

Editorial

Dear members, dear friends and supporters of Technology without Borders,

1700 kilometers through Ghana, 3 universities visited, 4 RGs visited (including 2 RGs - RG Somanya and RG Accra - newly founded), 3 projects visited or continued and 1 project leader workshop, as well as the handover of office within our Ghanaian network are the results of Jannik and Frank's trip to Ghana. The main purpose of the trip was actually to hand over the contacts that have been made over the years by our members and Frank since our foundation. However, as you can see, a lot of other things have happened around here.

Summary: A successful trip and a lot to do. For more on this, see below in today's newsletter.



♪ Every year again ... ♪ The year 2023 is nearing its end, and once again we have all worked together to help people improve their living conditions. This makes us feel good and right at the end of the year. On behalf of the Board of Directors, we would like to use this feeling to wish you and your families a Merry Christmas and a Happy New Year, along with a big thank you for the commitment of the active members and the support of all members in 2023.

Sincerely, your board

R. Schullan	F. Schofer	L. Hachmann	A. Weiß	A. Bruns
M. Reinhard	C. Zeidler	F. Enzmann	A. Vierling	D. Schaffert
			H. Blumenschein	J. Mechau

Water training and exchange of topics between the RGs Ghana and Uganda

A central element of the first week of the Board trip was a water training program with theoretical and practical content, in which two members from Uganda also took part. The training included two well regenerations and field studies.

The water training was organised by Joseph, project coordinator at TwB Ghana and specialist in the field of water, and took place in his hometown of Asesewa in the Eastern Region. In addition, Anthony, head of RG Sunyani, Immaculate and Renin from TwB Uganda were also

on site. In a two-hour theoretical workshop Dr. Yvonne Loh, a lecturer at Legon University in Accra, took us through the basics of water, including water resources, the water cycle, water quality and treatment methods.



We then looked at the Water Meter project in Asesewa, which Joseph implemented last year. We also visited Joseph's company, which produces drinking water bags. Here, Joseph illustrated the steps involved in water treatment, which includes sand filtration, reverse osmosis and bacteria elimination. In the practical part of the workshop, the reverse osmosis system was cleaned with Wessoclean.

Several villages near Asesewa were visited and field studies were carried out using TwB's internal questionnaire. Joseph showed us how to carry out a geological study to determine the moisture profile in the soil up to a depth of 200 metres. This method is very important to identify suitable locations for drilling a well.

In the villages of Bormase and Sekesua, a well was regenerated with Wessoclean. The dismantling and installation of the pumps is also an essential part of the regeneration work. Thanks to the water training, our Ugandans are now able to carry out water projects themselves, including well regeneration, and to train other members in Uganda. When visiting the villages, many wells were found that do not provide water because they were drilled in the wrong place and therefore cannot tap into the groundwater. The pump was broken in several wells.

Changes in infrastructure often lead to a worsening of water quality. For example, a well was found to be completely flooded because the water drainage had been changed due to the construction of a new road. As a result, the residents often draw their drinking water from ponds and rivers. Our observations have clearly shown us the importance of drilling wells in the right place with high efficiency and sustainability. For this reason, we have decided to set up a microbusiness with Joseph for the drilling, maintenance, and regeneration of wells. Hereby hydrological studies before drilling, pump tests after drilling, regular testing of water quality and the installation of a prepaid water meter system will be an integral part of every well drilling. More details on the microbusiness will follow in the next newsletter.

Jannik Mechau, Member of the Executive Board - Country Coordinator

Founding of the RG Somanya and visit to the University

The first visit to the University of Environment and Sustainable Development (UESD) in Somanya by a TwB board member was a complete success and led to the founding of a new regional group

After a letter of intent was signed between UESD and TwB in April 2023, the first personal visit to the university in Somanya has now finally taken place.

The meeting was chaired by the current Pro-VC, Prof Edward Wiafe Debrah. Together with Joseph, Jannik first presented the goals and premises of TwB as well as selected projects in the areas of water, waste, agroforestry, and hospital support. Prof.



Wiafe Debrah then provided information about the university and a community-based experience programme in which students carry out projects and research work in rural regions. As an example, he mentioned a waste project in which students are educated about the importance of waste separation and the need to protect the ecosystem. Both TwB and UESD see great potential for cooperation in rural projects and research work.

