

# K&C Phase 3 JAXA Forest Theme objectives

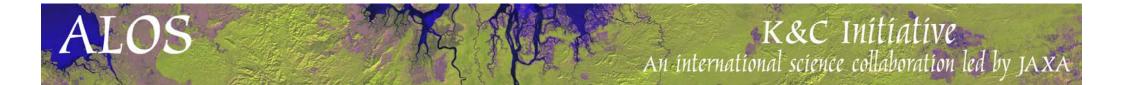
ALOS K&C Science Team meeting #15, Tsukuba/Tokyo Jan. 24-28, 2011

# Background

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ALOS 2011: A Public-Private Partnership (PPP) Full implications of the PPP still not clear, but it is certain to be stricter rules on PALSAR data distribution – data should primarily be made avilable through commercial channels.

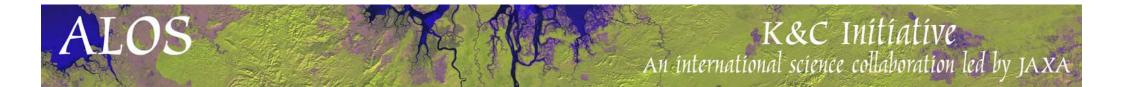
Despite the PPP shift, JAXA management has approved a "new" K&C project – very much thanks to the excellent results and visibility provided by the K&C Team in 2010: (Phase-1 reports, K&C booklet, J-STARS much appreciated by JAXA management) – with a modified structure and new key objectives that are in line with the recent changes at JAXA.



## Some points to keep in mind...

- We must assure that the K&C Initiative is not seen as a covert PI/AO programme or a data opportunity, where the role of JAXA is as a mere data provider ( contradictory to PPP)
- Need to shift from individual, independent projects focus, to a joint scientific effort with common goals and output products.

• To justify its existence, we must assure that K&C provides feed-back to JAXA and results on a continuous basis. Visibility is important for both the K&C and for JAXA.



# Phase 3 – an opportunity

JAXA and the K&C have the opportunity to step up and take the initiative in the generation of a number of global-scale key products and the development of SAR methodology standards to be made available to the international science community, national governments and NGO's.

# P3 Forest Theme goals – product development

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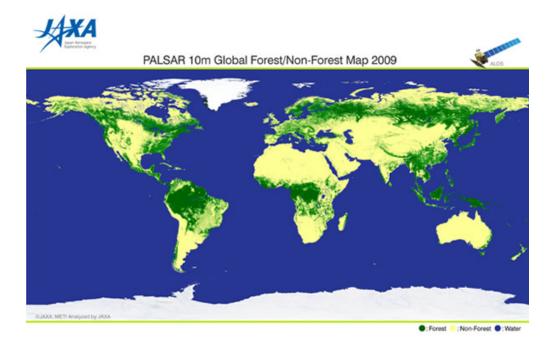
A joint effort to improve and validate the PALSAR global forest/non-forest map, and ensuing, generation of annual/bi-annual forest change maps and stratified biomass-type maps.

Each Phase 3 K&C Science Team member group will be tasked to take the responsibility for a certain region or country where they have local knowledge and in-situ data and work together with JAXA to improve and validate that part of the map.

Sharing of satellite and in-situ data between JAXA and the K&C teams is a key issue.

Progress should be reported at the K&C science team meetings twice per year.

# P3 Forest Theme goals – product development

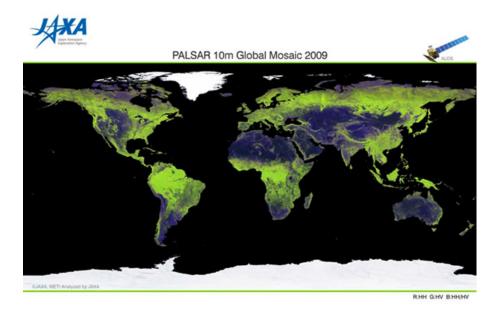


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First version global FNF map, derived using decision tree classifier with -14 dB threshold (eCog).

**Potential K&C task 1:** 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 map.

# P3 Forest Theme goals – product development



PALSAR global mosaics at 10m pixel spacing for 2007 and 2009 completed.

25 m global mosaics for 2007, 2008, 2009, 2010 to be completed during spring 2011.

**Potential K&C task 2:** Generation of annual/bi-annual maps of global forest cover change.

**Potential K&C task 3:** Generation of global/regional maps of above-ground biomass.

# P3 Forest Theme goals – methodology development

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**Potential K&C task 4:** Development of *methodology standards* for the generation of forest information products from spaceborne SAR data, (inevitable focus on L-band, but should comprise all data sources - LCX-band as well as SAR/optical synergy)

Can/should be closely linked to the methodology guidelines effort of the GEO-FCT and possibly the GOFC-GOLD Sourcebook.

