



Photo: Jörg Koch / Bayerische Staatskanzlei

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TUM.Africa Newsletter

Recent TUM activities in Africa

- ▶ **Collaborating to advance medical technology: New partnership signed during visit of Minister-President Dr. Markus Söder in Ethiopia**

The Technical University of Munich (TUM) has won new partners through its Africa Initiative. It will cooperate in upcoming medical technology projects with Ethiopia's Tegbareid Polytechnic College (T-PTC) and GIZ, the German development agency promoting international cooperation. The agreement was signed during a visit of Bavaria's Minister-President Dr. Markus Söder in Addis Ababa. Please find more information on the partnership in the [TUM Campus News](#).

- ▶ **Postdoc workshop Opportunities for Outstanding Scientists with Prof. Rank from IAS**

On March 31, TUM Cairo co-organized a special postdoc workshop to inform outstanding Egyptian scientists about funding opportunities at TUM. The workshop [Your Postdoc Career in Germany – Opportunities for Outstanding Scientists](#), which took place at the premises of the DAAD Cairo, targeted highly qualified Egyptian PhD holders and postdocs with publications in prestigious international journals.



Round table discussion with Prof. Rank. Photo: Heba Afifi

Prof. Rank, Director of the TUM Institute for Advanced Study (IAS), participated in the event as a speaker. He gave insights into research options at TUM and first-hand information about the IAS programs.

► Project in the field of Ground Improvement in Egypt

Supported by the TUM Liaison Office in Egypt the Chair of Soil Mechanics and Foundation Engineering, Rock Mechanics and Tunneling (Geotechnics Centre) has started a cooperation project in the field of Ground improvement together with two Egyptian universities: Cairo University and the German University in Cairo (GUC). The preparations for the workshops started on November 20, 2018 with a kick-off meeting with the Egyptian partners, where the Chair elaborated together with partners an agenda for the 1st workshop in Cairo and invited the key persons in the field of ground improvement and Geotechnics from universities, consultancy and the industry to join and hold presentations. The representative of the Liaison Office TUM Cairo joined the event as well. The event took place at the GUC (two days) and Cairo University (one day).



Participants of the Ground Improvement Techniques – State of the Art and Research Directions Workshop

The topics presented were very relevant to the workshop subject Ground Improvement in Soft Soils and the participants were very active, which facilitated the identification of fields for collaborative research and further research partners. The representatives from the construction companies did show willingness to technically and financially support the envisaged joint project. Finally, in a project partner meeting, the next steps for the development of a collaborative research proposal were stipulated. Based on the outcomes of the first workshop in Cairo, the identified research fields will be evaluated in detail and research ideas will be developed by the Egyptian and German partners. A mid-term report will be sent to the TGIF before by the end of April 2019.

The second workshop will take place end of July 2019 in Munich at TUM to hold discussion with the project stakeholders from the industry and academia as well as to elaborate a preliminary research proposal. The joint research proposal will be finalized in the months following the second workshop and the applications will be submitted simultaneously by the end of 2019.

► Tenure security, impacts of water management, gender equality and ecological effects in the region of Kitui, Kenya

In the scope of the DAAD Quality Network Biodiversity Kenya the Technical University of Munich will be sending four students and one researcher to Kenya in August 2019 to conduct further research in the region of Kitui. The expected outcome of this data collection is related to tenure effects on the local ecology.

Therefore, one Bachelor's thesis and three Master's theses will be written on the topics of tenure security, impacts of water management, gender equality and ecological effects towards nature resource protection at the TUM Chair of Land Management.

Contact: Tobias Bendzko,
e-mail: tobias.bendzko@tum.de



Road heading to the campus of South Eastern Kenya University (SEKU). Photo: © Jana Holler / Biodiversity Network Kenya

The progress of the entire research and its related activities can be found on the [Biodiversity Kenya Website](#).

► **Launch of The Lancet One Health Commission: Looking at the interaction between people, animals, and the environment from a multidisciplinary perspective**

The Lancet One Health Commission was launched on May 9 and 10, 2019 in Oslo, supported by [the Centre for Global Health at University of Oslo \(UiO\)](#). The Lancet has nominated the two co-chairs: [Dr. John Amuasi](#), Kumasi Centre for Collaborative Research in Tropical Medicine at the Kwame Nkrumah University of Science and Technology, Ghana, and [Prof. Andrea Winkler](#), Centre for Global Health at UiO and [Center for Global Health at the Technical University of Munich](#).

