Newsletter

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Welcome

Welcome to the second issue of the GlobWetland Africa Newsletter.

Since the last newsletter, the technical team has been very busy in reviewing the user requirements and the technical specifications for the GlobWetland Africa toolbox including testing the best methods for the end-to-end processing workflows to be implemented in the toolbox. We present here a short summary of these efforts.

In this Newsletter, we would also like to highlight the active role played by GlobWetland Africa in defining Earth observation as a "best practice" tool for inventorying, mapping and monitoring wetlands (STRP Task 1.1) and in contributing to the community engagement to and early development of the Global Wetlands Observing Systems (GWOS) in response to the Target 14 of the 4th Ramsar Strategic Plan (Scientific guidance and technical methodologies at global and regional levels).

We are looking forward to the presentation of the beta release of the GW Africa Toolbox and associated products at the first User Workshop, currently scheduled for mid-June 2017 at the Ramsar secretariat in Gland, Switzerland.

We hope you find the information useful and please feel free to distribute to your wider network. Also please do not hesitate to get in touch for more information or if you have any further queries (see contact info at end of newsletter).

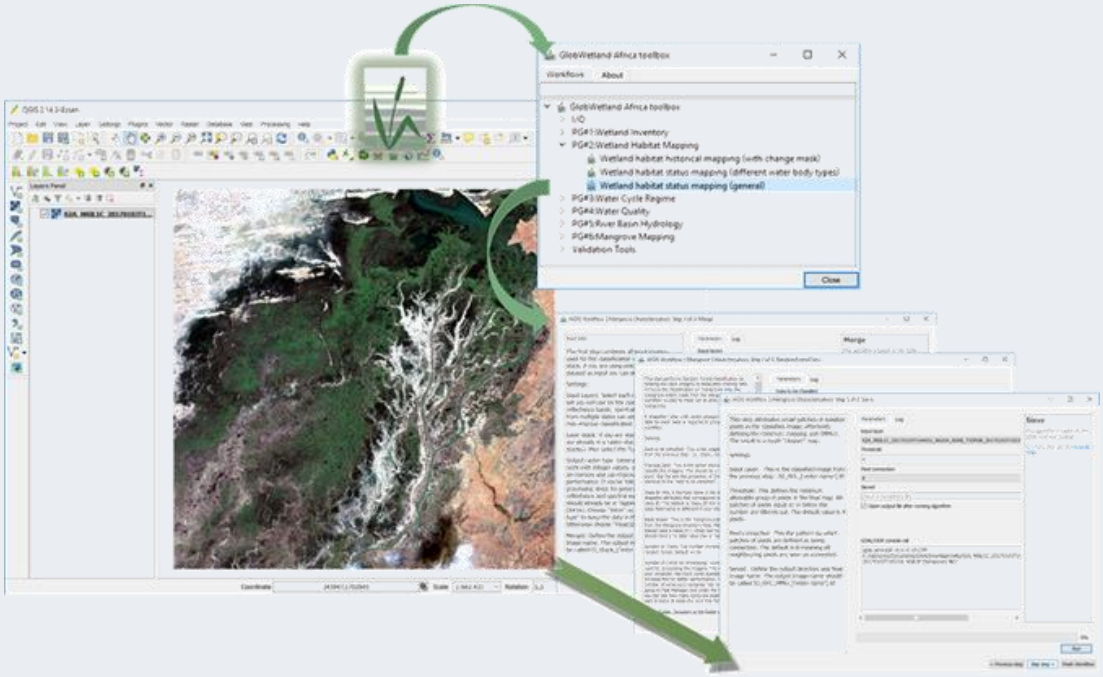
Christian Tøttrup, Project manager

Successful Milestone Reviews in Innsbruck and Copenhagen

Two technical project milestone reviews have been successfully completed in Innsbruck and Copenhagen in September 2016 and January 2017 respectively. The main purpose of these two project meetings was to review the experimental analysis and design specifications for the GlobWetland Africa toolbox. In addition the Pilot sites for consideration in the first use case production lot has been agreed and can be viewed on the project web site (cf. http://globwetland-africa.org/index.php/map-of-sites/).

