

(Final Newsletter of the project The Future Okavango, covering the period April until August 2015)

Dear TFO colleagues,

After a period of five years of intensive collaboration TFO is coming to an end by the 31st of August. As you will read in this last edition of our Newsletter many activities to disseminate our results have recently taken place and all results and products have been made available through our webpage for future uses. Please spend a few minutes to update your contact details and further relevant information on our webpage to make sure that all details and data are in place. From SPC we would like to thank you all for a very good and successful time and wish you all the best for your future.

TFO activities and deadlines, events of interest

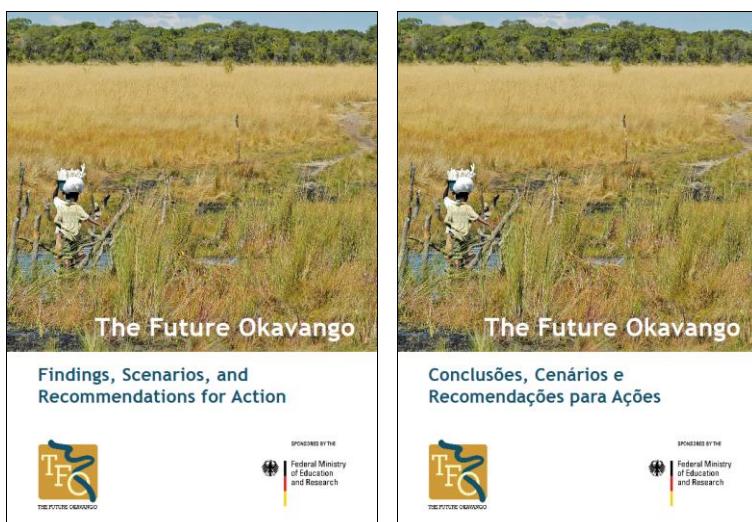
- The BMBF-Research Programme ‘**Sustainable Land Management**’: **Final Conference 2016 ‘Transformations in Sustainable Land Management’** will take place in Berlin, Germany, from 7 – 9 March 2016. The aim of the conference is to give a concise summary of the major findings from the research programme. Solutions on sustainable land management will be presented which range from local scale conservation, water management, and ecological engineering to global scale synthesis on biodiversity and ecosystem services. The conference will be organized in three main parts: 1) Policy and societal dimension, 2) Results from integrative research projects and 3) Outlook into the future of land use research. It will also provide an exchange platform for lessons learned in large integrative and transdisciplinary projects focusing on diverse aspects around land system research. To share cutting-edge research insights on sustainable land management representatives of all regional projects’ teams, scientists and stakeholders from various disciplines will be invited together with the BMBF and further ministries, the project management agency (DLR-PT), reviewers, keynote speakers, press representatives and selected members of the general professional public. At the moment, a BMBF Scientific Steering Committee is finalizing the programme.
- The **International Conference on Conservation Agriculture and Sustainable Land Use** will take place in Budapest, Hungary, from 31 May – 2 June 2016. Main topics of the conference will include among others: 1) Soil science and geomorphology in Conservation Agricultural Systems, 2) Agroecological research in Conservation Agricultural Systems, 3) Climate change and Conservation Agricultural Systems as well as 4) Land use and land cover change in the context of sustainable development. For further details on registration please refer to <http://caslu2016.mtafki.hu/index.html>.

- The 5th International EcoSummit Congress, **EcoSummit 2016 - Ecological Sustainability: Engineering Change**, will take place in Montpellier, France, from 29 August – 1 September 2016. EcoSummit 2016 will centre on the ecology of terrestrial ecosystems and all habitats that are integrated within those ecosystems, including river networks, wetlands and coastlines. Focus will be placed on fragile ecosystems that are more likely to suffer the consequences of climate change and anthropogenic pressure. However, in the current context of an increasing world population, changes in social habit (increasing world consumerism) and climate change, it is evident that agriculture is being intensified but with a growing awareness of the need to preserve and use sustainably world resources. An open Call for Abstracts will be issued in October 2015, with online abstract submission until 29 January 2016. For further details please refer to <http://www.ecosummit2016.org/>.

