

GOFC-GOLD Land Cover Implementation Team Teleconference 12. July 2007, 10.30 EDT

Participants: Frederic Achard, Sergey Bartalev, Michael Brady, Matt Hansen, Martin Herold, Eric Lambin, Erin Naydenov, Hakan Olsson, Jaqueline Sambale, Chris Schmullius, John Townshend, Espen Volden, Curtis Woodcock, Mike Wulder

Highlights and Action Items

- Next Land Cover IT meeting scheduled for 24-26 October 2007 at Boston University
- Africa Regional networks to meet in November at Ghana
- GOFC-GOLD prepares for the GEO Ministerial Summit and UNFCCC COP13 presence
- Summary and discussion of current activities

Details

Curtis Woodcock opened the teleconference by informing about regular at least quarterly GOFC-GOLD IT teleconferences to keep everybody aware about activities and foster joint IT efforts.

1) Report from LC-IT chairs, membership, general GOFC developments and communication within the implementation teams

Michael Brady informed about GOFC-GOLD developments. Tony Janetos has recently been confirmed as new GOFC-GOLD Chair following John Townshend's 6 year term. Curtis Woodcock, on behalf of the LC-IT, thanked John for his efforts. GOFC-GOLD is in a strong position and maintains continued support from the Canadian Forest Service, the Canadian Space Agency, NASA/START and ESA.

2) Upcoming meetings and events

There was agreement to hold the next LC-IT meeting 24-26th October 2007 at Boston University. The meeting should focus on specific activities; in contrast to the symposium-style format at the last meeting in Jena. The planning and agenda drafting should start soon and be based on the activities discussed in the telecon. Michael confirmed that limited travel funding will be available for LC-IT members to participate.

Michael summarized the plans for the GOFC-GOLD African Symposium planned for 12-16 November in Accra, Ghana. Two events will take place in the same week: a three day West Africa Regional Network (WARN) meeting, followed by a two day Fire IT sponsored meeting on fire early warning systems in Africa. The WARN meeting will involve regional scientists and members of the 3 other African regional networks. There is an organizing committee in place with Philippe Mayaux and Dave Skole representing the LC-IT. A detailed program will be distributed soon. LC-IT members with Africa interests are encouraged to participate in this event; interest was indicated by Matt Hansen.

3) LC-IT activities (see Appendix A for additional documentation):

3.1) Proposals for joint global land cover validation and evolving a "best available" map

The idea of a joint validation effort to develop a "best available" global land cover map was advocated at the last LC-IT meeting in Jena. Core effort would be a universal and operational validation including existing and future global land cover maps. Curtis summarized the ideas and plans and how such activity would be a joint effort of the land cover team and the regional networks.

3.2) Report on GEO initiative on global land cover

Martin discussed GOFC-GOLD involvement in GEO through participating and leading a number of related GEO work plan task (see GEO task matrix in Appendix A). One task led by USGS and GOFC is focused on global land cover (DA-07-02). A small workshop led by the LC-IT was held in early April'07 in Washington

DC to refine the work plan and specify the activities. The task team proposed "Global land cover" as one GEO early achievement to be presented at the ministerial summit in November 2007. The team was invited to contribute to a PR-type high-level GEO publication book prepared for the summit ("The full picture" published by Tudor Rose). There was agreement among the team that financial support for the preparation and distribution of such a book would be a key GOFC-GOLD capacity building and outreach activity for this fiscal year. Based on this decision Michael noted that related resources on the order of 10K\$ would be available from the GOFC project office.

3.3) Report on progress in the area of reducing emissions from deforestation

Since 2005, a GOFC-GOLD working group is providing technical input for monitoring deforestation to UNFCCC negotiations on reducing emissions from deforestation (REDD). Frederic discussed recent progress made at the GOFC workshop in Bolivia (April 2007) and the last UNFCCC-SBSTA (May 2007) with a joint ESA/GOFC side event on this issue. Current activities involve the development of a technical sourcebook for REDD implementation (to be presented at COP13), a special issue summarizing the current technical and scientific status, and the plans for presence at COP13 in Bali.

3.4) Mid-decadal and Decadal global Landsat datasets

NASA is currently preparing the next Geocover dataset from Landsat data for 2005-2007. The project involves three phases and the dataset should be available in fall 2008. NASA has allocated a budget for using this new dataset for global land cover studies. Frederic emphasized the importance and timely need for this dataset to complete the remote sensing survey for FRA2010. Some data gaps are expected and should be identified and filled with additional satellite observations; an issue that has been advocated to CEOS.

