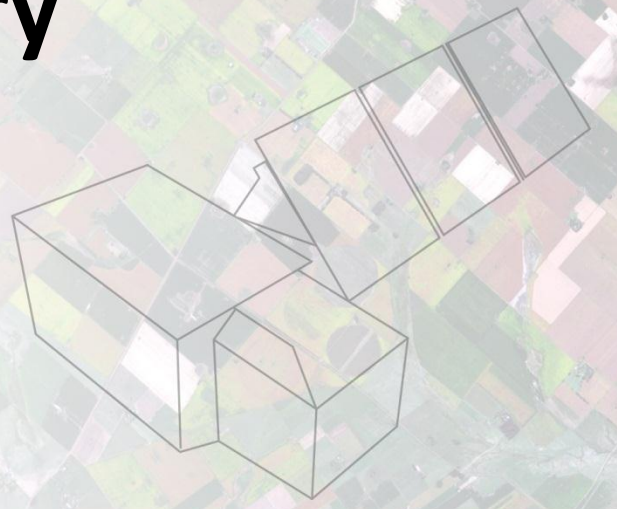
→ SENTINEL-2 FOR SCIENCE WORKSHOP

Session Summary
Forestry



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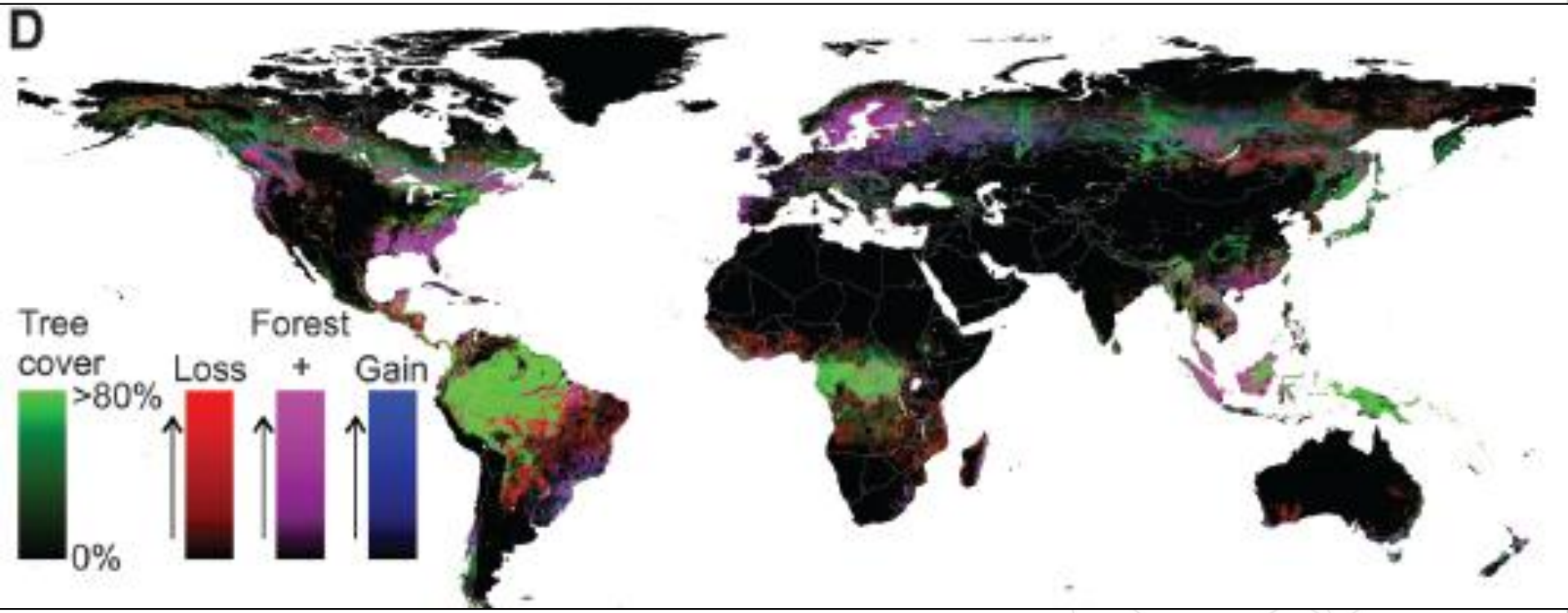
European Space Agency

Key Drivers in Forest Monitoring

1. "Operationalisation" R&D Opportunities
   - Optical Mx Time-series Data blending (eg Landsat + S2, etc.)
   - Mass-data processing in support of non-expert users (eg "bring tools to data" via e.g. Cloud-based or DataCube approaches) to deliver standard products to national governments or research users.
   - Better servicing to important global/regional initiatives: UNREDD, GFOI, WBFCPF, etc.
2. Data Exploitation R&D Needs/opportunities
   - Optical + SAR Interoperability (eg tropical forest mapping)
   - Primary vs. secondary forest mapping
   - Use of additional spectral dimensions of S2 (+L8): Red-edge, biophysical variables
   - Better integration with forest growth models
   - Forest Degradation products
   - Forestry-specific products
   - Biodiveristy & Conservation Variable (EBV's)

Highlight since S-2 symposium of April 2012:
Global forest product derived from full Landsat TM database



High-Resolution Global Maps of 21st-Century Forest Cover Change

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Forestry Sessions

10 oral presentations

- Monitoring tropical deforestation and forest degradation in REDD+ context (Gabon, Southeast Asia, Brazil, Mexico, DR Congo, Rep of Congo, Southern Africa)
- Forest inventory (Germany, France), forest disturbance (Romania)
- Data management system for REDD+
- assessment S2 potential in change detection from combined L7 and Rapideye

17 posters

- Leaf phenology (US)
- Forest structure and conditions (Finland, Europe, Ireland, Urban areas, Bulgaria, Romania)
- Forest inventory and monitoring (Canada, Germany, Baltic countries)
- Tropical forest assessment and monitoring (West Africa, Eastern Amazon)
- Forest fluxes modeling (Finland/Russia)
- Decision Support system

Potential Seed Questions

1	**Which further research is needed?**
2	**Which further retrieval techniques need to be developed?**
3	**What needs to be done to prepare for S2 interface with 3D/ray tracing structure modeling?**
4	**Which new tools are needed?**
5	**Are there requirements for High Level Products beyond Level-2A? Eg. Quantitative pigment concentration, MTCI**
6	**Do you expect any difficulties related to the large volume of data, and how can these be mitigated?**
7	**What needs to be done to use Sentinel-2 in synergy with other satellite missions?**
8	**Which opportunities arise in using Sentinel-2 with the existing long time series of high resolution data (Landsat, SPOT, etc)?**
9	**What are the benefits of the improved revisiting capacity (5 days with 2 satellites)?**
10	**What are the benefits of the improved spectral information content (e.g. red edge)?**