# Monitoring of Boreal Landscape Freeze/Thaw Status in Eurasia (M. Hallikainen)

### Product Leader: Kyle McDonald

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- Reiner Zimmermann (Max-Planck-Institute for Biogeochemistry, Germany)

#### Agreement status: Pending

Preferred agreement type (individual/institutional): Institutional/Individual ?

## Project objective(s):

• Develop annual maps of landscape freeze/thaw state within the prototype areas, using dual-pol ScanSAR data, non-mosaicked path images.

• Provide estimates of thaw onset, and freeze-up to within the temporal fidelity allowed by ScanSAR coverage.

• (Support development with scatterometer and mw. radiometer data)

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<u>Prototype Area 1:</u> Finland and neighboring areas
<u>Corresponding observation plan polygon(s)</u>: D3 (part), A1 (part), A2 (part)
<u>No. PALSAR paths/coverage</u>: ~20 passes, as many overlapping swaths as possible
<u>PALSAR request (Year 1-3)</u>: Continuous coverage March-June, October-January;
One coverage February; One coverage July
<u>Input data (EORC products)</u>: PALSAR ScanSAR path images (HH; HV-pol if available)
<u>Ancillary data requests</u>: 48 JERS-1 SAR path images 1992-1997 (8 passes x 6 years)

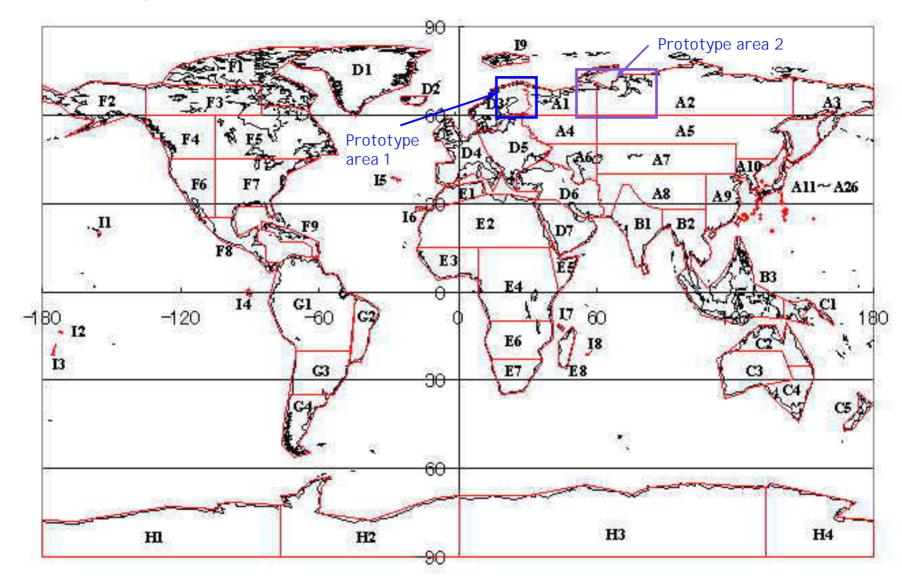
<u>Prototype Area 2:</u> Russia
<u>Corresponding observation plan polygon(s):</u> A1 (part), A2 (part)
<u>No. PALSAR paths/coverage:</u> ~20 passes, as many overlapping swaths as possible
<u>PALSAR request (Year 1-3):</u> Continuous coverage March-June, September-December;
One coverage January; One coverage July
<u>Input data (EORC products):</u> PALSAR ScanSAR path images (HH; dual pol,HV if avail.)
<u>Ancillary data requests:</u> 48 JERS-1 SAR path images 1992-1997 (8 passes x 6 years)

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<u>K&C Product Deliverables (before end of Year 3):</u>
Annual freeze/thaw state maps for prototype areas (Years 1&2)

<u>Prospects for Years 4-6 (assuming agreement extension)</u>
More intense temporal sampling of prototype areas
Extension to A1+A2+A3 depending on data availability

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Location of Prototype Areas