A core group comprising of staff from the Centre for Global Health at UiO, WHO, and Imperial College is driving the direction, design and implementation of the Commission. Scientists from all over the world gathered for the first meeting of the Lancet One Health Commission. The members decided that the Commission's main theme should be to improve human, animal, and ecosystem health through integrated approaches.



Dr. John Amuasi, one of the chairs of the Lancet One Health Commission. Photo: Øystein Horgmo, UiO.

The delegates also adopted the Commission's objectives. These objectives will lead the way for how the Commission and each working group will move forward over the next few years. The objectives include demonstrating the opportunities, challenges and value proposition for an integrated approach to multispecies health and sustainable economic development in the 21st century. In addition, they will synthesize evidence for the value of an integrated approach to multispecies health around the shared environment, food safety, shared medicines and intervention with an emphasis on infectious diseases, non-communicable diseases and antimicrobial resistance.



The Lancet One Health Commission's participants gathered outside Tøyen Manor. Photo: Øystein Horgmo, UiO

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Focus on shared environment, safe food, and the sharing of medicines and interventions

The Commission established three working groups. Each group will work on one part of the Commission's tasks over the next two years. The groups will look at these topics:

- Shared environment
- Safe food and food systems
- Shared medicines and interventions

The Commission's main task will be to produce a scientific report published in *The Lancet* with recommendations for the implementation of One Health based on this work. At the core of the Commission is the inclusion of multiple disciplines and sectors.

"It was important to include experts from multiple disciplines, including life sciences and social sciences and experts working on communicable as well as non-communicable diseases. It was also important to include work on how these two disease types interact," says Andrea Winkler, co-chair of the Commission.



Prof. Andrea Winkler is Co-Director of the Center for Global Health at TUM. Photo: Øystein Horgmo, UiO

► **Easy Building Workshop in Tanzania**

From June 1 to 16 2019, the workshop *Easy Building* took place in Bagamoyo, Tanzania. The event was organized by nine civil engineering students of the Technical University of Munich and led by the research associate Mareike Thiedeitz, M. Eng. It was taught as a module in the Master's course program of the master profile Construction Materials of the civil engineering study program. During the project, an arts and learning center was developed, planned and constructed in Bagamoyo, Tanzania, in cooperation with a local non-governmental organization called Forward Step Organisation.



Students and tradesmen after successful two weeks of building. Photo: Mareike Thiedeitz

The project generally follows two principles: One of them is the principle of “Education and engineering”. Civil engineering students get insights in local and global building techniques and deal with different construction and building materials and tools during a practical project. For instance, the concept development and the planning of the adoptable building manners happened after analyzing the locally natural available resources as well as the available materials and building tools and machines – a completely new learning experience for the civil engineering students.

Accordingly, the concept was planned with easily adoptable building styles and took all circumstances into account. For instance, the students got to know the local sandcrete building style, which is a rural version of the well-known concrete building style in Germany. Moreover, they figured out methods for the replacement of cement using natural supplementary materials like burnt rice husks. Finally, they planned concepts regarding natural ventilation and little sanitation units.



Constructing the blinding concrete. In the front: Finished reinforcement. Photo: Mareike Thiedeitz

Therefore, in only two weeks, a team of the students and local workers could finish the raw building including a sanitation unit. During this time and by working together, the students learned from the workers about local and easy building styles. The roof had already been built as a shelter on existing steel columns; therefore in the two weeks it was possible to dig the pit, do the scaffolding for the fundament and the floor and produce the reinforcement. The concrete for fundament and floor was finished after the first week. In the second week, the walls were built in Bagamoyo. In parallel, a little furnace for the burning of rice husks for the use as supplementary materials was manufactured as well as a sanitation unit. On the last day, June 14, the concrete ring beam was finished as the connection to the roof.

Building connects: creating new cultural exchange

A second principle of the workshop was the aim of international networking between the young generations for cultural exchange since international collaboration is of utmost importance in the era of globalization. The understanding for other cultures, religions and living circumstances are necessary for a peaceful future. The colonial history between African and European countries as well as the current post colonialism are a highly actual topic. Not only in politics but also in the academic world good collaborative bonds and teamwork are pursued. This is also the concept of the workshop *Easy building: Building connects*. A building project is teamwork and will only finish successfully with forthrightness, tolerance and curiosity.

