

Editorial

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

Once again, the year is drawing to a close. With these words we have always started the last newsletter of the year since the first one appeared, writing about our projects with which we have helped to improve people's living conditions so that they can have a future worth living in their homeland. But this year, through Corona, nothing went as in the years before. We gladly were able to get some project members back from their deployment areas just in time. Fortunately, they finished all the projects they started. Almost all other projects are now on hold. In the meantime, it has proven to be an invaluable advantage that we have TeoG / TwB members in some project countries. Thanks to their help, especially agroforestry and water projects could be advanced.

However, we should not forget that the people in the developing countries suffer much more from the restrictions and effects of Corona than we do here in Germany.

Because our projects were pretty much "on hold" this year, we had time to take care of some things that were left behind and some new ones. So, as a Christmas present to us members, two outstanding videos about our TwB work were finished just in time for Christmas. On the one hand, there is the video clip of the RG Aschaffenburg-Alzenau "We are Technology without Borders", which was created in cooperation with the TH Aschaffenburg and describes the work of TwB in general (<https://www.teog.ngo/videos/>). On the other hand, RG Hamburg has filmed its outstanding project "Water for Eritrea" (<https://www.teog.ngo/videos/>). It is really worthwhile to watch both films once between the holidays.

Every year around this time, the board has thanked all members and especially the active members for the successful cooperation, which we would like to do again this year. Furthermore, we have wished ourselves a contemplative Christmas. Perhaps, instead of always complaining about Corona, we should keep in mind that this year we will probably have a really "contemplative" Christmas because of Corona! But there remains also the hope and the wish that we will all see each other healthy again in the New Year.

In this sense - many thanks, a contemplative Christmas, a good slide into the New Year, and the wish that we all may experience it in the best of health.

Sincerely

Your board

F. Neumann	F. Regler	R. Schullan	M. Graf	L. Hachmann	J. Schlund	D. Schaffert
			N. Nguyen		A. Fen	J. Fassnacht
			Ch. Zeidler		A. Vierling	A. Bruns

Development cooperation in the pandemic year 2020

Despite the COVID-19 pandemic, our Sand Storage Dam project continued to develop almost on schedule. This was achieved by building mutual trust between us and our project partners over the years. In numerous video conferences with our Eritrean partners, the individual steps were discussed and the villagers provided the leveling of the sediment deposits and the removal of silt deposits as their own contribution.

It has been almost a year since we reported from Eritrea. A lot has happened in the world in this time and it is certainly not the same as it was a year ago. Eritrea has not been spared from the COVID-19 pandemic, on the contrary. Not only that, but East Africa has been hit by a plague of locusts this year, with many farmers having their crops and therefore next year's seeds literally eaten away. In addition, a little more than three weeks ago, a warlike conflict broke out in Eritrea's neighboring country Ethiopia, which is already leaving its first traces in Eritrea and threatens to destabilize the entire region on the Horn of Africa.

Despite all these circumstances, our project continues to live and has been able to take steps forward in recent months, albeit admittedly relatively small ones. This is where the mutual trust built up over the years with our local partner, the Water Resource Department, has paid off in particular. A project trip had to be postponed indefinitely until the situation on site and in Europe allows it.



The sand storage dam at the end of 2019

At the end of the 2019 rainy season, the sand storage dam on the sides almost reached the final height of an impressive seven meters, and in the middle spillway the steps were built to a height of almost four meters. The final stage of the spillway was completed after the last major rain event. The next construction activities were scheduled for the rainy season in the summer of 2020, once the reservoir volume behind the last stage was completely filled with coarse sediments. The goal until then was to improve the quality of the already impounded sand reservoir by manual leveling measures and the removal of isolated silt deposits. The spillway stage height, which in some cases was somewhat too high, as well as the dam upstream, which had not been fully filled in the previous year, led to unwanted deposits of fine sediments (silt) in the reservoir volume of our dam. During the project trip in fall 2019, we agreed to remove the unwanted fine sediments together with our local partner and the villagers, who provide the majority of the workers for the dam construction. The villagers agreed to carry out the time-consuming and laborious work themselves, free of charge.

