

(Newsletter of the project The Future Okavango, covering the period December 2014 and January 2015)

What is coming up? TFO activities and deadlines, events of interest

- The “**Symposium: Silviculture and Management of Dryland Forests**” will take place from 16th to 20th March 2015 at the Stellenbosch University, Western Cape, South Africa, in collaboration with the International Union of Forest Research Organisations. The symposium objectives are to bring decision-makers, farmers, ecologists, forest scientists, forest practitioners, academics, forest managers and researchers, who are interested in plantations, woodlots or natural forests in dry regions together in one forum to share and review information, developments, concepts and ideas within the broad spectrum of themes. These include among others: a) Tree physiology and growth in drought conditions, b) Management systems for dry natural forest ecosystems, c) Integrated fire management and d) Landscape improvements and ecosystem services from woodlots and farm forestry projects. For more information please refer to: <http://www.sun.ac.za/english/faculty/agri/forestry/dryland-forestry-symposium>.
- The International Conference on “**Integrated Land and Water resources Management in the dry areas under climate change**” will take place on Djerba Island, Tunisia, May 11-14th, 2015. The objectives of the conference are to present recent development in land and water resources management in the drylands, to provide a forum for debate and exchange among all stakeholders working for drylands development and to learn from the local experiences in combating land degradation and desertification. For more information please have a look at the conference website: <http://www.ildac2015.tn/>.
- The biannual meeting of the IUFRO Landscape Ecology Conference “**Sustaining ecosystem services in forest landscapes concepts, research, and applications**” will be held in Tartu, Estonia 23-30 August 2015. The goal of this meeting is to examine concepts (e.g., ecological theory, philosophy, legal and social frameworks), research (e.g., new approaches to analyzing spatial patterns, monitoring processes, simulation modeling, multiple scales), and applications (governance, policies, strategies, and practices at local, regional, national, continental, and global scales) of ecosystem services in forest landscapes. <http://iufrole2015.to.ee/eng/registration>.
- The 45th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland (**GfOe**) will take place from August 31st to September 4th, 2015 in Göttingen, Germany. The guiding theme of the 45th Annual Meeting is “**Ecology for a Sustainable Future**”. Special focus will be given to a) species, populations and ecosystems, b) ecosystem functioning, c) global change effects, d) impact of land use, and e) conservation approaches. The organizing committee encourages all scientists interested in ecological research to organize and chair sessions for

presentations or workshops. Proposals for sessions will be accepted until February 15th, 2015. For further details please refer to: <http://www.gfoe-2015.de/>.

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

Inside TFO: What has been done recently?

- On January, 14th, 2015, Manfred Finckh gave a talk at the Namibian Scientific Society, Windhoek, on "**Tool or disaster? Wild fires in the Okavango region**". The talk aims at disentangling the spatio-temporal fire patterns in order to understand their impact on vegetation and the logics and trade-offs behind wildfires in different parts of the Okavango basin. Earlier that day, Manfred Finckh gave an interview at the German Radio Station. The summary of the talk is available at the TFO website.



Dr. Manfred Finckh at the Namibian Scientific Society and the German Radio
(Photos: Armin Jagdhuber and Bertchen Kohrs)

- On Friday, January 9th, 2015, Rasmus Revermann presented a poster at the 7th Biennial Conference of the International Biogeography Society (ibs) in Bayreuth, Germany. First results on „**Using remotely sensed predictions for SDMs to explain distribution of canopy tree species of Miombo woodlands**“ obtained in collaboration with M. Finckh, M. Stellmes, V. De Cauver, B. Schröder and J. Oldeland were presented: Understanding distribution patterns of tree species is paramount to manage woody resources. Therefore, the realized distributions of all frequent woody species of the Okavango Basin have been analysed and distribution maps were produced based on a species distribution modelling approach. Information on species presence / absence was derived from the vegetation database created during the vegetation surveys carried out within the framework of the TFO project. As environmental predictor variables we used climatic data provided by SP01 and SP9.2, phenological metrics of a time series analysis of MODIS imagery produced by SP9.1 and information on the topographic position calculated from a digital elevation model. Results show the restricted distribution of species such as *Brachystegia spiciformis* or *Julbernardia paniculata* only occurring in the Miombo region of the Angolan Highland. *Erythrophleum africanum*, known for its hard wood, reaches down to the Kavango region of Namibia and only a few species such as *Burkea africana* occur throughout the entire study area. Next steps will be to derive macro-ecological properties such as species density and functional traits of plant communities based on the entire set of single species models. The pdf-version of the poster is available for download at the TFO website.

- From Mid-November until the end of December 2014 a team of students and researchers from Angola, Botswana, Namibia and Germany made in changing compositions a **field trip to three of the TFO core sites to examine the phytosociological composition of the hinterland vegetation**. The team consisted of Bachelor, Master and PhD students of the Polytechnic of Namibia (Miya Kabajani, Ninda Baptista), the Okavango Research Institute, Botswana (Gaolathe Tsheboeng) and the University of Hamburg, Germany (Paulina Melles, Jannika Wendefeuer, Torsten Hoche) together with their supervisors (Mike Murray-Hudson, Manfred Finckh) and the para ecologists (Meshack Kwamovo, Miguel Sachilula Hilario, Lucas Severino). The main focus was on the gradients of vegetation along the Okavango and among the TFO core sites, on standing woody biomass and on indicator species for forest degradation. More details on the field trips can be obtained from the personal travelogues of the students involved, which can be downloaded after login into MyTFO.



