



1st Post-K&C Science Team meeting PKC#1 (a.k.a. KC#26)

Ake Rosenqvist
K&C Science Coordinator



Shimbashi, Tokyo, Japan, January 21-23, 2020

Post-KC Science Team (2019-2022)

	Name	Surname	Institution	Country
1	Rahmat	Arief	LAPAN	Indonesia
2	John	Armston	University of Maryland	USA
3	Alex	Bouvet	CESBIO	France
4	Pete	Bunting	Aberystwyth University	Wales/UK
5	Bruce	Chapman	California Inst. of Technology/JPL	USA
6	Humberto	de Mesquita	Brazilian Forest Service	Brazil
7	Johan	Fransson	Univ. of Agricultural Sciences	Sweden
8	Dirk	Hoekman	Wageningen University	Netherlands
9	Josef	KelIndorfer	Woods Hole Research Center	USA
10	Joaquim	Macuacua	National Directorate of Forestry	Mozambique
11	Stephane	Mermoz	GlobEO	France
12	Shaun	Quegan	Univerity of Sheffield	U.K.
13	Lisa	Rebelo	International Water Management Institute	Laos
14	Edson	Sano	IBAMA	Brazil
15	Maurizio	Santoro	Gamma Remote Sensing	Switzerland
16	Bernd	Scheuchl	University of California, Irvine	USA
17	Thiago	Silva	Stirling University	Scotland/UK
18	Paul	Siqueira	Univ. Massachusetts	USA
19	Nathan	Thomas	NASA GFSC	USA
20	Nathan	Torbick	Applied Geosolutions, LLC	USA
21	Mikhail	Urbazaev	Friedrich-Schiller-University Jena	Germany

PKC#1 (KC#26) Agenda Tuesday Jan 21, 2020 Hall 16C

K&C Session 1: JAXA updates					
#	Item	Presenter(s)	Duration	Start	End
1	Welcome	Takeo Tadono, JAXA EORC	10	10:00	10:10
2	K&C Update	Ake Rosenqvist, soloEO	20	10:10	10:30
3	New methodology for EORC Forest/Non-Forest map generation	Takuya Itoh, RESTEC	20	10:30	10:50
4	EORC global mosaic processing/re-processing and data distribution	Kazufumi Kobayashi, RESTEC	20	10:50	11:10
5	EORC research results	Masato Hayashi, JAXA EORC	20	11:10	11:30
6	Updates to the Sigma-SAR processor	Masanobu Shimada, Tokyo Denki Univ	20	11:30	11:50
7	Cloud-based solution for ScanSAR mosaic processing	Josef Kelldorfer, Earth Big Data	20	11:50	12:10
	Q&A	All	20	12:10	12:30
Lunch			90	12:30	14:00
K&C Session 2: Glaciers & Wetlands					
#	Item	Presenter(s)	Duration	Start	End
8	JJ-FAST update	Manabu Watanabe, TDU	20	14:00	14:20
9	ALOS-2 ecosystem product validation with UAVSAR and field measurements	Bruce Chapman, JPL	20	14:25	14:45
10	InSAR based Ice Velocity and Grounding Line Measurements in Antarctica	Bernd Scheuchl, UC Irvine	20	14:50	15:10
11	Development of Digital Services for Peatland Monitoring	Rahmat Arief, LAPAN	20	15:15	15:35
12	Tropical Peat Watch demonstrator Indonesia	Dirk Hoekman, WUR	20	15:40	16:00
13	Characterization of Amazon floodplain forest habitats and inundation dynamics using PALSAR-2 time series	Mikhail Urbazaev, FSU Jena	20	16:05	16:25
14	The Global Mangrove Watch: Moving to Finer Resolutions	Ake Rosenqvist (Bunting & Lucas)	20	16:30	16:50
15	Integrating multisensor information as analysis-ready data for semi-automated monitoring of South American wetlands	Thiago Silva, Stirling Univ (via Skype)	20	17:00	17:20
	Open floor discussions	All	20	17:25	17:45

PKC#1 (KC#26) Agenda Wednesday Jan 22, 2020 Hall 15D

K&C Session 3: Forest 1					
#	Item	Presenter(s)	Duration	Start	End
1	CEOS Biomass activity update	Osamu Ochiai, JAXA SAOC	20	09:30	09:50
2	Fusion of ALOS-2 and Spaceborne Lidar Observations for High Resolution Mapping of Degraded and Regenerating Forest Structure and Biomass in Australia	John Armston, UMD	20	09:50	10:10
3	Deforestation and Forest Degradation Analysis in Mozambique	Joaquim Macuacua, Nat. Dir. Forestry	20	10:10	10:30
4	Above-ground biomass change in the woodlands and savannas of Southern Africa	Alex Bouvet, CESBIO	20	10:30	10:50
5	Forest loss detection in South-East Asia using ALOS-1 and ALOS-2 SAR data	Stéphane Mermoz, Globeo	20	10:50	11:10
6	Assessing the impact of precipitation on ALOS-2 forest observation in the tropics	Christian Koyama, TDU	20	11:10	11:30
	Open floor discussions	All	30	11:30	12:00
Lunch			60	12:00	13:00
Joint PI Meeting for JAXA EO Missions					
	13:00 – 16:00 ALOS-2 Plenary 16:00 – 18:00 ALOS-2 PI meeting (Poster Session) (Open to all. KC member participation voluntary)				
18:30 – 20:30 Joint PI Meeting Welcome Reception					