While Eritrea imposed a nationwide lockdown in the spring of this year and almost completely prohibited entry into the country, the villagers were still able to advance the project on their own, without explicit supervision or commissioning of the construction engineers. The result is

impressive: Several cubic meters of fine sediments were removed and the reservoir volume, originally with a height difference of up to two meters, was evenly leveled. These measures have significantly increased the quality of the sand spit and prepared the structure for the coming rainy seasons.



Villagers leveling as well as removing silt deposits.

The close cooperation with the Water Resource Department as well as the strong involvement of Begu's population through workshops, numerous discussions and the friendships that have developed over the years between all project participants enabled us to maintain and continue the project even in times of pandemic. The crucial factors for a functioning dam are clear from the villagers to the Water Resource Department to the project team in Germany and all our supporters. We are all pulling together and everyone involved fully identifies with the project!

The desilting work was completed in time for this year's rainy season. This allowed the rain events to continue to fill the reservoir volume this year, while the village population checked the quality of the accumulated sediments between the individual rain events and, if necessary, carried out smaller desilting operations on their own.

The construction progress of the last years can even be followed on Google Earth via satellite images. Thus, one can see how behind the dam wall, with each step, the reservoir volume is visibly filled with sediments and is constantly growing. In the coming year we will be able to build more steps and get closer to the completion of the dam!

While our Eritrean friends continued to work diligently on site, we also continued to work on the project in Germany. Thus, the friendly support of the Rotary Club Norderstedt remains with us with a further donation of 2,500 EUR. In addition, we received a grant of 2,500 EUR from the Technical University of Hamburg for our project. As a contribution to an international WASH conference for Eritrea scheduled by UNICEF for this year, we published a scientific article about the project. In addition, the journal *Wasserwirtschaft* published a report on our project in its December issue. In this article, the project principle is explained on the one hand and challenges and approaches to solutions are highlighted on the other hand. Last but not least, we are happy to introduce our new Instagram account "waterforeritrea", where we continuously provide updates and news with many visual impressions about the project and the country. Follow us on Instagram!

And for all who want to support us financially, [betterplace.org](https://www.betterplace.org) boosts every donation on advent sundays with 10% up to max. 200 € - a nice campaign

Reinhard de Lucas, RG Hamburg

Short Messages

TCB Cameroon - Hand in Hand for a Better School

RG Rhein Main is already working on two projects in West Cameroon. The first of these projects is about the water supply in Nzindong. There, a well is to be drilled and a water distribution system to the hospital, elementary school and church is to be installed. The second project is in Bayangam. There the well of the technical high school is to be regenerated and the control of the pump optimized, as well as a solar plant for the current supply of the pump is to be installed. In the course of this project, a regional group will also be founded in Cameroon, with the students of the upper school of the technical high school and the students of the small university in Bayangam. They will also help with the new, third project in the region, the TCB (teaching computer basics) project Cameroon. At the technical high school in Bayangam, a computer room is to be equipped with used laptops from Germany. For this purpose, RG Rhein-Main collects used laptops, installs a new operating system and some important office programs and transports the computers to Cameroon. There, the room is equipped and a local network with installed knowledge box is set up. In workshops, the teachers and some members of the new RG Cameroon learn how to use the programs and can then pass this on to the students. Thus, the technical high school is gradually getting a holistic concept for improving the learning situation with water, solar and IT infrastructure. The computers will then also be available to the new RG Cameroon, which is to carry out further projects in the region in the future. The project is scheduled to take place in November 2021, COVID-19 pandemic permitting.



