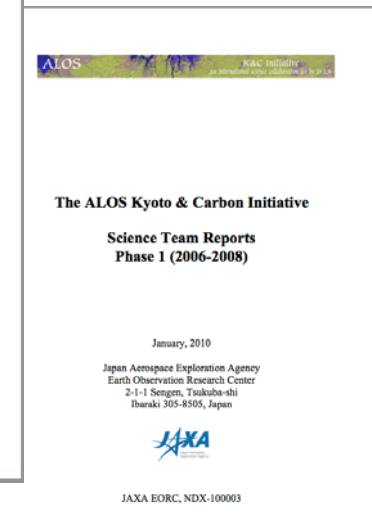
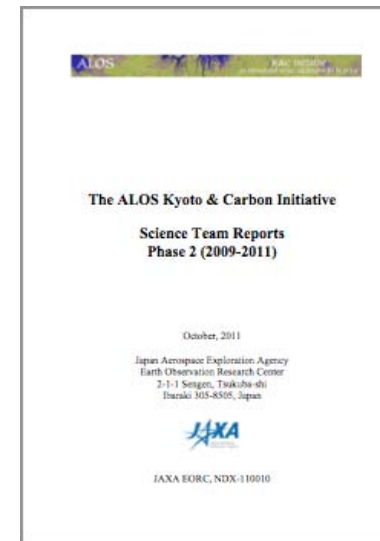
*K&C Science Team Reports **Phase 2** (Oct 2011, 250 pp)*

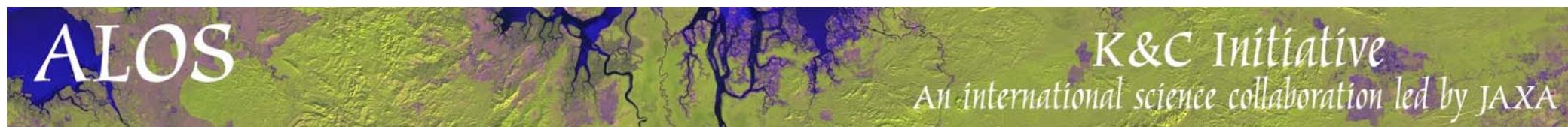
*IEEE Journal on Special Topics in Earth Observation  
and remote Sensing (J-STARS)*

*Vol. 3 No.4, Dec. 2010*

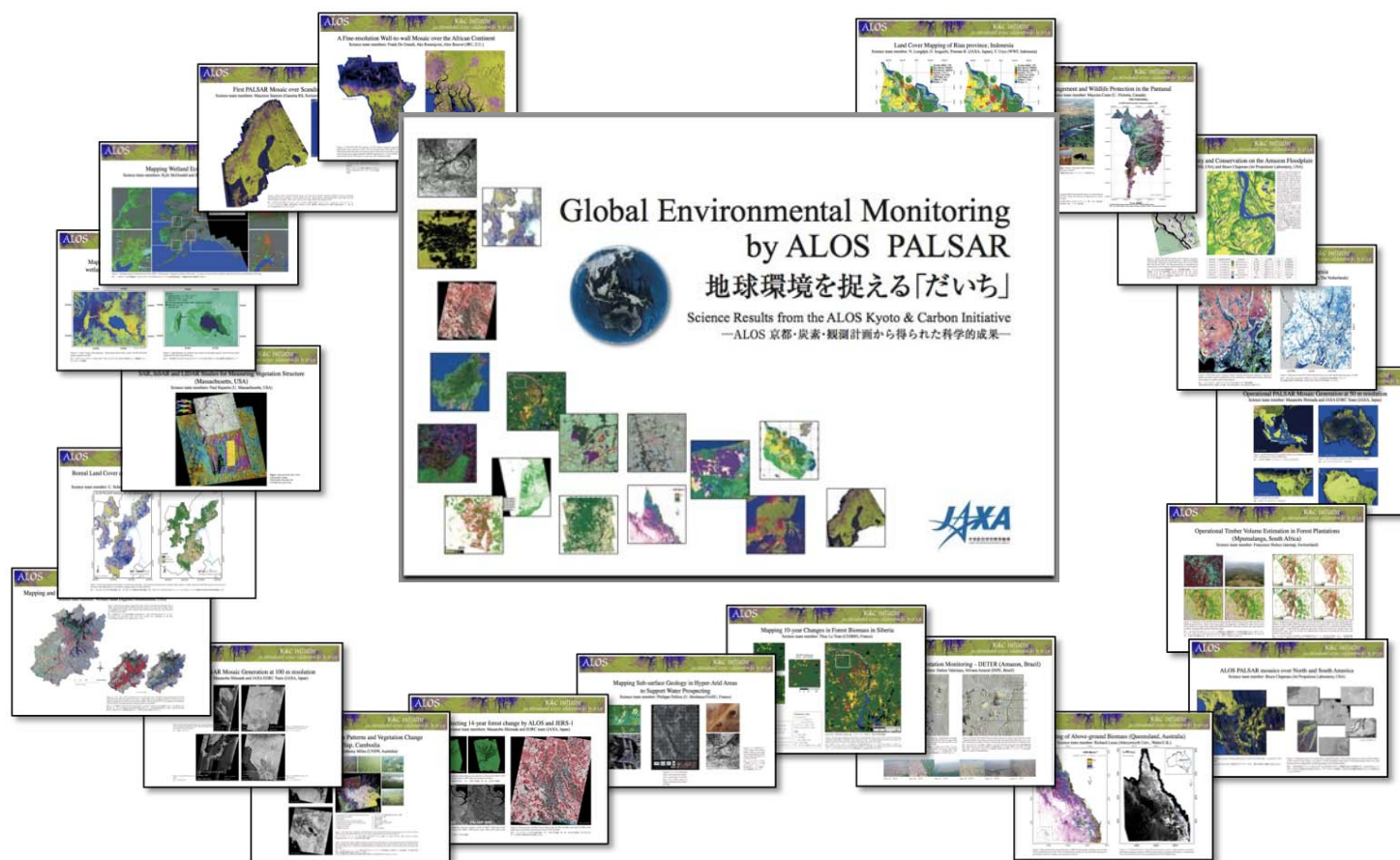
- Special Issue on K&C: Phase 1 results
- 10 papers from Forestry, Wetlands, Desert and Mosaic Themes

*All reports and individual papers available  
on the EORC K&C Homepage  
and the K&C Wiki*





Illustrated **K&C Booklet** (85 pp) published Sept. 2010  
35+ project descriptions in English and Japanese



Digital copy (PDF) available at **K&C Homepage** and **K&C Wiki**