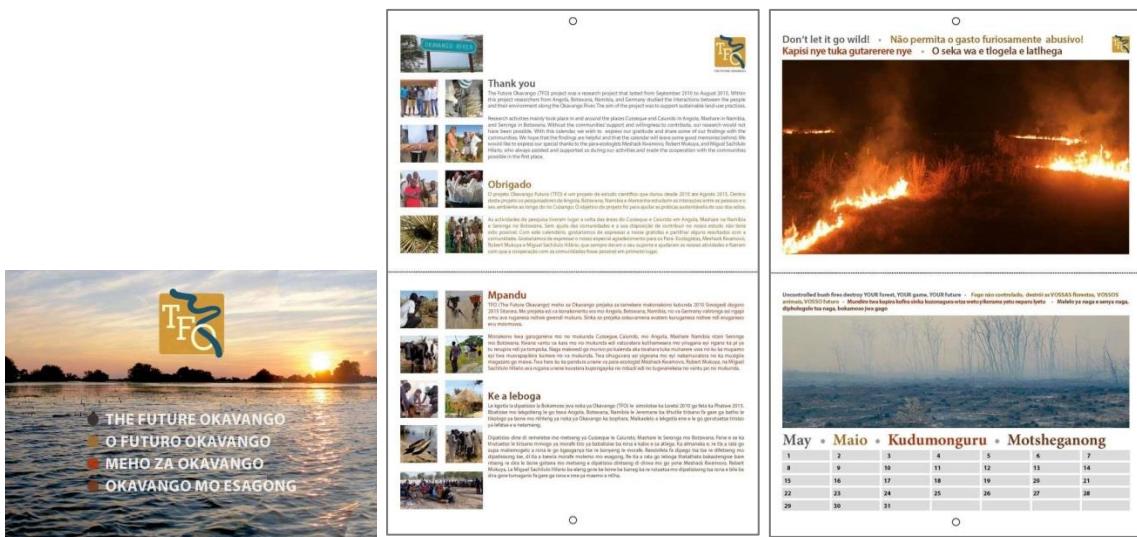
For more upcoming events, please have a look at our TFO website under the category "Events".

Inside TFO: What has been done recently?

- During the last months the focus of the work was mainly on compiling and synthesizing the research results obtained within TFO. From April 27th to April 29th representatives of all TFO-subprojects were invited to Hamburg to compile, discuss and agree upon the key findings and recommendations resulting from the TFO project. Additionally, the outcome of the scenario exercise and the quantitative and qualitative data on ecosystem services were presented and discussed. We agreed upon the structure of the Final Synthesis Report '**The Future Okavango - Findings, Scenarios, and Recommendations for Action**', one of the TFO-products for our stakeholders. This report was produced subsequently and contains key findings on the current state of the socio-ecological system, recommendations for action, four alternative future development paths (scenarios) as well as further information on the methodology and contacts to the researchers. The Final Synthesis Report is available for download in English and Portuguese via the TFO-website.



- The TFO team created two further products for our local stakeholders at the TFO core sites of Cusseque, Mashare and Seronga: a **wall calendar** and a **participatory film** communicating some of the project's research results to the rural dwellers. The wall calendar contains 12 messages derived from TFO research finding that aim to provide assistance to the local land user with regard to sustainable resource-use. For the **participatory film 'Sharing The Future Okavango research results'** six key findings with direct relevance to our stakeholders at the local level were selected by the paraecologists Miguel Hilario (Angola), Meshack Kwamovo (Botswana) and Robert Mukuya (Namibia) and translated into moving pictures. The film illustrates recommendations related to farming practices and nature conservation in the three countries. Both, the calendar and the messages of the film have also been translated into Portuguese and the respective local languages, Rukwangali and Setswana.



Impressions from the TFO-Calendar



Screenshots from the participatory film 'Sharing The Future Okavango research results'

- These products have been presented and distributed to stakeholders and scientists in the three countries on a TFO **'Final Dissemination Tour'** carried out from 13th to 27th July, 2015. The tour started on Monday, July 13 2015, with the book launch of the Final Synthesis Report 'The Future Okavango - Findings, Scenarios and Recommendations for Action' at the Polytechnic of Namibia in Windhoek. This was followed by workshops held in Maun and Seronga in Botswana, Rundu and Mashare in Namibia and Chitembo and Huambo in Angola. Presentations on climate and climate change, water availability and management, management of natural resources, agriculture as well as society and governance were given and the key findings of the TFO project were discussed. Thanks to all of the local organizers the Final Dissemination Tour has

been a great success. Representatives of national and regional governmental agencies, universities and NGOs attended the technical workshops; local farmers welcomed the TFO products and attended the workshops at the TFO core sites and the field demonstrations. Detailed descriptions of the respective workshops can be found on the TFO website.



Impressions from the TFO-Final Dissemination Tour
(Photos: Susanne Stirn / Hendrik Göhmann / Laura Schmidt)

Inside TFO: News, communication & other information

(Topics: New TFO members, new uploads or features in MyTFO, OBIS or website, information by PT/BMBF/GLUES)

- Also for the future please make use of the TFO webpages internal area called **MyTFO** which allows you to update your participant details, generate mailing lists and download internal documents such as reports, minutes, presentations etc. You will find the MyTFO link in the upper right corner. You can receive your personal MyTFO - login from the TFO - webmaster at webmaster@future-okavango.org.
- All SPs and Institutions please spend a minute to **update your participant details on the TFO Webpage in the MyTFO area** (see above) so that we get a clear picture who has been participating at this stage. Please also provide information on your function and thematic and regional expertise within TFO. If you identify colleagues of your SP who have left the project please send an email to the TFO - webmaster at webmaster@future-okavango.org.