PKC#1 (KC#26) Agenda Thursday Jan 23, 2020 Hall 16C

Joint PI Meeting for JAXA EO Missions					
	10:00 – 13:00 ALOS-2 PI meeting (Cal/val, Pol & InSAR Session) (Open to all. KC member participation voluntary)				
Lunch			60	13:00	14:00
K&C Session 4: Forest 2					
#	Item	Presenter(s)	Duration	Start	End
1	Brazilian Forest Map: Qualification of Tropical Forest Remnants to Sustainable Development Goals	Humberto de Mesquita, BFS	20	14:00	14:20
2	L-band Sensitivity to Biomass and Landcover Structure in the ABoVE domain	Paul Siqueira, UMass	20	14:25	14:45
3	Retrieval of forest biomass and biomass change using PALSAR-1, -2 and -3 data	Johan Fransson, SLU	20	14:50	15:10
4	Decadal forest biomass change with ALOS-1 and ALOS-2 L-band SAR observations	Maurizio Santoro, Gamma RS	20	15:15	15:35
5	Multi-frequency SAR Time Series Analysis for Ecosystem Monitoring: Fusing ALOS-2, ALOS-4, NISAR and Sentinel-1 Data Sets	Josef Kelldorfer, Earth Big Data	20	15:40	16:00
K&C Session 5: Related Missions and activities					
6	NISAR mission update	Paul Siqueira, UMass	20	16:05	16:25
7	GEDI mission update	John Armston, UMD	20	16:30	16:50
8	SAOCOM mission update	Marc Thibeault/Matias Palomeque, CONAE	20	16:50	17:10
K&C Session 6: Meeting Summary					
9	KC Meeting Summary and wrap-up	All	20	17:10	17:30
Adjourn				17:30	
NEW: 18:00 – 20:00 K&C No-host Dinner					



K&C No-host Dinner

Thursday Jan 23, 18:00~20:00

Izakaya Banya

Shimbashi 2-14-3, Shimbashi Renga-dori Kaikan 8F

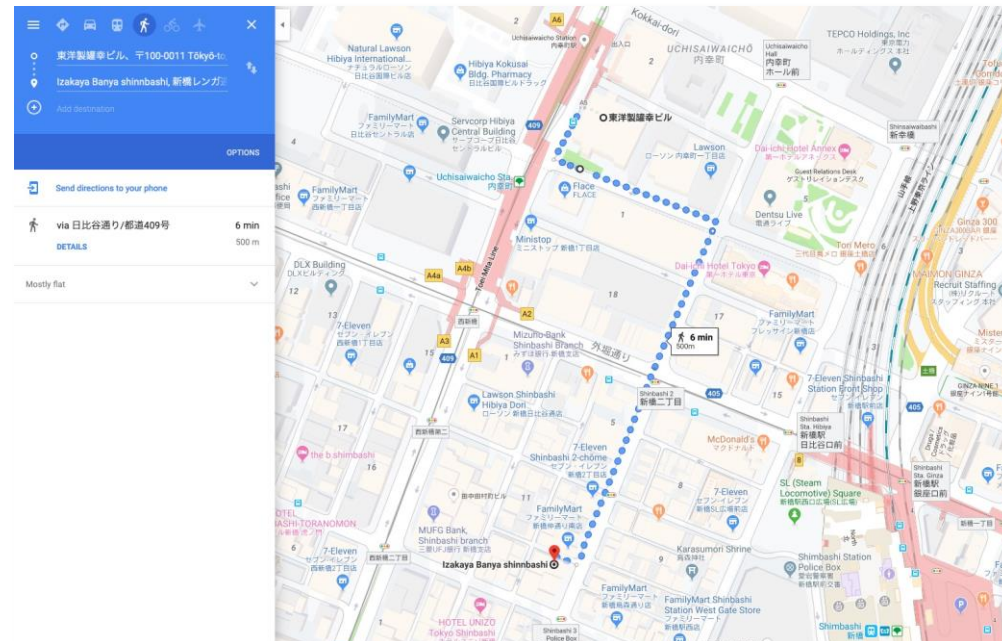
Fee: 4000 yen/pers

Please **sign list** (and provide payment) you would like to join!