As a result of this very successful meeting, a meeting with interested students was arranged at short notice, which took place three days later. After a presentation of our association and a round of questions, the Somanya regional group was officially founded with 19 student members and Perthuella Clarkson as RG leader. Dr Daniella Delali Sedegah, currently Dean of Students, will be the local patron. The additional presence of Joseph (Project Coordinator Ghana), Anthony (RG Sunyani) as well as Immaculate and Renin (both RG Ndeje, Uganda) gave our new members the opportunity to exchange ideas with experienced members from Ghana and Uganda. The RG Somanya is planning to start regular meetings and initiate its first projects at the beginning of the new semester in January.

Jannik Mechau, Member of the Executive Board - Country Coordinator

Project manager workshop in Ghana

In a two-day workshop, 12 TwB members from Ghana and two from Uganda were trained in project management and are now authorized to manage TwB projects independently.

Our organisation pursues the goal of implementing sustainable projects of high quality through good project management. In order to achieve this, we have been holding project manager workshops for many years. Participation in this workshop is a prerequisite for being allowed to manage TwB projects. This also applies for our international members, who are increasingly implementing their own projects in their own countries.

For this reason, a two-day project manager workshop was held by Jannik at KTU Koforidua, which was attended by 12 Ghanaian members from various regional groups and two additional members from Uganda. They were taught the basics of project management, how to fill in our project files correctly and, above all, how to manage a limited budget efficiently. Real projects of the participants served as examples. The lively co-operation of all participants, the many constructive discussions and the very good feedback regarding potential improvements in the project documents made the workshop a great success. Some participants with extensive project experience are now also able to conduct the workshop themselves on site in future. Another important element was the networking between the participants, be it during the workshop, at lunch and dinner together or in the accommodation. Overall, everyone learnt a lot of new things and had a lot of fun.



Finally, we would like to thank Dr Samuel Ofose and Dr Alexander Fordjour from KTU Koforidua for providing the venue and for their organisation and excellent support during the workshop.

Jannik Mechau, Member of the Executive Board - Country Coordinator

Field report from the Ugandan perspective by Immaculate and Renin

Immaculate and Renin, two Ugandan members of Technology Without Borders, were invited to participate in the water training programme in Ghana. The aim of the workshop was to equip the participants with the necessary skills and knowledge to tackle water-related challenges in their respective communities.

Upon our arrival in Accra on 30th of September, we were welcomed by Beatrice and Jannik. The first activity on our itinerary was a field study in the Eastern region of Ghana. During the field study, we visited an osmosis plant where we learned a lot about the process of water purification.

The next activity was a water quality training session in Asesewa facilitated by Dr. Yvonne Loh. The training covered topics such as water formation, composition of water and quality of good water among others. We were impressed by the level of expertise demonstrated by Dr. Yvonne Loh and were eager to learn and teach others back in our communities.

One of the highlights of the program was the borehole regeneration project which involved using Wessoclean to remove clogging in the borehole. The plan was to leave the Wessoclean in the borehole overnight and pump out the water in the morning. Unfortunately, bad weather interrupted our plan and we were unable to pump out the water ourselves. The task was eventually carried out by colleagues from the water sachets company of Joseph.



The project manager workshop in Koforidua was another highlight. It was organised by Jannik and lasted two days. We had the opportunity to interact with members from other regional groups and learn from their experiences. We then travelled back to Accra where we met up with Frank, the honorary board member of Technology without Borders, and exchanged with him. We were inspired by Franks commitment to the cause and were grateful for the opportunity to discuss with him. On 10th of October was our last day. We returned to Uganda after visiting some recreation centres in Ghana, such as Labadi Beach.

In summary, the water training programme in Ghana was a valuable learning experience that equipped us with the necessary skills and knowledge to tackle the water-related challenges in our home communities.

Immaculate Judith Tumusiime and Renin Omugabe, RG Ndejje, Uganda

Visit to the University KTU, Koforidua

At a joint meeting between the Koforidua Technical University (KTU) and Technology without Borders, both organisations presented their activities. This was followed by a productive series of discussions in which a working group was set up to strengthen the cooperation between KTU and TwB in the future.

After the Koforidua regional group was founded in March 2023, a visit to KTU Koforidua took place as part of the Board trip. The meeting was led by the Pro-VC, Prof Richard Ohene Asiedu, who first introduced KTU. He also discussed project ideas that included waste management and solar power supply in rural communities, a waste incinerator at a hospital and the cultivation of water hyacinths.