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SOURCEBOOK

GOFC-GOLD Sourcebook COP16 version recently released SAR still listed as "evolving technology".

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AR still listed as "evolving technology".	
	A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation
2.9 STATUS OF EVOLVING TECHNOLOGIES	
2.9.1 Scope of chapter	GOFC-GOLD • • • • 2-124
2.9.2 Role of LIDAR observations	
2.9.3 Forest monitoring using Synthetic Apert	ure Radar (SAR) observations 2-128
2.9.4 Integration of satellite and in situ data f	or biomass mapping 2-133
2.9.5 Targeted airborne surveys to support ca	rbon stock estimations – a case
study	
2.9.6 Modeling and forecasting forest-cover cl	hange
2.9.7 Cloud-computing and web-based approa	aches to support national forest
monitoring	
2.9.8 Summary and recommendations	
2.9.9 Key references for Section 2.9	

Contribution to GEO-FCT (GFOI) objectives development of methodology standards and guidelines for generation of forest information products

# P3 Forest Theme goals – K&C continuation

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*In addition* to the new Phase 3 goals, the continuation – and new establishment – of projects by the K&C Science Team is a natural component of K&C Phase 3 (stimulates PALSAR application development, critical for K&C members to obtain necessary funding, etc.).

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

- development of regional-scale applications
- support to the 3 C's Carbon, Conventions and

Conservation

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## P3 Forest Theme goals – K&C continuation

In addition (in addition...)

Scientific support to JAXA with ALOS-2 mission development – including definition of ALOS-2 systematic acquisition scenario

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## Main data sources

Due to PPP, stricter rules on data distribution.

- 25 m PALSAR FBD mosaics (annual/multi-annual 2007+)
- 25 m JERS-1 SAR mosaics (~1995)
- Full resolution data via AUIG (50 scenes/year)
- ScanSAR (discussion point)
- 50 m strip data

NOTE: EORC processing capacity for 50 m strip data reduced. Special justificaion required for provision.

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## Members and Themes

- # Themes 4  $\rightarrow$  2
- Focus om Forest and Wetlands
- Mosaic Theme continue?
- Desert Theme discontinued
- Change in member composition. New members invited, not all old membersto continue.
- Proposals for Phase 3 required in all cases. Support to at least one of the new K&C objectives, sharing of satellite/in-situ data required.

# Schedule

- Submission of Phase 2 reports (deadline 31 Dec...)
- Consolidation of Phase 3 goals with Science Team (KC#15)
- Proposals for Phase 3 (old & new members)

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- Submission deadline February 25, 2011
- Phase 2 report compulsory (old members)
- Proposal evaluation and notification March 2011
- Target for Phase 3 contracts April 1, 2011
- Contract duration 4 years (2011-2014) overlap with ALOS-2 launch (mid 2013)

# Summary – P3

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Objective 1:

ALOS

Contribution to generation/validation/improvement of one or more of the following:

- KC global forest cover map
- KC global forest cover change map
- KC global biomass maps
- Methodology guideline development (aim for GOFC-GOLD Source Book)

Objective 2:

Regional scale applications - KC team members' "own" projects'

In addition, in addition... ALOS-2 mission scientific support

## Timing of Phase 3 Science Team meetings

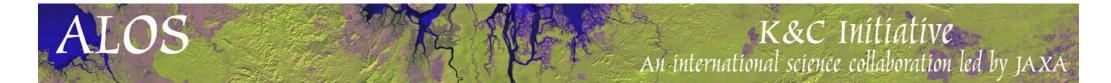
ALOS

K&C Initiative

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#### Chilly winter/humid summer vs. cherry blossom/autumn leaf

Try our new design (BETA) · Log in (optional) Doodle Poll: Timing for K&C Science Team meetings Cast your vote on the Doodle Poll Summary: 1 participant, 0 comments more ... You have created this poll. Edit · Close · Administer http://doodle.com/f3bqw73nnqq8vss6 "Select your preferred timing for the two annual K&C Science Team meetings. Make one choice (can be a range of several weeks) for each of the two meetings. Mtg Mta Mta Mto Mta Mtg 1: 1: 2: 1: 1: 2: Jan Feb Feb Mar Mar Apr xxx Jun Jun Sep Sep Oct Oct: (link sent by email 1st 2nd 1st 2nd 1st 2nd 1st 1st 2nd 1st 2nd 1st 2nd half – please fill in this week) Ake OK OK OK OK OK OK OK OK Your name Count 1 1 Save



#### Current status...

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Dirk		ОК	ОК	ок	ок	ОК	ОК						ок	ОК
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