Shimbashi Store



6 min walk from conference venue



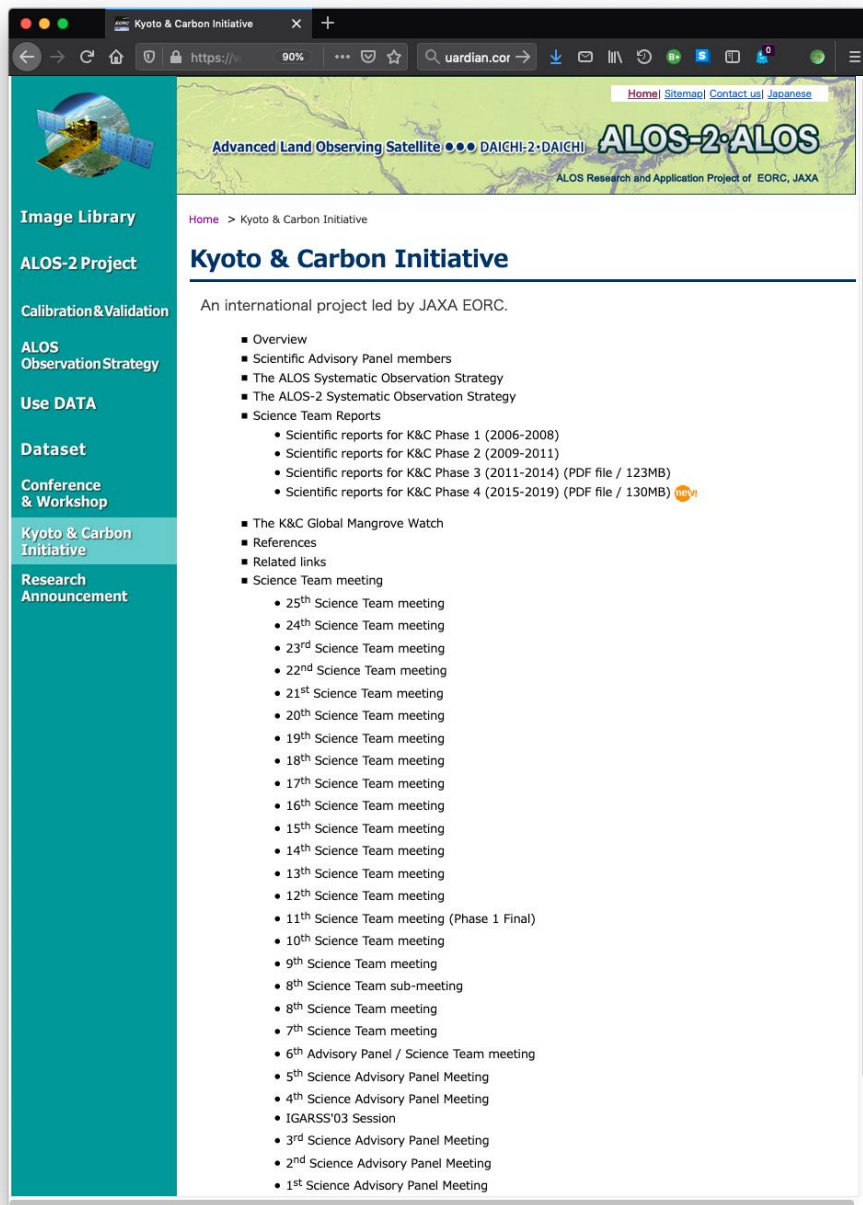
Joint PI meeting Friday Jan 24, 2020 Hall 16C

Joint PI Meeting for JAXA EO Missions	
AM	10:00 – 11:40 ALOS-2 Closing Plenary (Open to all)
	9:00 – 11:30 ALOS-4 Cal/Val Team meeting (Open to all)
Lunch	
Joint PI Meeting for JAXA EO Missions	
PM	13:00 ~ 15:30 ALOS-4 Cal/Val Team meeting (Open to all)
	MOLI PI meeting (Only MOLI science team members)

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#25)
- JAXA 25m mosaics and FNF classifications
- PALSAR and PALSAR-2 systematic observation strategy (BOS)

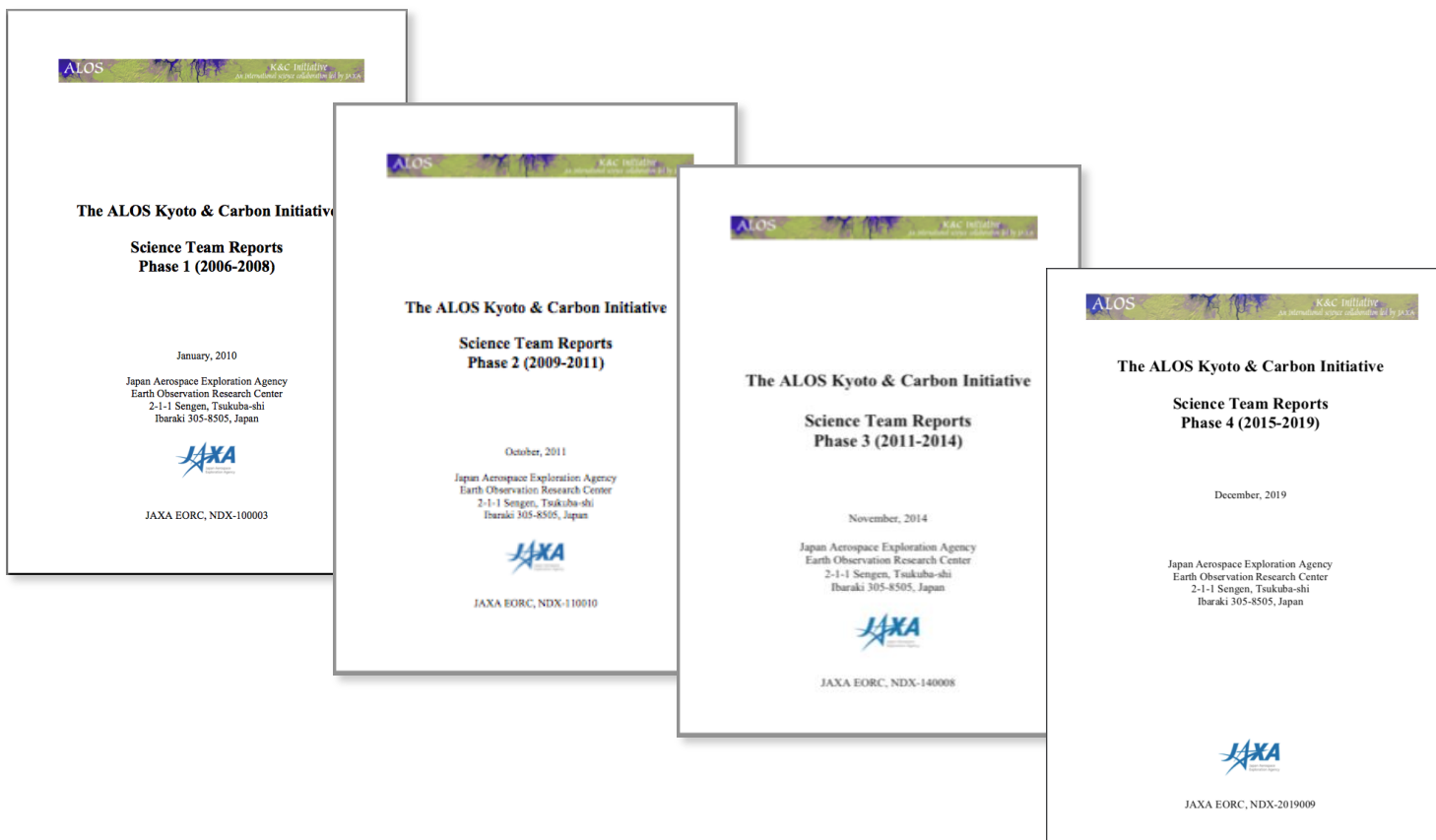
http://www.eorc.jaxa.jp/ALOS/en/top/kyoto_top.htm