The project *Easy building* follows with the whole concept of the 17 sustainable development goals of the United Nations. The cooperation with the Forward Step Organization, which is an organization fighting for girls and women empowerment, shall help getting awareness for different nations and cultures and lead to a sustainable exchange between the two countries. Please find more information on the [TUM sania project website](#) and on the online platform of the [Forward Step Organization](#). Please do also not hesitate to [send an e-mail to Mareike Thiedeitz](#) if you have any questions about the project.

► **First eMpower Africa Night at TUM campus Garching**

On May 2, TU eMpower Africa e.V. organized its first eMpower Africa Night on the topic *Social impact driven business and research in Africa – Now and How* at the Garching research campus in cooperation with its partner UnternehmerTUM.



The team of TU eMpower Africa e.V. with Prof. Dr. Walter Timo de Vries (center) Photo: TU eMpower Africa e.V.

Prof. Dr. Walter Timo de Vries, presented the new Africa strategy of TU Munich. Afterwards, TU eMpower Africa e.V. was introduced to the 120 strong audience from research and private enterprises. The non-profit organization was founded in 2018 by researchers, students, and alumni of TU Munich. It implements research results on decentralized Energy-Water-Food systems in rural communities in Africa.

The aim of the organization is to establish innovative solutions on the ground, which are based on renewable energy technologies, are economically feasible and improve local living conditions. A 90-minute panel discussion consisted of three founders from green-tech industry, Torsten Schreiber (Africa GreenTec), Florian Henle (Polarstern Energie) and Alessandro Medici (Powerblox), as well as Prof. Dr. Frank Martin Belz from the Chair for Sustainable Entrepreneurship at TU Munich and Karen Hitschke, managing director of Yunus Social Business, a social business venture capital fund founded by Nobel Peace Prize winner Mohammad Yunus.



Presentation by Johannes Winklmaier from TU eMpower Africa e.V. Photo: TU eMpower Africa e.V.

Anurag Mohapatra, the operations manager of TU eMpower e.V., moderated the discussion on the various aspects of the question, whether and how sustainable business models for renewable energies can work in Africa.

► Doctoral workshop in Tanzania

From June 19 to 22, 2019, Prof. de Vries from the Chair of Land Management contributed to a doctoral workshop to strengthen the research capacities of young and early career scientists in order to build research networks around inequality issues in the Global South. The workshop took place at the Institute of Rural Development Planning in Dodoma, the current capital of Tanzania, and was opened by the Lord Major of Dodoma. The participants originated from five African countries.



Doctoral workshop to strengthen the research capacities of young and early career scientists in order to build research networks around inequality issues in the global south. Photo: IRDP

Upcoming TUM activities in Africa

▶ ADLAND / EALAN Conference in Zanzibar

The Chair of Land Management is co-organising an ADLAND conference from July 22 to 26 in Zanzibar. The conference will be hosted by Ardhi University in Tanzania and brings together both the members of the EALAN (Eastern Africa Land Administration Network), as well as members of the NELGA (Network Excellence on Land Governance in Africa).

Recent TUM publications on Africa

- ▶ Chigbu, E.U., Ntihinyurwa, P.D., de Vries, W.T., Ngenzi, E.I., 2019, *Why Tenure Responsive Land-Use Planning Matters: Insights for Land Use Consolidation for Food Security in Rwanda*. International Journal of Environmental Research and Public Health **16** (8), 2019, 1354

Calls for proposals related to Africa

- ▶ [BMBF Research Partner Groups for Alumni in Africa](#) (text available only in German); deadline August 22, 2019

- ▶ [ASA Program](#)

Your company or association, institution or university pursues sustainability goals of social, ecological, and economical relevance? You would like to offer young people who are dedicated to fair and sustainable development an opportunity to participate in a specific project and gain insight into your work and exchange experiences? You can propose your project for the 2020 ASA Program by September 15.

Contact

If you would like to contribute to this newsletter, please [send an e-mail to Prof. de Vries](#).
Deadline for the next issue: October 15, 2019