

Diversity II Newsletter Issue 4



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The **Diversity II** project will contribute to the work of the Convention on Biological Diversity by assessing biological diversity in two important ecosystems of the Earth, **Inland Waters** and **Drylands** using satellite data.

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News

2nd Dryland User Consultation Meeting in Bonn, Germany, July 2014

Experts from UNCCD, SCBD, GEOBON, JRC, national focal points and other scientists met to discuss land productivity indicators. The workshop was considered a big success in reflecting on the essential questions of how to implement which products for the UNCCD and CBD reporting duties. In this way it was extremely useful for the further definition and dissemination of the project outcomes for drylands.

2nd Lake User Consultation Meeting in Frascati, Italy, May 2014

The 2nd Lake User Consultation Meeting was an opportunity for stakeholders of lake ecosystems to express suggestions and concerns for further elaboration of the product specifications, and to understand how these products can be used to assess lake condition responses to environmental change

Qualification and Acceptance Review meeting in Innsbruck, March 2014

The objective of the meeting was the verification that the end-to-end processing chains are ready for the production.

Prototype products release, March. 2014

Get access to the prototype products at www.diversity2.info

Critical Design Review meeting in Hamburg, Dec. 2013

The principal objective of the CDR was the review and approval of the Technical Specification supported by the prototype products and validation.

Calendar

The first phase of the project is characterized by analysis of user requirements and algorithm state of the art, prototyping and algorithm validation.

- *Sept. 2012: Kick-off*
- *Oct. 2012: Side event at COP 11*
- *Dec. 2012: System Requirements Review*
- *April 2013: System Requirements Review 2*
- *June 2013: User Consultation Meeting*
- *June 2013: Preliminary Design Review*
- *Aug. 2013: Living Planet Symposium*
- *Sep. 2013: Pre Critical Design Review*
- *Dec 2013: Critical Design Review*

In the second phase a data set comprising 10 years of ENVISAT data and including MERIS FR, AATSR, ASAR and RA data will be processed to biodiversity indicators and validated together with users.

- *March 2014: Prototype products available*
- *March 2014: Qualification and Acceptance Review*
- *May 2014: 2nd Lake User Consultation Meeting*
- *July 2014: 2nd Dryland User Consultation Meeting*
- **October 2014: COP 12**
- **Autumn 2014: Final products release**
- **Autumn 2014: Service Demonstration Review**
- **December 2014: Final Review**

Outcome of the 2nd Dryland User Consultation Meeting

The 2nd Dryland User Consultation Meeting was hosted by the UNCCD secretariat in Bonn and took place from July 7 to July 9. It was conceived as a workshop called "Workshop on Land Productivity Indicators for Drylands" and was attended by approximately 20 experts including UNCCD staff, national UNCCD focal point representatives, the CBD representative on drylands, GEOBON, the Joint Research Centre, the European Space Agency as well as the project consultants and project staff.

The agenda started out with introduction presentations from ESA and project sides, and reviews of the activities and information needs of the UNCCD, CBD, as well as GEO BON and CEOS Biodiversity (7th of July). The second day was dedicated to presentations of remote sensing experts from DLR, JRC and various universities, as well as regional representatives, and a detailed review of the activities and results obtained up to now in the dryland part of Diversity II. An important and often recurring topic of presentations and discussions was the question of how far in their classification and assessment the offered Earth observation based products related to land productivity and condition should go, and how they can be integrated into the national settings of the countries, which are partly quite remote from Earth observation experiences.

The last day, 9th of July, was used for a review of the Diversity II approaches and proposals for final, "second order" products. Some suggestions and ideas previously made by the participating experts were integrated in this presentation and further discussed. Further on, the planned ongoing activities of ESA and Copernicus in the EO data segment, especially the Sentinels, and the service segment were presented with a view to their significance for ongoing activities on drylands.

The participants agreed that the workshop was very helpful in reflecting on the essential questions of how to implement which products for the UNCCD and CBD reporting duties. In this way it was extremely useful for the further definition and dissemination of the project outcomes for drylands.

The project is absolutely grateful to the UNCCD responsible and all participants for making this happen.

Dryland demonstration sites



Fig 1. The figure shows all Dryland demonstration sites (brown areas). The 5 test sites (highlighted) have been selected for their representativeness of the drylands biodiversity, principally but not exclusively selected amongst the WWF ecoregions, and for the availability of in-situ observations.

Outcome of the 2nd Lake User Consultation Meeting

The Lake User Consultation Meeting jointly organized by the Diversity II and GloboLakes projects in Frascati (Italy) on May 19-20 was a great success thanks to the valuable support by all participants. Talks by biodiversity specialists, representatives of national environmental agencies and remote sensing specialists prepared the ground for discussions on the further development of inland water specific value added products and higher order indicators from EO data. In addition, a hands-on tutorial was held with the current monthly and yearly Diversity II water quality products. General conclusions for the further continuation of Diversity II and GloboLakes are:

- Trends in water quality and phenology parameters can be resolved by the EO products, which provide for sparsely monitored lake ecosystems a unique view on recent environmental changes.
- The primary production of a lake is the prime ecology and eutrophication indicator, and a key parameter in estimating ecosystem biodiversity potential. Information on Chl a concentration and portion cyanobacteria, provided by the EO products, support the estimation of primary production. This is considered the key information required by lake managers and biodiversity experts to support their work.
- The presented monthly and yearly products bear a large potential for various user groups. They will be used by user communities to gain experience and for providing recommendations for future evolution.
- The ingestion in ecosystem models should be considered to verify the relationship between the retrieved water quality parameters and population dynamics the distribution of species and habitats in freshwaters.

Inland Waters demonstration sites



Fig 2. The figure shows all preliminary Inland Waters demonstration sites (blue circles). The 10 test sites (highlighted) have been selected for the quality of their lake monitoring programs and because they are representative of the diversity in lake water conditions.

Please visit the project website for more information, <http://www.diversity2.info>



Diversity II is an ESA Data User Element Project

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