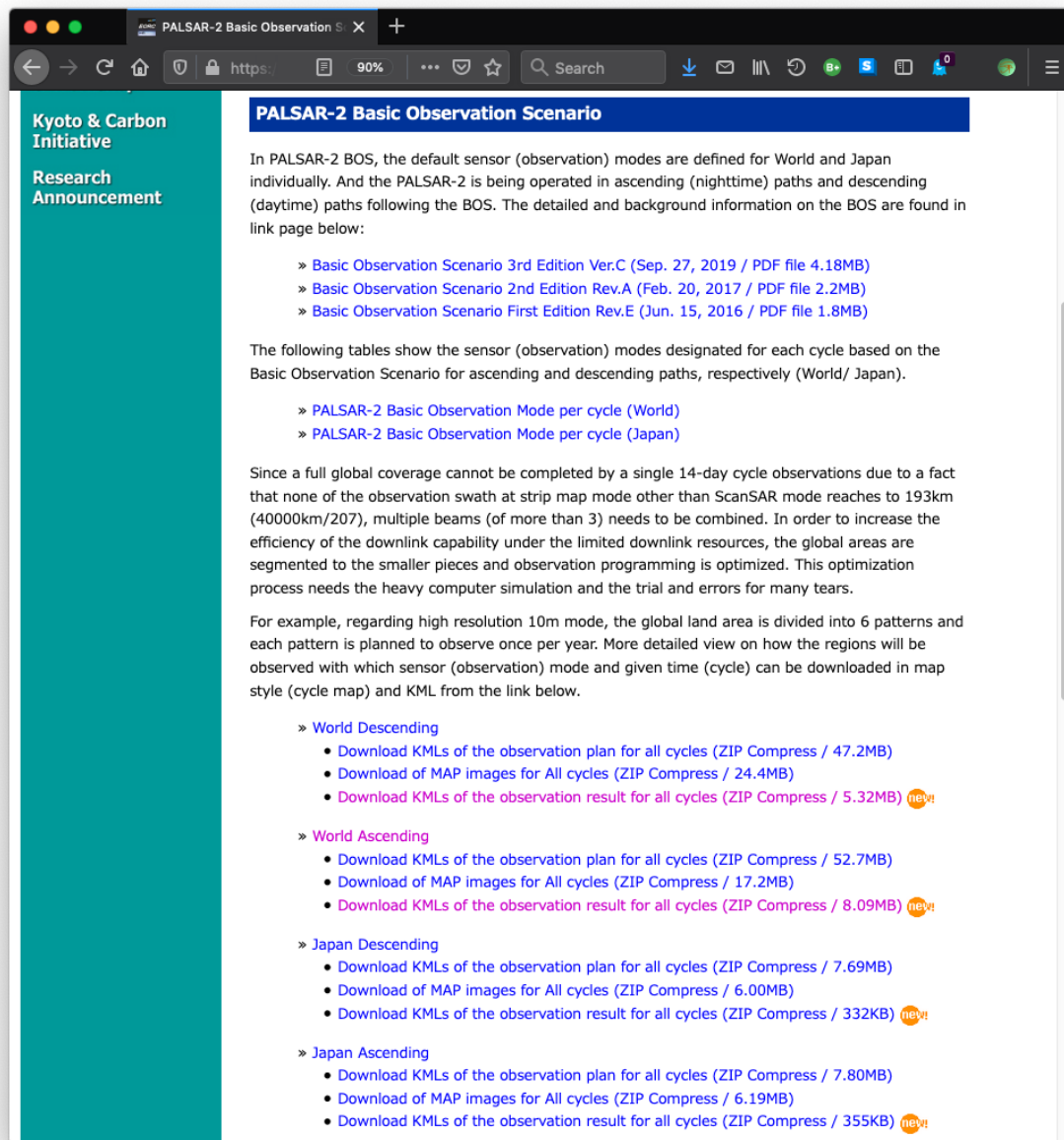


K&C Reports

Phase 4 Report updated (v Dec 2019)