The GlobWetland Africa toolbox

The work on the open-source and free-of-charge GlobWetland Africa Toolbox is progressing at a steady pace. The Open Source software components of the toolbox have been identified and the algorithms for the retrieval of the different wetland information products are now integrated into QGIS (http://www.qgis.org) which will act as the central integrating platform, due to its clear and accessible Graphical User Interfaces (GUI). Once the algorithms are incorporated in QGIS they are used to create processing workflows that provides users with step-by-step guidance for the end-to-end processing of the GlobWetland product portfolio and other relevant GIS tasks for wetland management. Workflows are mainly designed for novice and intermediate users while more advanced users will be able to access a large range of additional tools and functionality of the system.

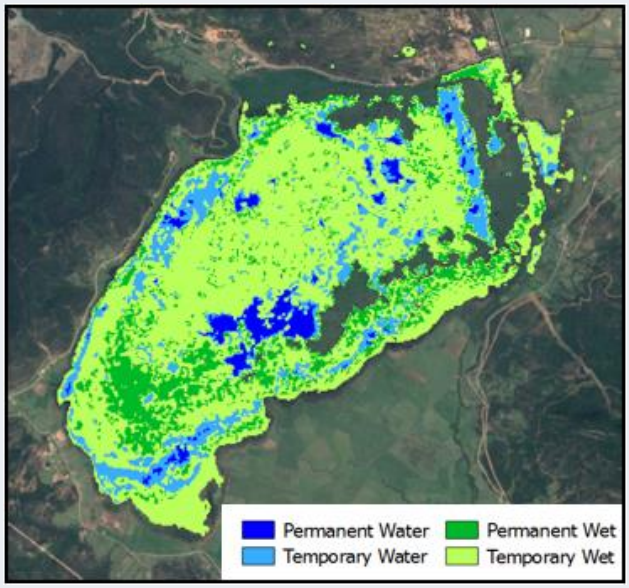


The GlobWetland Africa toolbox provides users with all the necessary functionality to monitor, assess and inventory wetlands and their adjacent lands. This includes end-to-end processing workflows for wetland delineation, wetland habitat mapping, monitoring of inundation regimes and water quality and for river basin hydrology assessments.

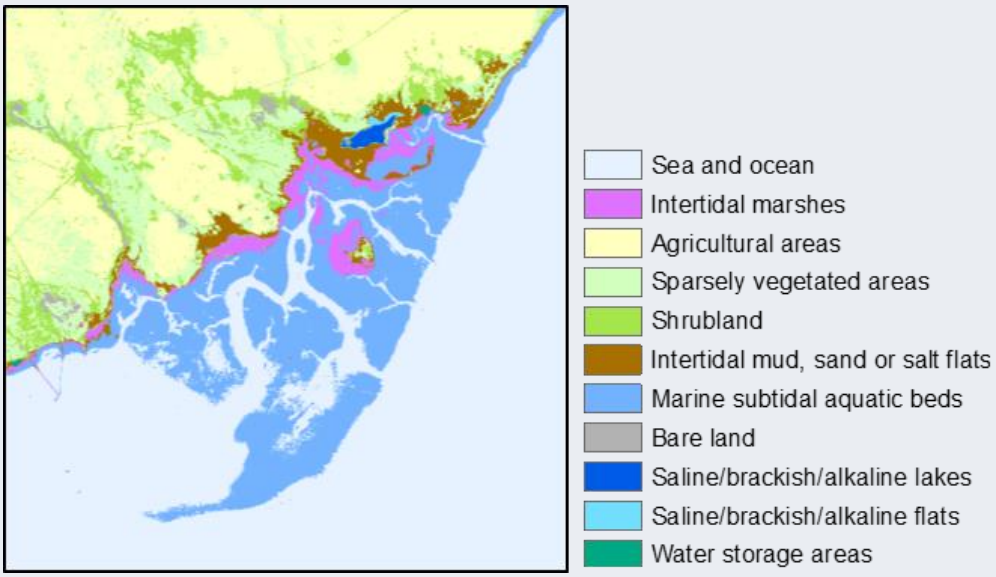
Based on this development framework an alpha release of the GlobWetland Africa toolbox was presented and demonstrated at the Critical Design Review held in Copenhagen on the 18-19th of January 2017. Over the next months this alpha release will be further developed in order to present and publically release the first beta version of the toolbox at the next user workshop scheduled for mid-June 2017.