Frank, Jannik and Joseph then introduced the Technology Without Borders association and its activities. TwB also brought up

the topic of e-waste with regard to possible project ideas. In the following discussion round, it was decided to set up a working group to further promote cooperation between TwB and KTU and the implementation of project ideas in regular online meetings. The working group will then also include the RG Aschaffenburg, which will act as a partner RG of the RG Koforidua. In addition, possibilities for the integration of TwB in the study programmes, e.g. in student research projects and theses, were discussed. The content discussed at the meeting will later be set out in a joint declaration of intent.

Frank Neumann, Jannik Mechau, Executive Board

Project Lean Hospital Techiman

Lean management at Holy Family Hospital has long been the dream of Christopher Akanbobnaab, the head of HFH. In more than 10 "lectures" via video conference, the theoretical basis was created for a two-day on-site inspection with the "change agents", which resulted in more than 30 ideas for improvements.

The idea for this project was born in 2018 when the Board members Veronika, Frank and Robert had an evening beer with Christopher Akanbobnaab, the director of the Holy Family Hospital (HFH) in Techiman. At that time, Frank had just completed a project to improve processes in a large German hospital and during the discussion Christopher said: "Let's do a Lean

Hospital project here in Techiman". As sometimes happens with evening beer conversations, this topic was forgotten again.

Even before that, but also since that conversation, the HFH has grown continuously, from around 300 employees in 2012 to more than 1,000 employees in 2023. This was ultimately the reason for Christopher to approach Frank again by email at the beginning of the year about the topic of Lean Hospital. As usual with Christopher, the decision to start a project was made within an hour and two emails. This has since been followed by 10 video conferences with theoretical principles on

- Basics of lean management
- Stakeholder management
- Overcoming cultural-, process- and material-barriers
- Value-adding activities versus waste
- Value stream design in administration" (VSDiA)
- Analysis of the HFH organisation with a view to "value-adding departments"

All these topics were then accompanied by exercises or "homework".

Video conferencing is excellent for knowledge transfer, but lean management aspects can be demonstrated much more clearly in an on-site visit. Within 2 days, 6 HFH wards were inspected with the responsible persons and a discussion with the finance department also took place. The results in the form of more than 30 starting points for improvements in the wards and in the finance area were presented at the end of the second day by those responsible for the respective department.

In an inspiring closing speech, Christopher asked those present to play a leading role as "change agents". The growth of the HFH in recent years can only be absorbed through appropriate changes to meet the challenges of the future. We will see whether we have been able to initiate a self-sustaining lean process with the steps we have taken so far.



Frank Neumann, Honorary Board Member

Visit to the University UENR, Sunyani

We now have the longest contacts among Ghanaian Universities with the University of Energy and Natural Resources (UENR). At the joint meeting, both organisations presented their current activities and, as expected, many similarities were identified, based on which the existing good cooperation is to be further expanded.

The visit to Sunyani University is now TwB's fourth visit due to the long-standing activities of our members, Professors Mercy and Nana Derkyi, Anthony and the strong Regenerating Wells



team, making it almost a "home game" for us. In this respect, the meeting took place in a relaxed atmosphere under the leadership of the Pro-Vice-Chancellor, Prof Kuwornu.

Our presentation was characterised by the RG's Regenerating Wells activities, which were very well accepted by the university management. The RG Sunyani is currently in the process of regenerating and repairing wells in several neighbouring villages.

Similar to the other universities, we also presented here the projects dry separation toilets, plastic waste (Ru!-Water Sachets), Hospital Support and Agroforestry. All of these topics are partly reflected in UENR's main areas of study, so that in the end all those present agreed not only to maintain the existing contacts, but also to expand them. Through Profs. Derkyi, we will therefore also contact the UENR's Climate Club.

Towards the end of the meeting, however, there was a surprise: The Pro-VC chairing the



Waste

Ort:
Koforidua, Tarkwa - Ghana

Zeit:
Ab Herbst 2018

Kosten:
ca. 10.000 €



Education

Projekt: e-waste - RecycleDown! Elektronikschrott

Hauptziele

- Schul- und Ausbildung der Kinder in Toxic City
- Wertstoffgewinnung

Maßnahmen

- Konzipieren von autonomen Containern für die / das Demontage / Recycling von unterschiedlichen Geräten
- Sortenreine Wertstofftrennung
- Aufbau und Durchführung von Schulungen zur Demontage unterschiedlichster Geräte durch deutsche und ghanaische Hochschulen



Mülldeponie Agbogbloschie



Leider auf unbestimmte Zeit zurückgestellt

waste, which was created back in 2016, and it became clear that we would most likely be dealing with this topic again in the medium term.

