

# WELCOME TO AFRICA

Scientific Cooperation Network  
on  
Climate Change Adaptation

## STUDENTS EXCURSION

**2 – 15 March 2013**

**„Summer School on Climate Change Adaptation“**

**Khartoum / El-Obeid, Sudan**

Technische Universität Dresden  
Faculty of Environmental Sciences  
Institute of International Forestry and Forest Products  
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In the first two weeks of March 2013, while Germany was still covered in snow, the winter ended suddenly with a students' excursion headed by Prof. Dr. Jürgen Pretzsch. Ten bachelor and master students of the TU Dresden travelled to Sudan thus to participate in the Summer School, which is part of the project "Scientific Cooperation Network on Climate Change Adaptation" and financed by the DAAD program "Welcome to Africa".

The workshop on "Climate Change Adaptation" took place in cooperation with the local partners, the University of Khartoum and the University of Kordofan. The Summer School workshop was held from 4<sup>th</sup> to 12<sup>th</sup> March in two Sudanese cities – Khartoum and El-Obeid.

### **Day 1 (3<sup>rd</sup> March 2013)**

After a long but interesting trip, taken from Berlin to Khartoum, we were warmly welcomed to Sudan by Dr. Yahia Gumaa. He was always extraordinarily concerned to create our stay in Khartoum as agreeable as possible. Together with scientists from partner research institutes and universities in Ethiopia, Tanzania and Uganda, we stayed in the guest house of the University of Khartoum, which is very close to the campus of the Faculty of Forestry and right next to the river Nile. Sunday, the 3<sup>rd</sup> of March, was our first day in Khartoum and for some of us it was also the first day in Africa. However, we had a day time to adapt to the hot and dry climate and visited the beautiful green campus of the University. We gazed at the camels and made our first contacts with Sudanese people.



### **Day 2 (4<sup>th</sup> March 2013)**

From the next day on, we started with the workshop in which the invited African and German scientists and students to present their current studies. The presentations were very well structured and did not lack in respectful formalities, which were very useful for the German students thus to learn about Sudanese culture. The sessions were structured in six different themes and guided through by a selected chairperson, who introduced, timed and finally summarized the presentations and lead the discussions afterwards. These themes were:

1. Climate Change Adaptation
2. Institutional and Spatial Arrangements in Sustainable Forest Management

3. Land Use Change/ Environmental Services from Forests
4. Wood Production
5. Value Chains of NTFPs
6. Land-Use Conflicts and Mismanagement in Rural Areas

The opening ceremony was honored by the visit of the German ambassador to Sudan, Rolf Welberts, who emphasized the importance and urgency of this scientific project network. In addition, the DAAD representative to Sudan, Dr. Wolfram Full, participated in the first days of the workshop. After a very saturating lunch, which we took under the shade of Eucalyptus trees in the faculty's garden, we then had a guided tour around the campus. We were introduced to a large number of tree species found on the campus and had a glance on the gardening project and the wood production project of the Faculty of Forestry.



The first workshop day was opened and closed by an interactive session on overall outcomes, as well as on the whole project “Scientific Cooperation Network on Climate Change Adaptation”. The scientists tried to find a consensus by discussing ideas and comments about the objectives of this project. Scheduled goals are:

- Further studies and research
- Increased Networking
- Establishment of binding frameworks
- Create a common teaching module
- Joined publications

### **Day 3 and day 4 (5<sup>th</sup> and 6<sup>th</sup> March 2013)**

The biggest part of the 3<sup>rd</sup> and 4<sup>th</sup> day was formed by presentations. Nevertheless there was time afterwards and Dr. Yahia Gumaa took us on a city tour through Khartoum. At the river Nile we had a coffee, which is traditionally brewed on charcoal. We also visited the main campus of the University of Khartoum, which was established in the year 1902 by the British.



### **Day 5 (7<sup>th</sup> March 2013)**

The next day, we started early in the morning from our University Guesthouse to the ruins of Musawarat and the near-by social project of Prof. Gaffar Mirghani (Professorship for History and Archeology at University of Khartoum). They are located about 180 km north of Khartoum. The Professor is well known in Khartoum and other places in Sudan, since he received the land around Musawarat as gift from President Omar al-Bashir. Today, the area encompasses a school with gardens, as well as a hospital to improve local livelihood of the Bedouin population. However, daily service for the Bedouins has not started yet. We had the luck to enjoy the lush gardens at the guest house, where we had lunch and a tasty barbeque.



Musawarat (Al-Musawwart es-Sufra) is located at the head of Wadi-el Banat and was built in the ancient Meroitic times (3rd century BC). The ruins were known in old Europe, since the people practiced techniques of astronomy and mathematics. According to Prof. Gaffar Mirghani the name "musawarat" refers to the title of a teacher. Students made graffiti's into the sandstone walls (Latin and Greek words in the meroetic writing character). In addition, old handcrafts and ancient art performance was found. Since 2011, Musawarat is also an UNESCO World Heritage Site. The large ruin arrangement includes temples, passages, low walls, about 20 columns, ramps and two reservoirs, as well as many sculptures of animals. Of high interest is especially the lion temple that lays about 600m from the main ruins.



### **Day 6 (8<sup>th</sup> March 2013)**

After the long trip to Musawarat in the North we were off to our 600 km trip south to El Obeid, North Kordofan, which gave us a different view of the country. Even though it was a 10 hour drive, the views out of the bus windows and the sceneries at the truck stops kept us astonished. We also saw the different systems of water storage and irrigation, as well as various types of houses of different tribes. This impression gave an idea of the hard living conditions that Bedouins have to cope with.