Product examples

The first results of applying the toolbox to map selected wetlands looks promising and over the next months the operational and practical use of the GlobWetland Africa toolbox will be further demonstrated through Use Case Demonstrations (UCDs) executed over +70 pilot areas spread across the African continent.



Example from Lake Tonga (Algeria) on identification and delineation of wetlands areas as a support to wetland inventories. The creation of the wetland inventory support product is based on a multi-temporal classification approach using optical and radar data. Water and wetness frequency parameters are separately derived from both datasets and fused in the end to give an accurate delineation of wet areas as a support to wetland inventories.



Example of Wetland Habitat status mapping from Iles Kneiss (Tunesia). The map is derived using a random forest classification of multispectral satellite imagery along with derived spectral and textural indices. Ideally, multi-date imagery is used as input for the classification, as accuracies tend to improve when using imagery that captures different stages of the vegetation/water cycle.

Contribution to the Ramsar Scientific and Technical Review Panel (STRP)

GlobWetland Africa is contributing to the STRP Task 1.1 on Earth observation as a "best practice" tool for inventorying, mapping and monitoring wetlands, including Ramsar Sites which the Standing Committee has designated as a high priority task for delivery in the 2016-2018 work plan of the STRP. The task calls for the STRP to review and report on the role and use of Earth Observation for inventorying, mapping, and monitoring wetlands, including Ramsar Sites. The expected output from this task will be a Ramsar Technical Report (RTR) which will highlight best practices from existing projects such as the Global Mangrove Watch (GMW), Satellite-based Wetland Observation Service (SWOS), GlobWetland Africa, and other Earth Observation efforts. GlobWetland Africa participated in a STRP writing workshop held at International Water Management Institute (IWMI) in Lao 13-15th December 2016 and also attended the 20th STRP meeting at the Ramsar secretariat headquarters in Gland, Switzerland on 13-17th February 2017.

Events & Outreach

GlobWetland Africa continues to be in active dialogue with the wetland community through participation in various events and initiatives in order to promote Earth Observation as a best practice for Wetland inventory, assessment and monitoring.

GlobWetland Africa at the 13th Conference of the Parties to the Convention on Biological Diversity (CBD)

In December 2016 and during the 13th Conference of the Parties of the Convention on Biodiversity (CBD COP13) in Cancun (Mexico) a side event on the Geo-Wetlands Initiative was being organized joint by the European Space Agency, the Ramsar Secretariat, UNEP-WCMC and the Geo-Wetlands Team.

GlobWetland Africa contributes to the recently created GEO-Wetlands initiative, which has amongst its objective the development of the Global Wetlands Observation System (GWOS) as a STRP knowledge repository on Earth Observation best practices for wetland inventory, mapping, monitoring and assessment.

The side event was prepared to inform the biodiversity community about the GEO-Wetlands activities and plans towards developing a Global Wetlands Observing System (GWOS).

For more information on the Geo-Wetlands Initiative please visit:
https://www.earthobservations.org/activity.php?id=122

Celebrating World Wetlands Day 2017

The theme for World Wetlands Day 2017 is Wetlands for disaster risk reduction (www.worldwetlandsday.org). A theme which is being reflected in a new leaflet published by GlobWetland Africa (http://globwetland-africa.org/index.php/2017/02/02/world-wetlands-day-2017/) as well as the following post on the Okavango Delta by the European Space Agency: http://www.esa.int/spaceinimages/Images/2017/02/Botswana_wetlands.

ISRSE-37, 8-12 May, South Africa

The 37th International Symposium on Remote Sensing of Environment (ISRSE-37) will convene in Tshwane, South Africa 8 to 12 May 2017. The theme is "Earth Observation for Development and Adaptation to a Changing World".

At the ISRSE-37 GlobWetland Africa will participate to the session on Wetland Monitoring under the theme on Biodiversity and Ecosystems, and will attend an ad-hoc STRP writing meeting to finalise the Ramsar Technical Report (RTR) on the use of Earth Observation for wetland inventory, assessment and monitoring (STRP task 1.1). For more information please visit: http://isrse37.org/

Follow us on the web!

Please visit our web site to access background information, to learn where we work and to review the most recent news: www.globwetland-africa.org

We kindly request that you provide us with any relevant news that you would like the project to communicate.

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