Available on KC Wiki and JAXA EORC www





JAXA EORC Observation Strategy www

- BOS (future) plan
- BOS observation results
- **KML download available**

http://www.eorc.jaxa.jp/ALOS/en/top/kyoto_top.htm

ALOS Systematic Observation Strategy

Home | Sitemap | Contact us | Japanese

Advanced Land Observing Satellite DAICHI-2 DAICHI ALOS-2 ALOS

ALOS Research and Application Project of EORC, JAXA

Home > ALOS Systematic Observation Strategy

ALOS Systematic Observation Strategy

To obtain the image with spatial and temporal consistencies over sub-continental scale.

ALOS-2

- ALOS-2 observation results file during nominal operation period
- PALSAR-2 Basic Observation Scenario Map/User Guideline
 - * Upload of Basic Observation Scenario Map (by cycle) and KML.
 - * Upload KMLs of the Basic Observation Scenario results.

ALOS

- ALOS Systematic Observation Strategy
 - PALSAR
 - PRISM / AVNIR-2
- User Request Guidelines
 - PALSAR
 - PRISM / AVNIR-2
- ALOS Data Take Simulation

Japan Aerospace Exploration Agency Earth Observation Research Center
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JAXA

JAXA EORC Observation Strategy www

- BOS (future) plan
- BOS observation results
- **KML download available**

http://www.eorc.jaxa.jp/ALOS/en/top/kyoto_top.htm

K&C Wiki

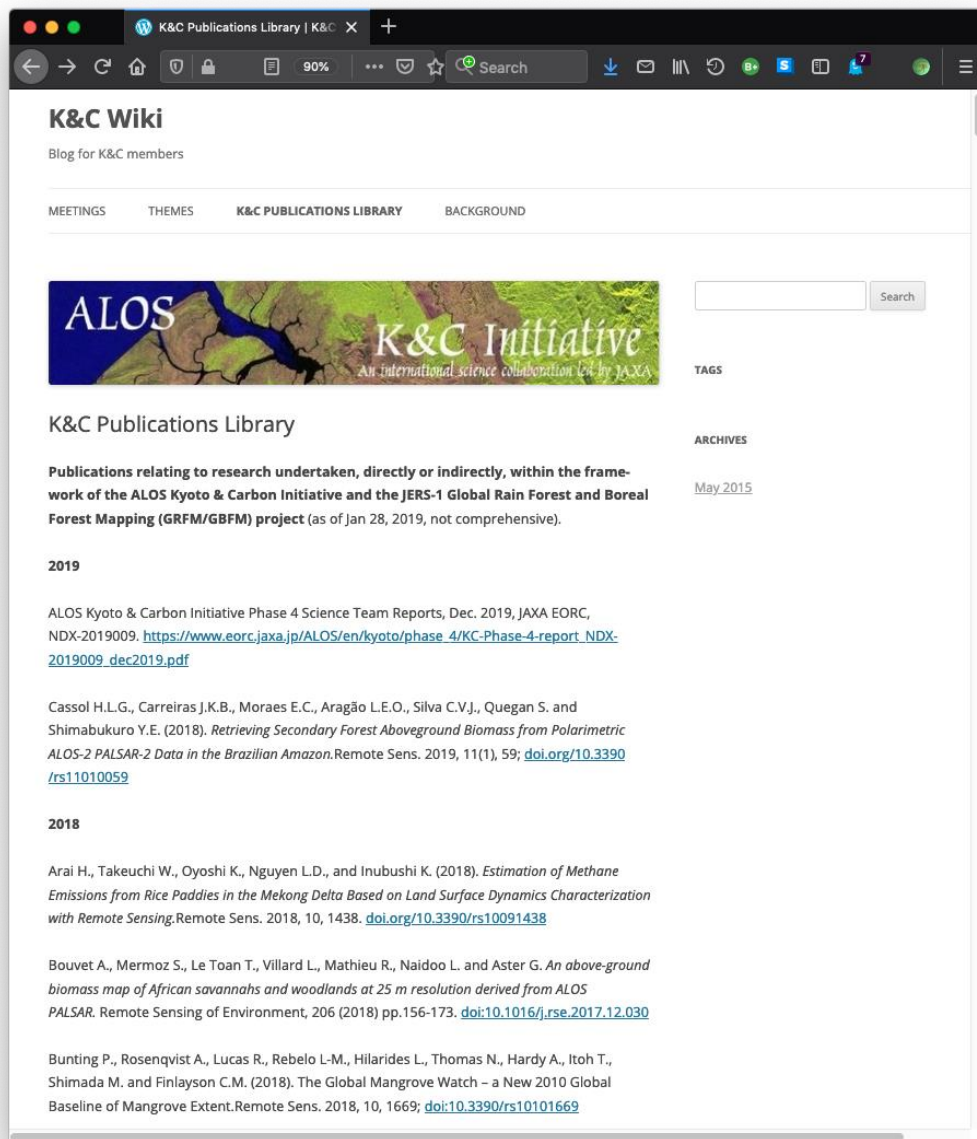
<https://kcwiki.wordpress.com/>

K&C Publications Library

Library of references to papers
relating to K&C and
GFRM/GBFM research

150+ references & PDFs from
Science Team 1996 – 2018

Please provide your 2019
publications!
(journal + conference papers)