Frank Neumann, Jannik Mechau, Executive Board

Visit to the kindergarten in Drobo

Our trip ended with a visit to the kindergarten in Drobo, which generated new project ideas. However, the idea of setting up an agroforestry demonstration farm on a piece of land belonging to the kindergarten was cancelled.

The Drobo kindergarten was set up by the organisation "African Future Kids", of which Stephen Takyi is a member. He is also a member of TwB, which is why we also support the kindergarten. When we arrived, we were warmly welcomed by the children and school staff, who were all smiling with joy. During our tour of the building, we were fascinated to see the commitment and enthusiasm with which both the kindergarten children and the pupils are taught by their teachers.



We were very surprised that computer lessons are already being taught in Year 3, unfortunately mainly in theory on the blackboard. This is because the building is not connected to the

power grid and has no internal energy source with which to charge the existing laptops. Consequently, an autonomous energy supply for essential consumers is to be set up in future using solar panels. The Amberg regional group will drive the project forward and has already started initial planning together with African Future Kids.

During the tour, we noticed that although the rubbish is collected in baskets, it is not properly disposed or transported afterwards. A waste incinerator, which has already been set up and standardised in many TwB projects, could provide a remedy here.

Also on the agenda was a visit to the kindergarten farm, which could be a possible location for a planned agroforestry demonstration farm. However, as the farm is unfortunately not located directly next to the kindergarten, we decided to abandon this plan and look for a new location.

Finally, we would like to thank the school director Joe for the guided tour of the kindergarten and the farm.

Frank Neumann, Jannik Mechau, Executive Board

Newsflash

Rotarian aspects of our trip should of course not be missing

Because 4 Rotarians were co-founders of Technology without Borders and the legal board of TwB are Rotarians, between 40% and 60% of our projects have been financed by Rotary donations since the beginning, TwB works closely with the German Rotary Volunteer Doctors and the Rotary Action Group "Water without Borders" and the goals of TwB and Rotary are largely the same, the Rotary aspect of this trip must not be forgotten. In addition, several members of the travelling group (Jannik - President-elect, Frank - Past President, Abdul - Past Rotaract District Speaker and Ambassador of the Rotary initiative "EndPlasticSoup" as well as Renin - Roaracter) have a Rotary background.

The Rotary Clubs of Koforidua - New Juaben, Techiman (where Christopher Akanbobnaab is Past President) and a joint meeting of RC Sunyani Central and Sunyani East were visited. Of course, the traditional flag exchange was not to be missed. Frank Owusu is a member of the management of Sunyani Technical University and we have agreed that students from his university will help to further develop the technical expertise of RG Sunyani.

Abdul Rashid Wumpini, now also a TwB member, will set up a new TwB RG in Tamale and will continue to promote the existing topics of "Agroforestry" and "EndPlasticSoup - RecycleUp!-Water Sachets" with the new TwB regional group. (We will certainly hear about this in one of the next newsletters)

Since 1 July 2023, Ghana has been its own Rotary District and we have tried to contact the new district governor. Unfortunately, a meeting with him and RC Accra-Spintex was not possible due to short-term scheduling conflicts.

Consequently, the trip was also a complete success on the Rotary side with many presences 😊



Frank Neumann, Honorary Board Member

Founding of a new TwB regional group in Accra

A new TwB regional group has been founded in Ghana's capital Accra. A total of 9 student members with Bismark Koduah as leader belong to what is now the youngest TwB RG. A detailed introduction will be provided in the next newsletter.

Jannik Mechau, Member of the Executive Board - Country Coordinator

TwB at the Erlangen Christmas Market

Once again, this year, the RG Erlangen can be found at the Christmas market in Erlangen. As in previous years, we are allowed to use the volunteer stand for two days. We will be providing information about the association and collecting donations. You can also buy souvenirs from our project countries and freshly baked cookies.

So come along to the Erlangen Christmas market on Schlossplatz on December 20 and 21 between 10 am and 9 pm. We look forward to seeing you there!

Stefan Leimbach, RG Erlangen

V.i.S.d.P. Robert Schullan, Annika Mücke, Stefan Leimbach

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