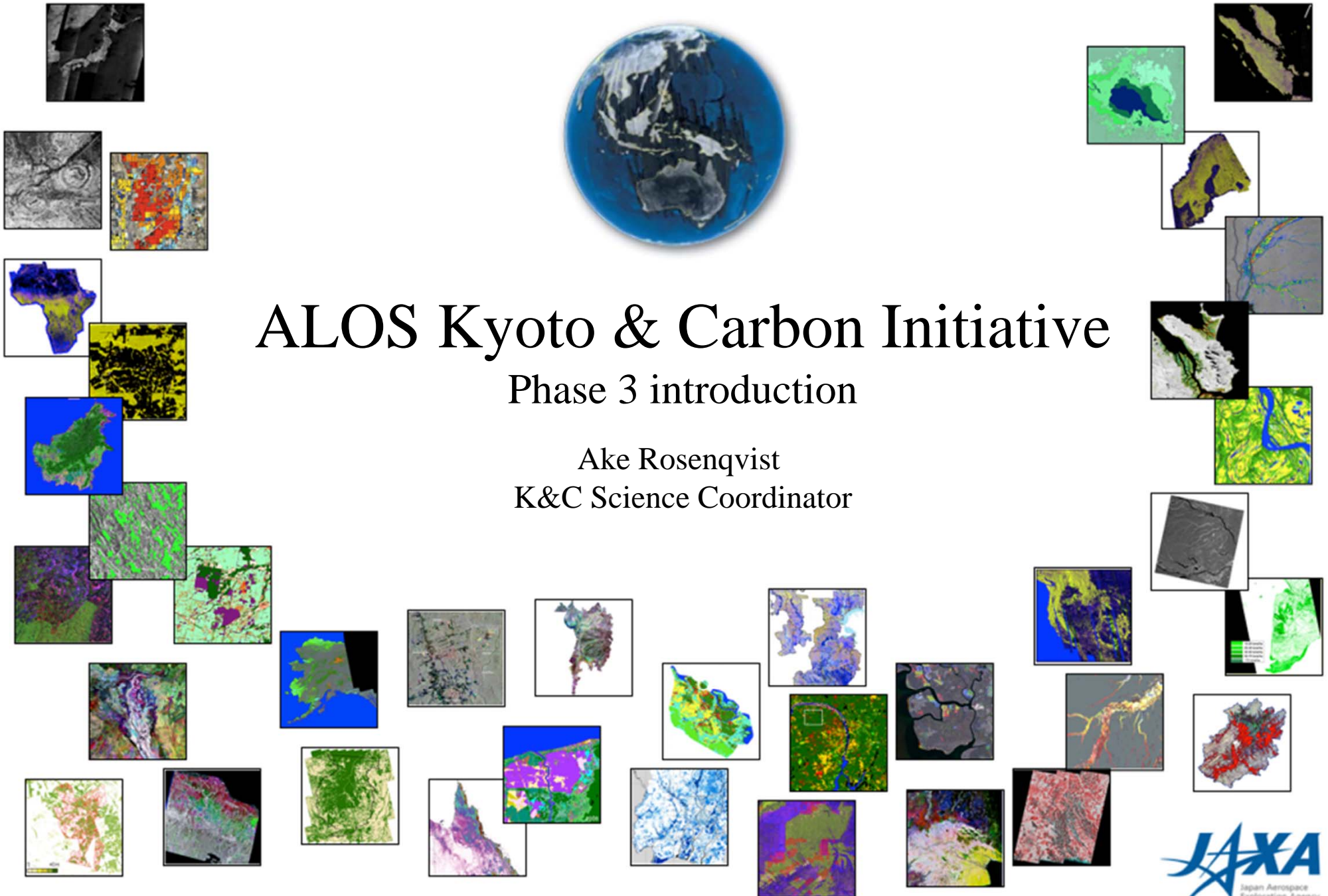




# ALOS Kyoto & Carbon Initiative

## Phase 3 introduction

Ake Rosenqvist  
K&C Science Coordinator



KC#21 - Kyoto, December 3-5, 2014

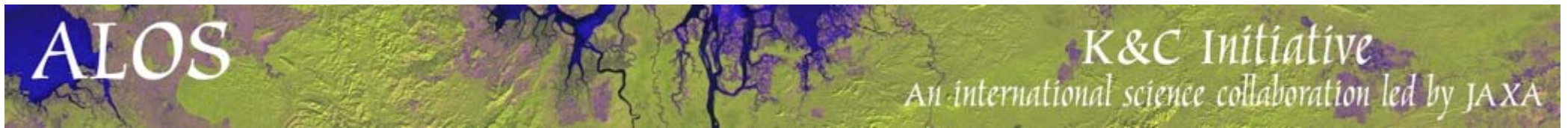


## Heritage and objectives

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 advance (L-band) SAR applications development in support of the “4 C’s”:

- The terrestrial **C**arbon cycle science community (CO<sub>2</sub> & CH<sub>4</sub> sources and sinks);
- Multinational Environmental **C**onventions:
  - UNFCCC and REDD+ (Forest and Land Cover Change);
  - Ramsar Convention (wetland characteristics and disturbances);
- Environmental **C**onservation
- **C**limate Change



