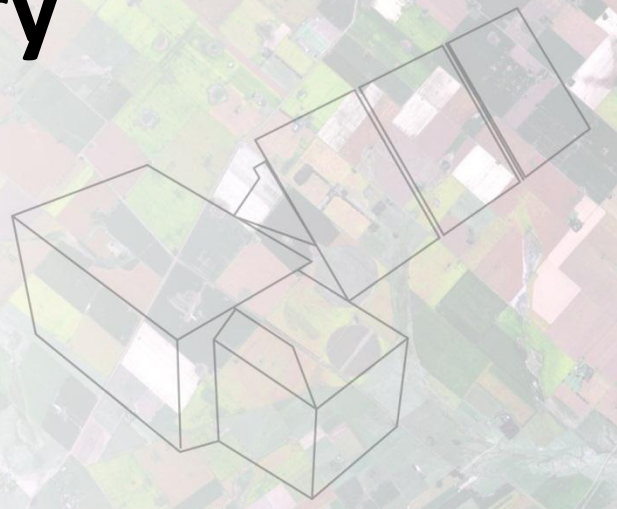
→ SENTINEL-2 FOR SCIENCE WORKSHOP

Session Summary
Land Cover



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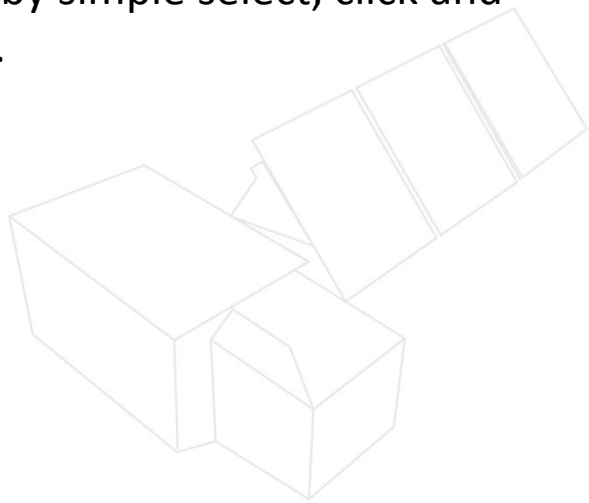
European Space Agency

2012 recommandations

There is a need to remove the data preparation burden from the users in order for them to spend less time in preparing the data and more time in processing them. The access to Sentinel-2 data would also be facilitated if Sentinel-2 data products are also available in GIS compatible format such as GeoTiff format.

A single portal that would work as the virtual repository of all collections of Sentinel-2 data, globally is highly desirable for the land cover community. This Sentinel-2 Portal should provide for easy access to all collections of S2 products by simple select, click and download functionalities. Batch access should also be enabled.



2012 recommandations

Id	Recommendations
1	Free and open data policy
2	Straightforward and efficient data access
3	Timely launch of Sentinel-2 B unit
4	Sentinel-2 Level 3 products
5	Sentinel-2 L1C simulated products
6	Inter-sensor calibrations
7	Sentinel-2 validation data sets
8	Time Series Analysis Methods
9	Mosaicking Tools / Mosaic Products
10	Compositing Tool / Composite Products
12	Atmospheric correction tools
13	Sentinel-2 data formats
14	Surface Reflectance Products
15	Cloud / Cloud Shadow screening tools
18	Sentinel-2 – Landsat interoperability
19	Use of “best available” Digital Elevation Models (DEM)

1. What are the priorities to remove the data preparation burden from the users ?

2. What are the priority science bottlenecks to be addressed by Sentinel-2 mission for operational land cover monitoring ?

3. What is the required validation effort to assess the output of the Sentinel-2 mission ?

4. What are the issues to be investigated towards a Landsat 8 – Sentinel 2 synergy ?

5. How to get ready for the big data paradigm ?

1. The demand for S2 for land cover information on the global scale was repeatedly emphasized
   - The work horse for many multilateral environmental agreements (MRV, ECV incl. land cover change, lake area, glaciers… slow change, such as forest degradation and desertification), for development cooperation (food security, surface water…) and for national needs (from cadastre to land policy)
2. Need for a science agenda
   - development for S2 exploitation for urban applications, land take, forest characterization, quantitative biophysical variables retrieval, in situ data for validation
3. Access to data processed to Level 2 underpins the above

4. Alignment with other systems (especially L8) is critical to meet temporal sampling requirements. Thus cross-validation of S2 L2 and L8 products is required (DEM compatibility, surface reflectance compatibility, cloud detection – with and without thermal)
5. Access to L2 products must be easily assured on large scale (bandwidth, data identification and downloading), inc. archived data
6. web enabled access to L3 products incl. composites at weekly, monthly, seasonal and annual periods should be provided. Other L3 products, may follow
7. Greater synergy with Sentinel 1 data needs to be promoted – especially for critical regions where optical image acquisitions are challenged