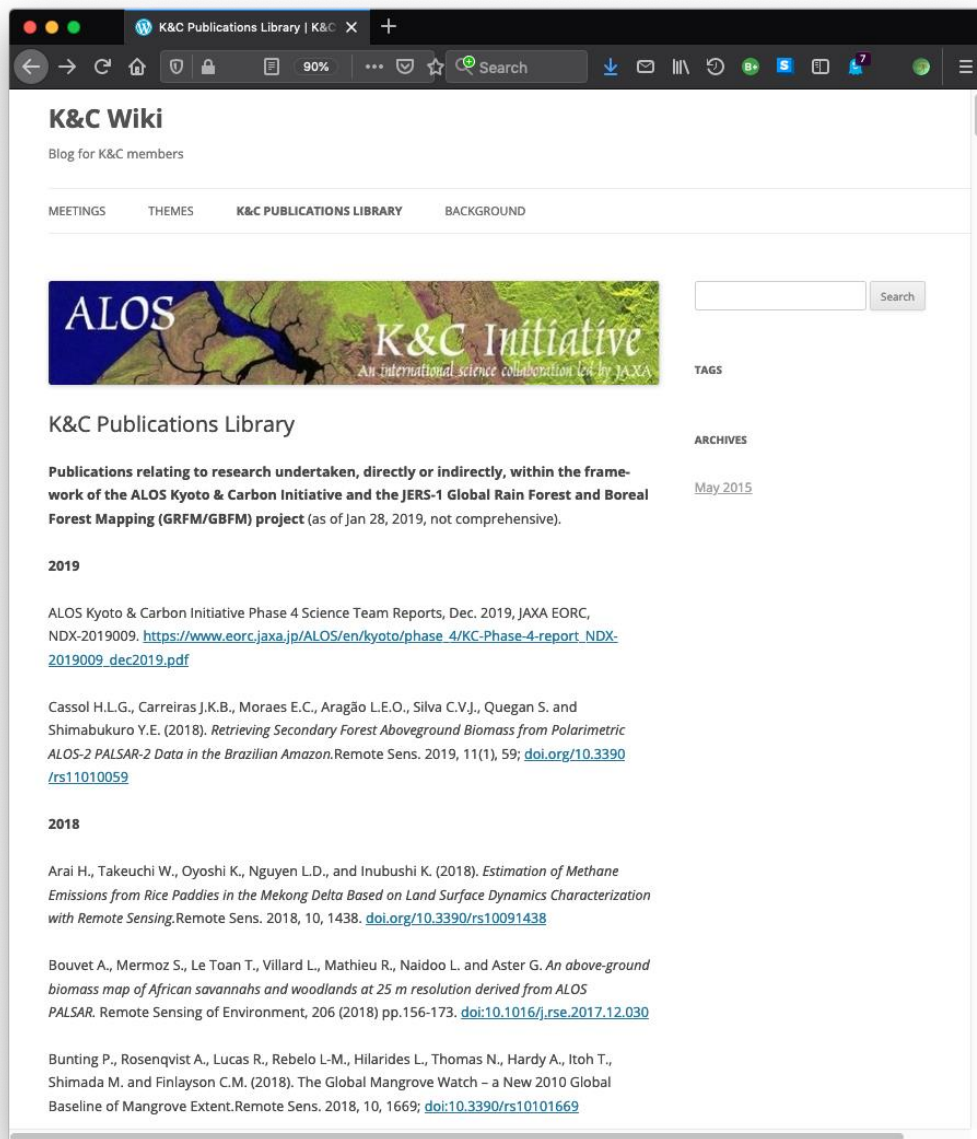


Acknowledgements

Proper acknowledgement of JAXA and the K&C Initiative in all related publications is essential.