3.5) Progress in global land cover datasets

Frederic reported on recent GLOBCOVER progress. The MERIS image data have been processed and a recent user feedback meeting (with GOFC LC-IT participation) has commented on the quality of the bimonthly mosaics. A version 1 draft map is expected in late November 2007. Frederic informed about plans for follow up versions of GLOBCOVER with improved input data. Chris Schmullius mentioned some of the feedback provided for the GLOBCOVER mosaics. There are concerns about the current version 1 validation strategy. GLOBCOVER validation should be included in the GOFC global validation efforts and involve the regional networks. Curtis mentioned that the new MODIS global land cover map with 500 m should be completed and available within a short time frame.

3.6) Planned effort to define the "best practices" for validating land cover change

Following the effort for "best practices" in global land cover validation, the LC-IT has started activities to evolve a similar task for land cover change. Curtis suggested to technically discuss this issue at the LC-IT meeting in Boston. Espen Volden mentioned a recent validation workshop of the GSE forest monitoring service cases. Their consensus on validating land cover and land cover change will be documented soon and could be a valuable input to the upcoming discussions within the LC-IT.

3.7) Land Cover Classification System (LCCS) and recent developments

Curtis has provided comments on the current LCCS version to the development team at FAO. The FAO response requires further discussion and considerations, in particular since LCCS is close to become an ISO standard. The GEO DA_07-02 working group proposed to set up a review board to collectively guide comments and feedback on LCCS from the community.

3.8) UNFCCC standards for essential climate variable's - land cover

The UNFCCC SBSTA has requested GTOS to prepare standards for reporting on the essential climate variables (ECV, see GCOS implementation plan) including land cover. The standards will be presented to the UNCCC at COP13 in Bali. A first draft of the land cover ECV is available online and GOFC-GOLD has been

invited to provide feedback and edit the current draft. Given the time constraint (COP13), this effort has to start soon and should be completed latest at the Boston meeting.

3.9) IGOL progress

John Townshend described the successful presentation of the Integrated Global Observations for Land (IGOL) document to the IGOS P plenary meeting in May???. The report was well received. John has been asked to now coordinate the transition of IGOL into GEO. The LC-IT will be involved in this process to ensure the proper reflection of all IGOL goals in the future and to avoid any parallel activities. John mentioned the area of observing “land use”, which should receive more attention in the future.

3.10) FRA2010 status

Frederic and Matt reported on the FRA2010 remote sensing survey. FAO has received green light at the recent COFO meeting to move ahead with the survey. However, overall progress has been slower than expected. JRC will implement the high-resolution sample survey for Europe and all the tropics. Methods are being prototype and ultimate implementation depends on the mid-decadal Landsat survey data. Matt’s group has made significant progress for global forest change estimates using moderate resolution data.

3.11) Support of new sensors

Curtis and Mike reported on Landsat science team activities. The contract for the Operational Land Imager instrument of the Landsat Data Continuity Mission (Landsat 8) has been awarded and the expected launch date is 2011. There are current discussions whether Landsat 8 will include a thermal band. All Landsat 8 data will be processed and available for free and Tom Loveland from the LC-IT is the project scientist, while Curtis and Mike are on the team. Further related activities have been aimed at making the full Landsat archive freely available. Chris and Martin mentioned the plans for the ESA BIOMASS mission. The P-band sensor is in planning phase and in direct competition with non-land mapping missions; and thus the GOFCLC land cover office is supporting this activity.

3.12) Russia forest inventory and IPY Workshop on arctic monitoring

Hakan and Sergey mentioned their involvement in the new Russian forest inventory. Due to legal changes in Russia a new inventory will be implemented, heavily drawing upon satellite observations. Hakan is involved as technical adviser from Sweden. Sergey’s group has received funding to perform the moderate- and fine-resolution data analyses for forest change and fire.

Hakan reported on a series of workshops during the International Polar Year, which aim to define Sustained Arctic Observation Networks. This process originates from the Arctic Council, but the ideas are very similar to GEO and a merge with GEO should be anticipated. The first IPY workshop on Sustaining Arctic Observing Networks will be held November 12–14th, 2007, in Stockholm, Sweden. Appendix A contains a link to more information.

3.13) SIBESS-C and Dragon/China forest monitoring

Chris informed about progress made in the ESA Dragon program. A forest map for North-Eastern China has been completed using ERS1/2 tandem data. The program will continue and expanded to other regions in China. Furthermore, the prototype SIBESS-C database is now online. It offers access to a number of earth observation products for the Siberia region.

6) Other business

John raised the issue of membership and obvious gap of LC-IT members from East Asia. He suggested finding an appropriate candidate in the near future.