## **Heritage – 20 years(!) of continuous R&D**

### Global Rain Forest / Boreal Forest Mapping (GRFM/GBFM) – 1995-2001

- Advancement of L-band SAR applications for forest and wetlands by JERS-1 SAR
- Birth of the concept of systematic wall-to-wall observations over continental scales
- Development of algorithms for large area mosaicking

### K&D Phase 0 – Science Advisory Panel – 2001-2005

- Scientific advise to JAXA during ALOS mission and BOS development
- Pre-launch research: Development of algorithms and methods using archived JERS-1 SAR;

## **Heritage – 20 years(!) of continuous R&D**

### K&C Phase 1 & 2 – Regional “prototype” demonstration – 2006-2010

- Application demonstrations over large geographical regions - regional/semi-continental scale

### K&C Phase 3 & 4 – K&C in the PPP era (2011 – 2018)

- JAXA EORC global forest/non-forest map (validation and improvement)
- Development of methodology guidelines for forest/wetlands mapping by SAR
- K&C Global Mangrove Watch – global mangrove change mapping supporting Ramsar

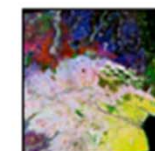
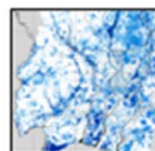
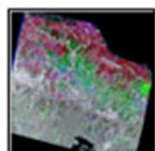
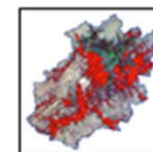
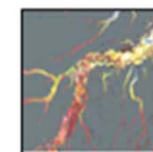
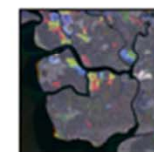
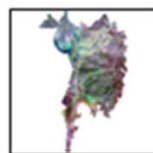
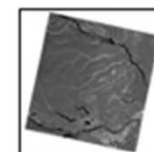
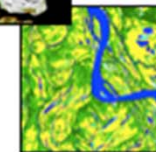
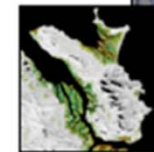
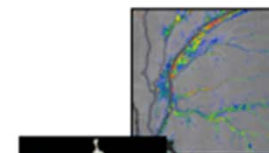
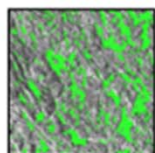
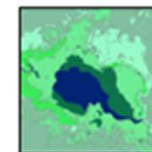
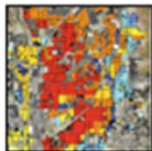


## Phase 3 Science Team

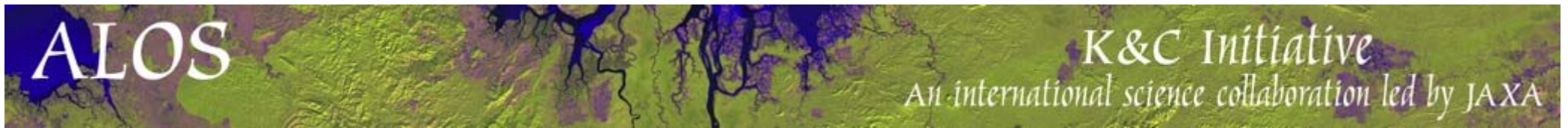
- 30 research groups from 18 countries
- Science Team meetings held 2 times/year (KC#16 – KC#21)



# Phase 3 outcomes: Reports and Publications

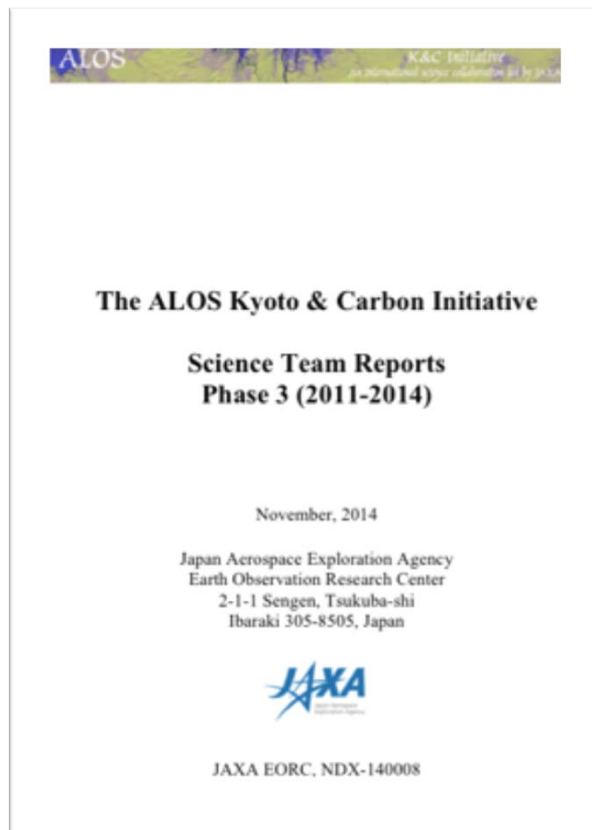






## Phase 3 Science Team Reports

Comprehensive compilation of Phase 3 outcomes



- 35 reports from (all) K&C Science Team members
- 430 pages (125 MB)
- Released Nov. 2014
- Official Reference#: JAXA EORC NDX-14008
- Available at:

