Title: Disturbance Maps for Boreal Forests

<u>Product Leader:</u> Christiane Schmullius

<u>Affiliation:</u> Friedrich-Schiller-University (Germany)

<u>Product Team (confirmed members only):</u>

- Thuy LeToan, CESBIO (France)
- Shaun Quegan, SCEOS (UK)
- TBD

<u>Agreement status:</u> Ready to sign when product team has been confirmed

<u>Preferred agreement type (individual/institutional):</u> Individual

<u>Project objective(s):</u>

- Develop methodology for (i) identification and (ii) spatial quantification of disturbances in boreal forests using multi-temporal, dual-pol, repeat-pass PALSAR data. Test sites in Prototype Area 2 will be used for the development.
- Application of the methodology for the whole SIBERIA-II area (Prototype Area 2), using 50 m resolution PALSAR mosaics.
- Generation of Disturbance Maps for two observation periods (summer 2005 to summer 2006 and winter 2006/07 to winter 2007/08)
- Define methods for application to the whole pan-boreal zone.

Disturbance Maps for Boreal Forests

<u>Prototype Area 1</u>: Selected test sites in the SIBERIA-II project region

<u>Corresponding observation plan polygon(s)</u>: A2 (part); A5 (part)

<u>No. PALSAR paths/coverage</u>: ~20 passes

<u>PALSAR request (Year 1-3)</u>: ~100 passes (three coverages @34.3° ; two @43.4°)

<u>Input data (EORC products)</u>: PALSAR path images (Coherence and Sigma-0, slant range, 50m)

<u>Ancillary data requests</u>: All available JERS-1 SAR images 1992-1998

<u>Prototype Area 2</u>: Central Siberia (SIBERIA-II project region)

<u>Corresponding observation plan polygon(s)</u>: A2 (part); A5 (part)

<u>No. PALSAR paths/coverage</u>: ~40 passes

<u>PALSAR request (Year 1-3)</u>: 10 full coverages

<u>Input data (EORC products)</u>: PALSAR image <u>mosaics</u> (Coherence, Sigma-0, SRTM corr., 50m)