Franziska Enzmann, Tillmann Beck, RG Rhein-Main

Development cooperation from the home office

Even though flights abroad are not possible at the moment, Technology without Borders is not easily deterred from project work. Our inventory app "Teog swift" is being maintained and expanded. Hundreds of devices are already registered and chief programmer Julian is constantly providing our partners in Ghana and Nepal with new features. For example, accounts can now be assigned directly via the app, device data can be exported and manuals for all devices can be stored. Together with the Hospital Support Working Group and medical partners such as the German Rotary Volunteer Doctors (GRVD), we are currently developing concepts for various repair scenarios that will make everyday life easier for the local maintenance staff. Furthermore, we are currently looking for programmers who are interested in web design, because we want to create a web interface in addition to the Android front end. If you are interested in volunteering from your home office, please contact andreas.vierling@teog.de.

Andreas Vierling, RG Erlangen

New project video for "Water for Eritrea" online

While the current lockdown brings life to a standstill in many places, the Hamburg project team of "Water for Eritrea" has used the last few months to process the many impressions from the last project trip in 2019. The result is an atmospheric film that impressively shows the



Screenshot from the video => <https://www.youtube.com/watch?v=UI-e3Pgjp8A>

developments that have already taken place in the Begu Valley as part of the project have been completed. The photographs not only show the construction of the sand spit dam itself, but also the many faces of colleagues, partners and friends on site who are all working together on this joint project.

As a little treat for the Christmas holidays, the video is now online, both on the club's homepage and on social media channels including the new Instagram account [@WaterForEritrea](https://www.instagram.com/WaterForEritrea). Feel free to check it out, liked & followed!

Jan Marc Schwidtal, RG Hamburg

News from the trees

Donation of KWF employees for the TeoG planting campaign

Next year, the big TeoG planting campaign is planned for October 9 in northern Hesse. Several thousand trees will be planted by TeoG members to offset the CO2 emissions of flights to TeoG project sites. The project is being carried out in cooperation with the German Board of Trustees for Forestry and Forestry Technology (KWF), which will be hosting next year's KWF conference at the planting site. Already the employees of the KWF donated 2000 € for the project, so that still more trees come into the



forest. The RG Rhein Main would like to thank them for their support! As a sign of the partnership, TeoG Rhein-Main and KWF together planted a young sweet chestnut on the KWF premises. The sweet chestnut is the tree of the year 2018 and copes well with the changing climatic conditions. For this reason, it is to be increasingly used in forestry in the future.

Small planting campaign in Hessen

The big TeoG planting action was originally planned for this fall. Due to the current COVID-19 pandemic, the action had to be postponed for a year, but the RG Rhine-Main will plant 300 trees (red oaks and bird cherries) in the wildlife park on the grounds of the waterworks in a smaller action as soon as the corona situation permits together with the neighboring RG Rhine-Neckar and the Wasserbeschaffungsverband Riedgruppe Ost. The trees not only serve as CO2 reservoirs, but also have an important function in the water cycle, as they increase the water absorption capacity of the soil and minimize evaporation from the upper soil layers. Bird cherry also serves as food for native birds and insects. So it's time to get to work and plant!

Franziska Enzmann, RG Rhein-Main

Currently running and completed projects:

www.teog.ngo

V.i.S.d.P. Dr.-Ing. Frank Neumann, Ina Reichman, Annika Mücke

Technik ohne Grenzen e. V. - Richard-Strauß-Straße 38 - 91315 Höchststadt a. d. Aisch

Board: Dr.-Ing. Frank Neumann (Spokesperson), Dipl.-Ing. Franz Regler, Dipl.-Ing. Robert Schullan, Michael Graf, cand. Ing. Nhat Nguyen, Dr.-Ing. Christian Zeidler, B.Sc. Lara Hachmann, M.Sc. Jonas Schlund, B. Sc. Annika Fenn, M.Sc.. Andi Vierling, M.Sc. Daniel Schaffert, M.Sc. Jakob Faßnacht, M.Sc. Arne Bruns

Association register: Fürth: VR 200 486 - **Tax number:** 216 / 111 / 00 865

apoBank **IBAN:** DE29 3006 0601 0007 5832 90 **BIC:** DAAEDEDXXX