Outside TFO: Reports from stakeholders' activities

(Topics: Feedback from stakeholder meetings TFO attended, TFO members on stakeholders contacts, stakeholder activities....)

New Publications by us and/or others

(Topics: new publications by TFO members or other publication be of interest; interesting websites, data etc.)

- FAO (2015): Regional overview of food insecurity: African food insecurity prospects brighter than ever. Accra, FAO. <http://www.fao.org/3/a-i4635e.pdf>.
- Finckh, M., Revermann, R., Aidar, M.P.M (2015): Climate refugees going underground – a response to Maurin et al. (2014). *New Phytologist* (in press).
- Midgeley, G.F. and Bond, W.J. (2015): Future African terrestrial biodiversity and ecosystems under anthropogenic climate change. *Nature Climate Change* 5: 823–829; doi:10.1038/nclimate2753.
- Mishra, N.B., Crews, K.A., Miller, J.A., Meyer, T. (2015): Mapping Vegetation Morphology Types in Southern Africa Savanna Using MODIS Time-Series Metrics: A Case Study of Central Kalahari, Botswana. *Land* 4(1): 197-215; doi:10.3390/land4010197.
- Palmer, C.G., Biggs, R., Cumming, G.S. (2015): Applied research for enhancing human well-being and environmental stewardship: using complexity thinking in Southern Africa. *Ecology and Society* 20(1): 53; <http://dx.doi.org/10.5751/ES-07087-200153>.
- Pascual, J., Wüst, P., Geppert, A., Foesel, B.U., Huber, K., Overmann, J. (2015): *Terriglobus albidus* sp. nov., a novel acidobacterial species of the family Acidobacteriaceae isolated from Namibian semiarid savannah soil. *International Journal of Systematic and Evolutionary*, published ahead of print: 01 July, 2015; doi: 10.1099/ijsem.0.000411.
- Rieprich, R. and Schnegg, M. (2015): The Value of Landscapes in Northern Namibia: A System of Intertwined Material and Nonmaterial Services. *Society & Natural Resources*: 1-18.
- Sibhatu, K.T., Krishna, V.V., Qaim, M. (2015): Production diversity and dietary diversity in smallholder farm households. *Proceedings of the National Academy of Sciences USA, PNAS* Early Edition: <http://www.pnas.org/cgi/doi/10.1073/pnas.1510982112> (open access).
- Skidmore, A., Pettorelli, N. et al. (2015): Agree on biodiversity metrics to track from space. *Nature* 523: 403-405; doi:10.1038/523403a.

- Sam Van Holsbeeck submitted and defended his Master thesis "**Annual diameter growth of *Pterocarpus angolensis* (Kiaat) and other woodland species in Kavango, Namibia**" (in English) in July 2015 at the University of Ghent, Belgium. The thesis is supported by TFO project SP05. Supervisor is Dr. Jan Mertens and co-supervisor is Vera De Cauwer.

"The most preferred species for sawmilling in Namibia, and most of the southern African region, is *Pterocarpus angolensis* D.C. (kiaat). This species grows in north-eastern Namibia at the edge of its southern distribution area and has been harvested on a commercial scale since the 1940s. However, there is not enough information to determine if this exploitation is sustainable. This study aims at (1) determining and measuring annual diameter growth of kiaat in the Kavango regions, (2) comparing growth of kiaat with a few other woodland species from which increment cores are taken (*Burkea africana* Hook, *Baikiaea plurijuga* Harms, *Terminalia sericea* Burch. ex. DC and *Schinziophyton rautanenii* Hutch. Ex Radcl.-Sm.) and (3) correlating rainfall and temperature to mean diameter increment of kiaat. All increment cores are levelled with a WSL core-microtome and then measured using a Lintab TM with TSAP-Win software. A limited number of stem discs was collected to make comparable tree-ring analysis by manual counting to determine growth rates. Another way to determine annual growth was by comparing diameter over an eight year period. *P. angolensis* has an average diameter increment varying between 0.7-0.8 cm per year in Kavango, which is higher than neighbouring regions in Namibia but lies within the ranges of southern Africa. Regarding the other woodland species, growth rate of *P. angolensis* was lower than rates of *T. sericea* and *S. rautanenii*. *B. africana* and *B. plurijuga* respectively grow slower than the three other species. Our results also show significant growth variations among sample sites, often depending on the age of trees. Tree-ring series of kiaat were cross-dated and a master chronology with a length of 72 years could be established. Growth response to rainfall and temperatures correlated negatively and poses particular challenges in research on growth factors."

All TFO participants who have completed MA, BA, PhD theses or other publications, please contribute your work to the TFO publication-database on our webpage.

Best regards,
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