[http://www.eorc.jaxa.jp/ALOS/en/kyoto/phase\\_3/KC-Phase-3-report\\_NDX-140008.pdf](http://www.eorc.jaxa.jp/ALOS/en/kyoto/phase_3/KC-Phase-3-report_NDX-140008.pdf)



ALOS

K&C Initiative  
An international science collaboration led by JAXA

## Remote Sensing of Environment K&C Special Issue

*“Science results from the ALOS Kyoto & Carbon Initiative”*

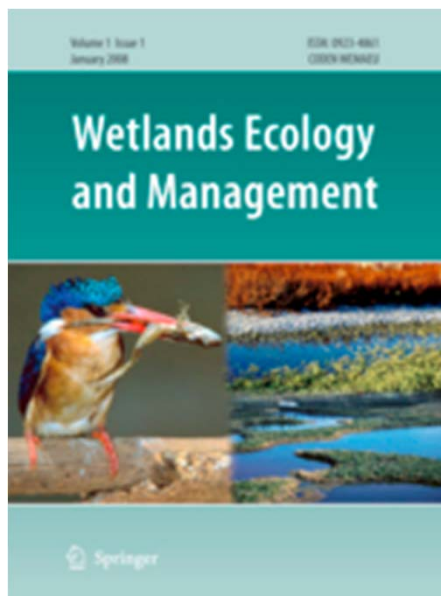


- Finally published! (Nov. 2014)
- RSE Vol. 155, 2014
- 11 papers from K&C Science Team



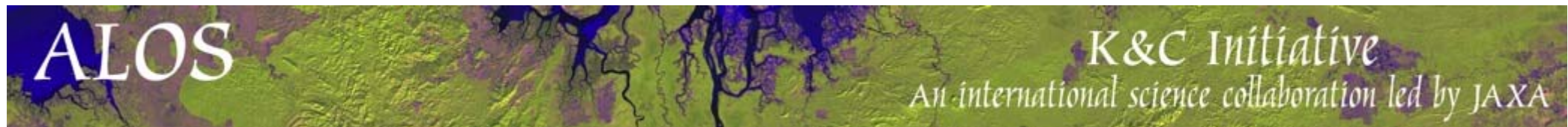
## Wetlands Ecology & Management Special Issue on

*“Radar remote sensing of globally important wetlands”*



- 6 papers from K&C Science Team
- Last manuscript in review
- Publication foreseen in early 2015

<http://www.springer.com/life+sciences/ecology/journal/11273>.



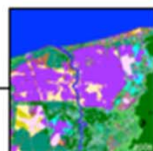
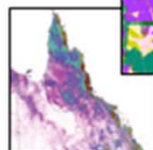
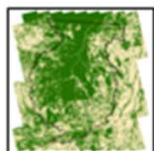
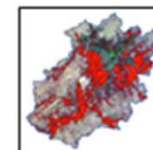
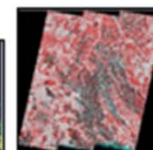
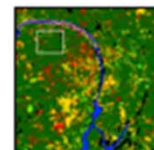
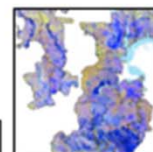
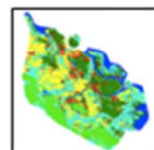
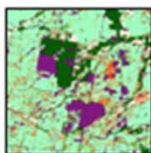
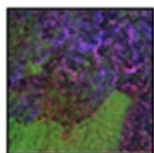
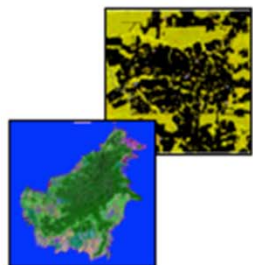
Illustrated **K&C Booklet** (85 pp) with  
35+ project descriptions in English and Japanese



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

## KC#21 Agenda

Wed-Thu: Phase 3 report presentations  
Fri: Phase 4 Kick-off





**Wednesday Dec. 3**

K&C introduction

Phase 3 Science Team reports – Forestry

Lunch (12:15-13:30)

Phase 3 Science Team reports – Forestry

Ajourn (17:15)

## Thursday Dec. 4

Phase 3 Science Team reports – Forestry

Phase 3 Science Team reports – Wetlands

Lunch

Phase 3 Science Team reports – Wetlands

External reports

Phase 4 New member presentations

Reception dinner (19:00)

## **Friday Dec. 5 - Morning**

Phase 4 introduction

PALSAR-2 status

ALOS-2 Basic Observation Scenario

EORC data processing and ground data collection

PALSAR-2 data distribution procedures

Open floor discussions

(SAP side meeting)



## Friday Dec. 5 Afternoon – Time off!



The Golden Pavillion – *Kinkaku-ji*



*Kyomizu* Temple



The Stone Garden – *Ryoan-ji*



*Nijo* Castle