<u>Ancillary data requests</u>: JERS-1 SAR (GBFM) mosaics from mid-1990's

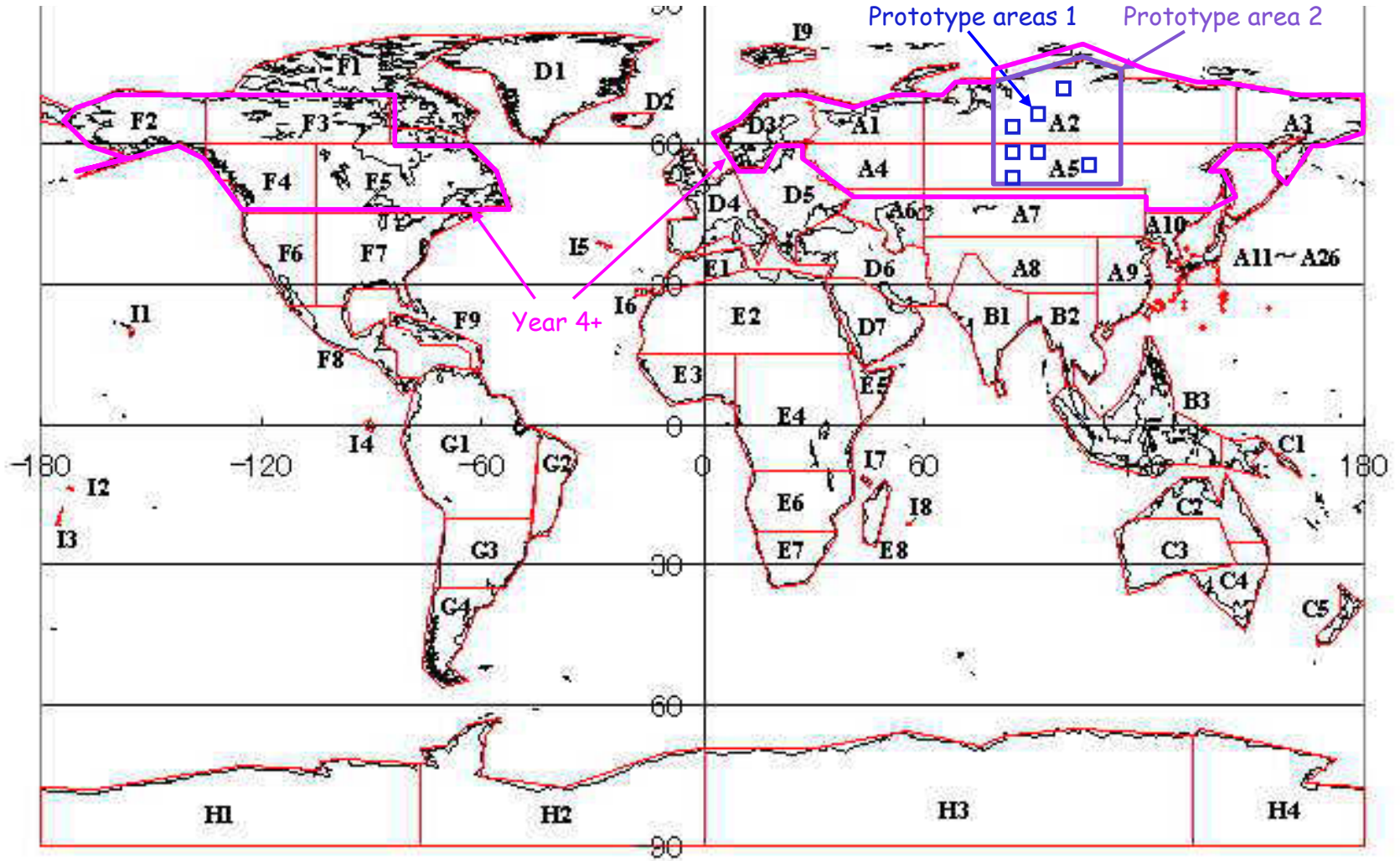# Disturbance Maps for Boreal Forests

<u>K&C Product Deliverables (before end of Year 3):</u>

- 2 Forest Disturbance Maps over central Siberia (SIBERIA-II region)
  (summer 2005 – summer 2006) & (winter 2006/07 – winter 2007/08)

<u>Prospects for Years 4-6 (assuming agreement extension)</u>

- Extension to the whole pan-boreal zone (A1-A5, D3, and F2-F5)
- Forest Disturbance Map (combined 2005-2007 and 2007-2009 depending on region)

Disturbance Maps for Boreal Forests

Location of Prototype Areas

Title: Land Cover Classification and Land Cover Change

Product Leader: Christiane Schmullius

Affiliation: Friedrich-Schiller-University (Germany)

Product Team (confirmed members only):

- Thuy LeToan, CESBIO (France)
- Shaun Quegan, SCEOS (UK)
- TBD

Agreement status: Ready to sign when product team and availability of input products have been confirmed

Preferred agreement type (individual/institutional): Individual

Project objective(s):

- Develop methodology for integration of selected K&C products (forest maps, deforestation maps, biomass maps, regrowth maps, disturbance maps and GLI land cover maps) to produce new land cover products or improve and update existing land cover products. Methods will be developed for the boreal biome.
- Application of the methodology for central Siberia (Prototype Area 2).
- Generation of Land Cover Change products for Prototype Area 2.
- Define methods for application to the whole pan-boreal zone.

Land Cover Classification and Land Cover Change

Prototype Area 1: Selected test sites in the SIBERIA-II project region

Corresponding observation plan polygon(s): A2 (part); A5 (part)

No. PALSAR paths/coverage: 0 passes

PALSAR request (Year 1-3): 0 passes

Input data (EORC products): No new data required

Ancillary data requests: K&C products: forest maps, deforestation maps, biomass maps, regrowth maps, disturbance maps and GLI land cover maps

Prototype Area 2: Central Siberia (SIBERIA-II project region)

Corresponding observation plan polygon(s): A2 (part); A5 (part)

No. PALSAR paths/coverage: 0 passes

PALSAR request (Year 1-3): 0 passes

Input data (EORC products): No new data required

Ancillary data requests: K&C products: forest maps, deforestation maps, biomass maps, regrowth maps, disturbance maps and GLI land cover maps