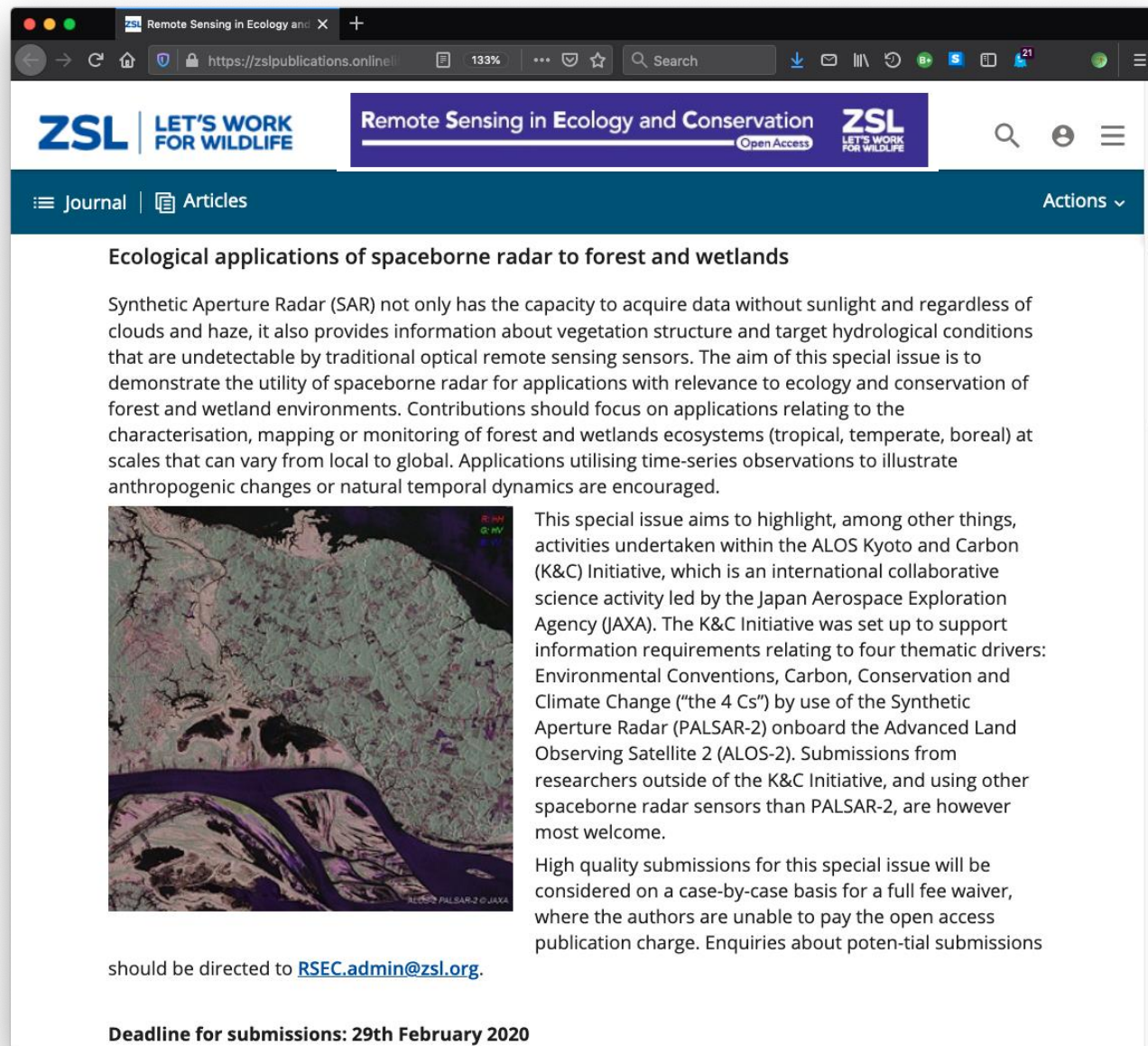
Please include the following paragraph in all publications where data obtained from the K&C have been used:

”This work has been undertaken [in part] within the framework of the JAXA Kyoto & Carbon Initiative. ALOS-2 PALSAR-2 data have been provided by JAXA EORC.”



K&C Special
Issue 2020New extended
submission deadline:

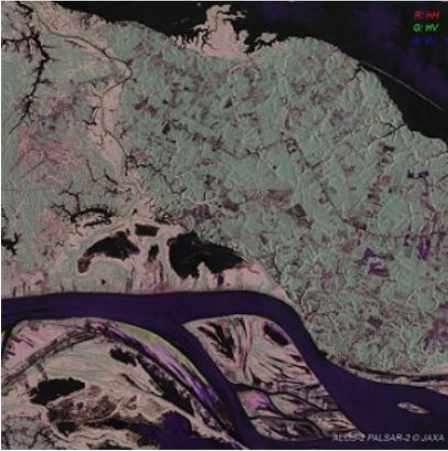
June 30, 2020



The screenshot shows the ZSL (Zoological Society of London) website for the journal "Remote Sensing in Ecology and Conservation". The page features the ZSL logo and the tagline "LET'S WORK FOR WILDLIFE". The main heading is "Ecological applications of spaceborne radar to forest and wetlands". The text describes the capabilities of Synthetic Aperture Radar (SAR) and the aim of the special issue. A satellite image of a river delta is shown. The text continues to describe the K&C Initiative and the submission process. The deadline for submissions is stated as 29th February 2020.

Ecological applications of spaceborne radar to forest and wetlands

Synthetic Aperture Radar (SAR) not only has the capacity to acquire data without sunlight and regardless of clouds and haze, it also provides information about vegetation structure and target hydrological conditions that are undetectable by traditional optical remote sensing sensors. The aim of this special issue is to demonstrate the utility of spaceborne radar for applications with relevance to ecology and conservation of forest and wetland environments. Contributions should focus on applications relating to the characterisation, mapping or monitoring of forest and wetlands ecosystems (tropical, temperate, boreal) at scales that can vary from local to global. Applications utilising time-series observations to illustrate anthropogenic changes or natural temporal dynamics are encouraged.