Impressions from the joint field trip of SP05
(Photos: Miya Kabayani, Janika Wendefeuer and Torsten Hoche)

Inside TFO: News, communication & other information

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

- **TFO online calendar** available on OBIS: Please be so kind to take the time to **always add all events, deadlines, field-trips, conference dates** etc. that are of relevance for the TFO community and make use of the calendar as much as possible. You will need an OBIS account to get access to the calendar which is accessible for TFO members only. You can register on the OBIS website, in case you don't have an account yet. Link to the calendar (link can also be found at the upper right corner on the TFO website):

<http://leutra.geogr.uni-jena.de/obis/metadata/login.php?url=%2Fobis%2Fmetadata%2Fcalendar.php>

- 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 is 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.)

- Weinzierl, Thomas & Heider, Katharina (2014) The impact of climate change on the agricultural suitability for selected crops in the Okavango catchment – a GIS -based analysis. Spotlight on Agriculture No. 134, November 2014. Available at: <http://www.geo.uni-hamburg.de/de/geographie/dokumente/personen/publikationen/weinzierl/weinzierl-2014.pdf>.
- King, J., Beuster, H., Brown, C., Joubert, A. (2014) Pro-active management: the role of environmental flows in transboundary cooperative planning for the Okavango River system. Hydrological Sciences Journal 59 (3-4), 786-800.
- Duraiappah, A.K., Asah, S.T., Brondizio, E.S., Kosoy, N., O'Farrell, P.J., Prieur-Richard, A.-H., Subramanian, S.M., Takeuchi, K. (2014) Managing the mismatches to provide ecosystem services for human well-being: a conceptual framework for understanding the New Commons. Current Opinion in Environmental Sustainability (7), 94–100.
- Jayne, T.S., Chamberlin, J., Headey, D. D. (2014) Land pressures, the evolution of farming systems, and development strategies in Africa: A synthesis. Food Policy 48, 1–17.

Erratum:

Helmschrot, J., Kralisch, S., Quintino, M., Masamba, W., Steudel, T., Göhmann, H., Zander, F., Ambrosio, N., Baumberg, V., Mosimanyana, E., Homolka, A., Mwewa, L., Mashauri, D.-A. & Flügel, W.-A. (2014): Environmental Information Management and Hydrological System Modelling for the Assessment of Hydrological Ecosystem Functions and Services (ESF/ESS) in the Okavango River Basin. Zentralblatt für Geologie und Paläontologie; Teil I, 2014, Heft 1: 305-337. DOI: 10.1127/zgpl/2014/0305-0337

In the last TFO-newsletter of September 2014, the authors of this publication were quoted incorrectly. We apologize for this error.

- Jolien De Ruytter submitted her Master thesis "**Timber stock of *Pterocarpus angolensis* (Kiaat) in the Kavango regions of Namibia**" (in Dutch) in January 2015 at the University of Ghent, Belgium. The thesis is supported by and contributes to the TFO project SP05. Supervisor is Dr. Jan Mertens and co-supervisor Vera De Cauwer. This is a shortened version of her abstract:

The study aims to establish a volume function to measure the standing stock of Kiaat timber in the Kavango region. Fieldwork was carried out in September and August 2013 in four areas:

Hamoye, Mashare, Nkurenkuru and Katope. Diameter-selected trees were measured with regard to parameters for the volume measurement. The volume of the trees was calculated with the formule of Smalian and an association between this volume, the height and diameter at breast height from the trees was searched. For this purpose empirical models were tested through a statistical program, as well as theoretical models common in literature. The empirical and theoretical models both suffered from heteroscedasticity, a common problem with allometric relations of trees. A solution for this problem was found by a few regressions, of which $\log V = 1,38 + 2,19 * \log D$ appeared best. The regression was not dependent on the area and appeared to be an improved compared to former allometric relations for *Pterocarpus angolensis* in Namibia. The influence of human activity through the proximity of roads and villages on the growing stock of *Pterocarpus angolensis* was tested in the four regions. There was no significant association between the growing stock and the distance of roads and villages; more data or variables may be required to study the relation."

All TFO participants who have completed MA, BA, PhD theses or other publications, please contact us if you would like to use the opportunity to have your work advertised here and please use the opportunity to contribute your work to the TFO publication-database on our webpage.

News from the Okavango region

(Topics: new policies, happenings etc. relevant for resource management in the Okavango Basin)

Anything else...

(Here we offer space for all other information, which might be of interest for the TFO community)

***** Do you have any information for the TFO-community? *****

Upcoming events, new SP-members, publications, research results, news from the basin or interesting events to share – please let us know:

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