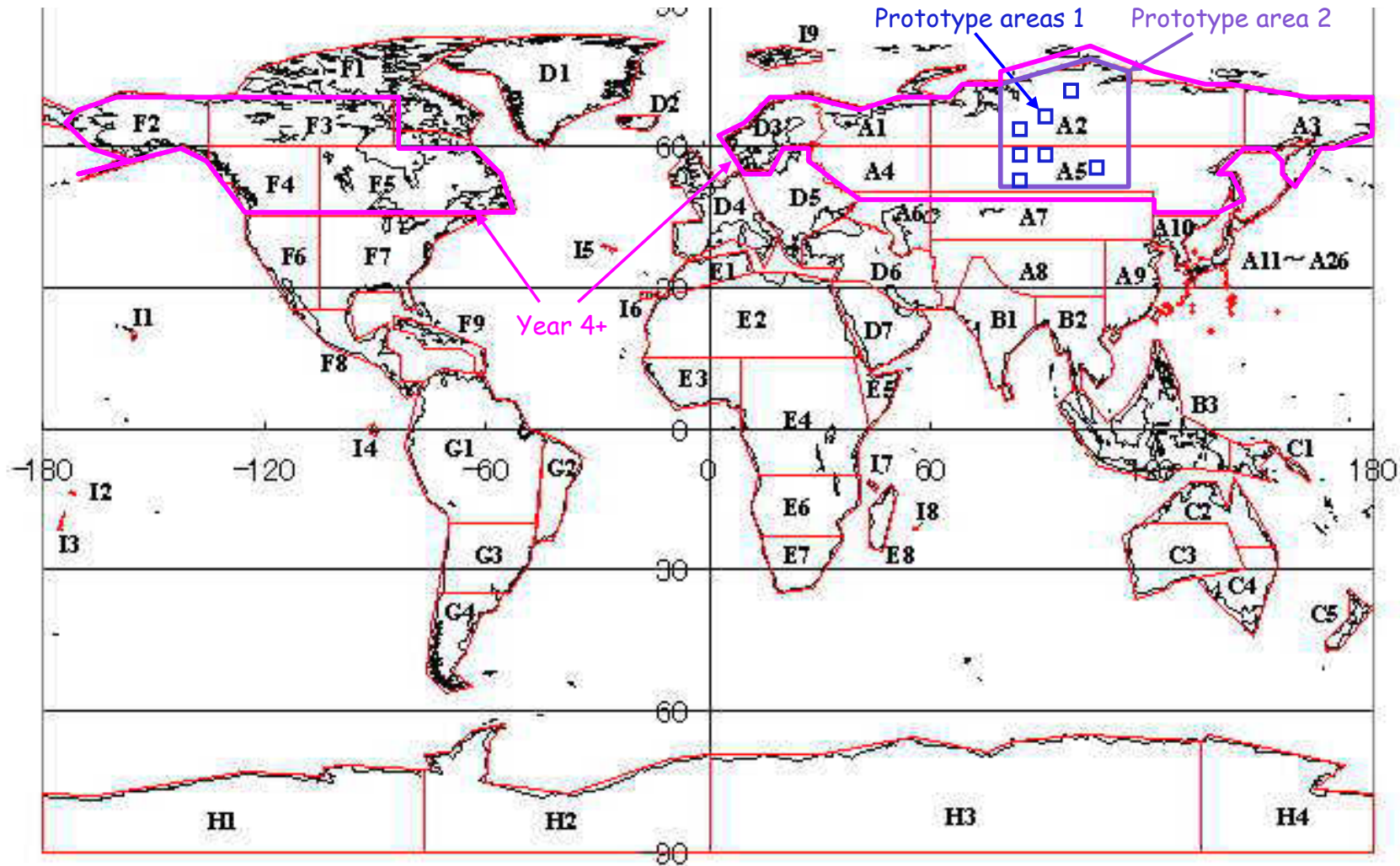# Land Cover Classification and Land Cover Change

K&C Product Deliverables (before end of Year 3):

- Land Cover Maps over central Siberia (SIBERIA-II region) from two observation periods

- One Land Cover Change Map for central Siberia (SIBERIA-II region)

Prospects for Years 4-6 (assuming agreement extension)

- Extension to the whole pan-boreal zone (A1-A5, D3, and F2-F5)

Land Cover Classification and Land Cover Change

Location of Prototype Areas