This special issue aims to highlight, among other things, activities undertaken within the ALOS Kyoto and Carbon (K&C) Initiative, which is an international collaborative science activity led by the Japan Aerospace Exploration Agency (JAXA). The K&C Initiative was set up to support information requirements relating to four thematic drivers: Environmental Conventions, Carbon, Conservation and Climate Change ("the 4 Cs") by use of the Synthetic Aperture Radar (PALSAR-2) onboard the Advanced Land Observing Satellite 2 (ALOS-2). Submissions from researchers outside of the K&C Initiative, and using other spaceborne radar sensors than PALSAR-2, are however most welcome.

High quality submissions for this special issue will be considered on a case-by-case basis for a full fee waiver, where the authors are unable to pay the open access publication charge. Enquiries about potential submissions should be directed to RSEC.admin@zsl.org.

Deadline for submissions: 29th February 2020

Data provision

- **AUIG2 data** (see presentation by Ms Riiko Ueno, EORC Order Desk)
 - If possible, avoid ordering during Feb & March.
 - In April, EORA2 PI ordering quota WILL BE CARRIED OVER to next JFY + New quota will be added
 - Max 10 scenes (5 ScanSAR) per order, max 2 orders/day
 - **REQUEST TO JAXA:** Increase K&C Science Team member AUIG2 scene allocation to 50 scenes/year (= same as EORA2 PIs)
- **Path data processing and provision**
 - JAXA allocation and processing schedule
 - JAXA capacity: 1000 path products/year
 - We are now accepting **KC Path Image requests for JFY 2020**. Please submit request forms by **end of February**.

Discussion points

AM session:

- FB and ScanSAR processing issues
- AUIG2 ordering
- Path data provision

PM Session:

- RSEC Special Issue

Remote Sensing in Ecology and Conservation

Open Access

ZSL
LET'S WORK
FOR WILDLIFE

- ALOS-2 “Super-Super Site” proposals
- ALOS-4 input

Re-confirmation of intent

Lead author (name & affiliation)	Provisional title
Lisa Maria Rebelo , IWMI., Sri Lanka	Mapping disturbances in protected mangrove areas 1996-2016
Richard Lucas , Aberystwyth U, UK	Sustainability measures for mangroves as assessed through integration of Japanese L-band SAR and spaceborne optical data
Mikhail Urbazaev , FSU Jena. DE	Multi-temporal statistics of L-band backscatter for forest cover and deforestation mapping
Edson Sano , IBAMA, BR	Feasibility of global forest/non-forest maps derived from X-band and L-band SAR data over the Brazilian Amazon and Cerrado
Maurizio Santoro , Gamma RS, CH	Quantifying the carbon pool of Sweden in 2010 and 2015 using spaceborne SAR observations
Nathan Torbick , AGS, USA	Assessing ecological hydropulse in the Mekong basin using multi scale Earth observations
Marcela Quiñones , SarVision, NL	Ecological Mapping Using ALOS PALSAR data - Integrated approach for definition of ecosystems in the Colombian Amazon
Pete Bunting/Henry Batten , Aber U, UK	Hotspots for Conservation of Mangroves for Africa
Martyna Stelmaszczyk , FSU Jena, DE	Ecological applications of spaceborne radar to forest and wetlands
Angelica Jaojoco , Flora and Fauna Intl. The Philippines	Combined use of L-band SAR and optical data for multi-temporal mapping of mangroves in the Philippines
Jessica Rosenqvist , CUNY, USA	Mapping of Inundation Extent in the Amazon Basin 2014-2017 with ALOS-2 PALSAR-2 ScanSAR Data
José Don De Alban , Nat. Univ. Singapore	Integrating L-band SAR and Landsat data for mapping land cover change in protected areas in the Philippines

Discussion topics

- **FB and ScanSAR mosaics**

- Geometric/radiometric accuracy
- Processing and re-processing schedule

- **ALOS-4**

- Relevant observations in NISAR/SAOCOM era. Joint KC proposal to JAXA on ALOS-4 operations to assure maximum complementarity (e.g. 1-2 global/regional QP obs?)

The soloEO CO₂ Challenge – offset your C travel footprints

Our community (EO) - with our extensive travel - emit more CO₂ than the average American!

<http://databank.worldbank.org/data/reports.aspx?source=2&series=EN.ATM.CO2E.PC&country=#>

Where to donate?

Your call. Good to select an organisation subscribing to the “Gold Standard” certification:

http://wwf.panda.org/what_we_do/how_we_work/working_with_business/climate/offsetting/gold_standard/

I offset my CO₂ emissions to The Nature Conservancy:

https://support.nature.org/site/Donation2?3901.donation=form1&df_id=3901

Where to calculate?

Several options. E.g.:

Carbon Neutral: <http://www.carbonneutralcalculator.com/flightcalculator.aspx>

United: <http://co2offsets.sustainabletravelinternational.org/ua/offsets>

Qantas: <https://www.qantasfutureplanet.com.au/>

SAS: <http://sasems.port.se/EmissionCalc.cfm?lang=1&utbryt=0&sid=geninfo&left=geninfo>

For an economy class ticket, it boils down to approx ~US\$1.25 (€1) per flight hour

→ Tokyo <--> London (return) = US\$30 (€24)

→ Tokyo <--> Bangkok = US\$15

→ New York <--> LA = US\$12

→ Frankfurt <--> Rome = €3

→ Sydney <--> Dubai = US\$38