Land ECVs: common science benefits

- **Contribution to climate models:**

  - **Land Cover: parameters, land surface dynamics, land cover change.**

  - **Fire: GHG emissions, vegetation dynamics.**

  - **Soil moisture: Feedbacks water-energy-carbon cycles.**

  - **Glaciers: surface fraction**

  - **Ice Sheets: topography, albedo, freshwater fluxes to the ocean.**

Land ECVs: common science benefits

- **Relations with other ECVs:**

    - **Land cover: fire, glacier-ice mask, soil moisture. Potentially, aerosols, clouds.**

    - **Fire: aerosols, GHG, land cover.**

    - **Soil moisture: clouds, land cover, sea level, GHG, SST, fire.**

    - **Glaciers: Sea level, land cover, ice sheet.**

    - **Ice sheets: Sea level, sea ice, glacier.**

Land ECVs: common issues

- **Data accesibility.**

- **Data bulk processing (all).**

- **Share pre-processing:**

  - Geometric correction (land cover – fire).

  - Common masks (water – cloud): land cover, fire, glaciers, ice sheets.

- **Consistency in temporal trends.**

- **Validation protocols?**

- **Output formats, metadata and tiling (land cover – fire).**

CCI Project Integration Meeting - 14-16 May 2012

Success stories

- **Land cover: unique inland water mask.**

- **Fire: validation dataset.**

- **Soil moisture: 30+ years of data generated.**

- **Ice sheets: contribution to IPCC reports.**

- **Glaciers: major contribution to IPCC report.**

Added value of ECV

- **Land cover: consistent land cover state and condition.**

- **Fire: Merging product,**

- **Soil moisture: First of its kind.**

- **Ice sheets: Temporal trends, additional parameters not available before.**

- **Glaciers: datasets not available before.**

- **All: uncertainty characterization; systematic validation.**

- **Land cover: September 2012 (2010) .**

- **Fire: August, 2012 (2008).**

- **Soil moisture: June 2012 (1978-2010).**

- **Ice sheets: TBD.**

- **Glaciers: February 2012 (1950-2010).**

Meeting the requirements of modelers

- **Land cover: .**

- **Fire:**

- **Soil moisture:.**

- **Ice sheets: .**

- **Glaciers: sea level modelling community (fully engaged): 85 users.**