In El Obeid, Elyass Muneer Siddig took over the organisational part. He was as committed as Dr. Gumaa and proved again the enormous Sudanese hospitality. As we arrived, a big meal was already waiting for us before we proceeded with the Opening Ceremony. This started with a Holy Quran Ceremony, as it was Friday, the holy day of the Muslims. The Sudanese TV and Radio was present and from then on accompanied our stay in and around El Obeid. Exhausted and impressed we were finally taken to our hotel in the late evening.



### **Day 7 (9th of March 2013)**

The next day, after the presentations, we went to a public park for a social meeting, to get to know the family members of most of the Sudanese workshop participants. The men were dressed in their best traditional Jalabiyas, the women in their most beautiful colored Thobes and the children were spruced up especially. Tea, coffee and some (very) sweet delights were offered. The highlight of the evening was that every person, of the about 40 Sudanese participants, had the chance to present him-/herself and his/her family.





### Day 8 (10<sup>th</sup> March 2013)

The eight day started with the last presentations and discussions of papers. In the afternoon all the participants went out for an excursion. At first, there was an introduction into Gum Arabic processing from *Acacia senegal* and *Acacia seyal* at Warm Seas Agribusiness, El Obeid.

While visiting the specific working areas, a staff member of the company explained the three different stages of the processing, drying, (manual) cleaning and manufacturing. After the raw gum is sundried outside in the yard up to a water content of <15%, impurities are manually sorted out, mainly by woman and children. Up to 40 employees producing 3 sacks á 30 kg each per day, earning 5 SDG (approx. 0,90 €) per sack. Another 20 employees handle machinery in two shifts producing six different qualities of grinded gum during the second stage. The whole process is supervised through analysis of color, viscosity and moisture content of the gum in the company's laboratory. As it was stated by the company's staff member, there is a profit margin of 2500 to 5500 USD/t from raw gum to processed powder.



The second part of the excursion was a visit of the El Obeid crop market, North Kordofan's biggest market for cash crops like Gum Arabic, peanuts, hibiscus and water melon seeds, which was founded in 1905. Approximately 100 stakeholders, producers, traders and

customers are registered at this daily market, which includes 70% of the total Gum Arabic produced in Sudan. At best market days a top-line of 2 Mio US\$ is generated. A production chain code needs to be printed on the bags, indicating the producer, the trader and further product information one of the 13 rural market names. Also small quantities are accepted at the market and sold through an auction system. Auctioneers may take part as well by internet. Price formation is based on supply and demand.

Finally, the whole group visited the El Obeid Camel market as well as the NTFP section on Ibn-Masoud market. Traditional spices, fruits like Baobab, dried tomatoes and chili could be bought, also the traditional Sudanese clothes like the Jalabiya. The common dish of camel meat and camel liver was served for dinner as final highlight of the stay at the market.



### **Day 9 (11<sup>th</sup> March 2013)**

The next day we went on an excursion with various visits. We started with a meeting with the Minister of Agriculture at North Kordofan State, General Mohammed Bashir Suleiman and his state advisor. There, Prof. Pretzsch and Prof. Bekele from Ethiopia had the chance to raise some of the project's interests, such as the translation of the Report on Agriculture and Land use in North Kordofan and the formation of an independent body for gum arabic trade. The Minister assured support for the German students doing their research in Sudan.

Afterwards we went on a long trip south to Jabe-Eldair Reserve Park, a 31 km<sup>2</sup> big Biosphere Reserve which is divided in three zones: A core zone, which is of essential interest for conservation; a buffer zone, including the villages around the mountains and a transitional zone that expands 7 km around the buffer area. Economic activities are only allowed in the last two zones, but control in the core zone is questionable. The core area is concentrated inside the mountain area, where 26 species of animals conserved, for example the Kudu.





In the reserve we met the commissioner of the area, who expressed his gratitude to all of us for doing scientific work in the area in order to avoid undesirable effects of climate change. We also had the chance to visit one of the villages within the reserve and to talk to the elders.



On our way back to El Obeid our bus got stuck in the sand dunes, but with mutual power we pushed it out. Our last stop for this day was the Conflict Resolution Office El-Rahad. It works on conflicts management between the local agriculturalists and pastoralists through mediating between the traditional leaders and relevant stakeholders.

### **Day 10 (12<sup>th</sup> March 2013)**

On our last day in El Obeid and of the Summer School program we had another excursion. Our first stop was at the Drought Recovery Project. It works since 2008 and it is an integrated Rural Development Project by the Federal Ministry of Finances. During the last years in the communities that took part in the project, the number of water harvesting facilities increased, solar-energy panels were installed and brick houses were built.

After an interesting discussion, we moved on to El-Ain Forest 25 km south-east of El Obeid. The forest is divided in community forest and state owned forest. Its main importance is to feed the surrounding communities (14 villages with approximately 500 inhabitants each) and

at the same time to preserve the drinking water source and provide fuel-wood for El-Obeid. Main tree species grown in Taungya systems are *Eucalyptus spp* and *Acacia spp.*, as well as that, crops are planted, for example cucumber. At the end of the day, when we arrived back in El-Obeid, we were surprised with a big farewell ceremony, including traditional dances and live music, which took place at the police department of El Obeid.

### **Day 11 to 13 (13<sup>th</sup> to 15<sup>th</sup> March 2013)**

With leaving El-Obeid the next morning, we left behind two of our students which stayed to collect data for their master's thesis. Back in Khartoum we had one more delightful afternoon on the market and full with new impressions we began our way back to Germany.



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