Michael emphasized the GOFCLC Science and Technical board meeting planned for 2008. Curtis highlighted the Boston meeting on the focus on actual tasks and need to soon start the agenda development. In that context,

John stated that most successful efforts in the past have been timely, specific and high-profile activities that benefit from international coordination and this should be considered for defining priorities.

The next LC-IT teleconference is scheduled for 15. November 2007.

M.Herold, GOFC-GOLD Land Cover Project Office, 18.7.07

Appendix A: Detailed information and documentation for activities:

3.1) Proposals for joint global land cover validation and evolving a "best available" map (Curtis Woodcock)
See last LC-IT meeting report: http://nofc.cfs.nrcan.gc.ca/gofc-gold/Report%20Series/GOLD_28.pdf

3.2) Report on GEO initiative on global land cover:

GOFc-GOLD GEO task management matrix:

<http://www.geogr.uni-jena.de/~c5hema/GEO%20Task%20Management%20Matrix%20may07.doc>

GEO DA-07-02 Task sheet (July 2007): <http://www.geogr.uni-jena.de/~c5hema/telecon/DA-07-02new.doc>

Global land as early achievement (July 2007):

http://www.geogr.uni-jena.de/~c5hema/telecon/geo_achievement_global_land_cover.pdf

3.3) Report on progress in the area of reducing emissions from deforestation

GOFc-GOLD Bolivia workshop agenda and presentations online: <http://www.gofc-gold.uni-jena.de/sites/bolivia07.php>

Presentations given at the joint ESA/GOFc SBSTA side event:

http://regserver.unfccc.int/seors/reports/events_list.html (scroll down to ESA side event)

Paper published by GOFc working group: <http://www.geogr.uni-jena.de/~c5hema/ENVSCI557.pdf>

3.4) Mid-decadal and Decadal global landsat datasets

Update on status: <http://mdgls.umd.edu>

3.5) Progress in global land cover datasets (i.e. GLOBCOVER)

Presentation by Olivier Arino on status (June 2007): http://www.geogr.uni-jena.de/~c5hema/telecon/02_Arino_globcover_status.pdf

Envisat conference paper: http://www.geogr.uni-jena.de/~c5hema/telecon/Arino_Globcover_ENVISATSYMPOSIUM.pdf

GLOBCOVER data access: <http://ionia.terradue.com/>

3.6) Planned effort to define the "best practices" for validating land cover change (Curtis Woodcock)

3.7) LCCS and recent developments

GLCN News Bulletin: www.glcnet.org/news

ISO conference at FAO: <http://dwms.fao.org/isomeeting/index.htm>

3.8) UNFCCC standards for essential climate variable's - land cover

Current draft: <http://www.fao.org/gtos/ECV-T09.html>

3.9) IGOL progress and presentation to IGOS-P

<ftp://ftp.geog.umd.edu/pub/jtownshe/IGOL/>, version submitted to IGOS P: IGOL Version 5.6-2 DRAFT-2.doc

Slides presented at IGOS-P plenary:

<http://www.geogr.uni-jena.de/~c5hema/telecon/IGOL%20IGOS-P%20May%2029th%2007%20Distribution.ppt>

3.10) FRA2010 status

GOFc-GOLD LC newsletter: http://www.gofc-gold.uni-jena.de/documents/newsletter/GOFc-newsletter_no12.pdf

3.11) Support of new sensors (i.e. LANDSAT-8, ESA-BIOMASS, NASA-LIDAR/SAR)

Landsat Data Gap Studies: <http://calval.cr.usgs.gov/LDGST.php>

Initial Data Characterization, Science Utility and Mission Capability Evaluation of Candidate Landsat Mission Data Gap Sensors

http://calval.cr.usgs.gov/documents/Landsat_Data_Gap_Studies/Landsat_Data_Gap_Study_%20Technical_Report6.pdf

ESA BIOMASS mission: <http://www.cesbio.ups-tlse.fr/us/indexbiomass.html>

NASA Desdyni: <http://desdyni.jpl.nasa.gov/>

3.12) Russia forest inventory and IPY Workshop about arctic monitoring

Russia forest inventory information: http://www.geogr.uni-jena.de/~c5hema/telecon/Russian_NFI.pdf

IPY Workshop draft announcement: <http://www.geogr.uni-jena.de/~c5hema/telecon/IPY-workshop12-14nov07.pdf>

3.13) SIBESS-C and ESA Dragon

SIB-ESS-C information and data access: <http://www.sibessc.uni-jena.de/>

ESA Dragon project update: <http://earth.esa.int/dragon/>