



# Technology without Borders Newsletter I / 2021

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## **Editorial**

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

An exciting new year is ahead of us and COVID 19 will probably accompany us for a while. A new year usually means changes, and this is also true for us. Ina Reichmann will leave the newsletter editorial team and will fully concentrate on the management of the TCB (Teaching Computer Basics) working group. We would like to take this opportunity to thank her for her commitment to the editorial team over the past years. As her successor, we were able to welcome Stefan Leimbach to our team with immediate effect. A warm welcome to him.

### **Strengths and weaknesses of our association**

One of the undeniable strengths of our association is the fact that about 70-80% of our members are students, who drive our projects forward and take up new topics with an incredible commitment. We, the Executive Board, follow this fact with great pleasure and would like to thank all committed members very much. As in real life, unfortunately, there is also a "but". After graduation at the latest, the "nest-building phase" begins. One has to prove oneself in a new job and a little later family planning "strikes". Understandably, one's interests are not exactly focused on topics related to Technology without Borders. This can lead at one or the other point to the fact that an RG has suddenly scarcely or has no more members. To avoid such a development, foresighted RG management is continuously recruiting younger members. However, this can be made much more difficult within the current Covid situation. In this respect, the board asks all RG leaders to pay special attention to membership recruitment during these pandemic times. We would be very pleased to report about smart ideas on this topic soon. In this sense we wish you all - px. (which is a special Bavarian idiom and means - stay healthy!)

Sincerely

Your board

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

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## **First harvest at our agroforestry project in Brazil**

**Since the implementation of the agroforestry system (AFS) at the Camping and Pousada Serra e Mar in September 2020, we have observed the beginning of the growth of a highly productive and biodiverse forest, composed of more than 30 species among trees and annual crops. During the last months, the work was carried out in collaboration with the owner of the property, Ubaldo Rosa and his family. Together with the help of employees, volunteers, and members of the project, he carried out and monitored these works.**

The work in Serra e Mar started in July, when first technical plans of the agroforestry system were made out together with Ubaldo. In the following month, soil correction, organic fertilization and soil preparation were carried out. Following this, the three-day planting took place at the beginning of September according to the specifications of the technical planning. Here, the planting lines and distances for the consortium cultivation of annual crops, production and economic trees were implemented.



*Project leader Lutz and Ubaldo with their first harvested corn*

The planning and implementation phase of the demonstration area had the direct technical support of Gustavo Tramontin, Agronomist Engineer specialized in Regenerative Agroforestry Systems. The technical planning also included the maintenance phase after the planting, pointing out a detailed management plan of the pruning schedule, fertilization, management, and seasons for cultivation.

After planting, the crops developed well, just as grasses that compete for nutrients, water, and sun. Therefore, at the beginning of October, the first weeding in the AFS lines was carried out by Ubaldo and his volunteers. In general, the trees and short cycle crops have shown good development. However, it was noted that the soil in the AFS area is not yet fully balanced. Even though a complete organic fertilization was provided, some parts of the plantation showed reduced growth

when compared to others. This is completely natural, and due to the fact, that crops demanding in fertility have been introduced in an area of degraded land and low natural fertility.

Fortunately, with the proposed management system, through frequent pruning of trees and sowing of cover plants such as black oats, vetch, millet, and crotalaria, in the long term naturally tends to have a greater balance in soil fertility. This will result in greater productivity and homogeneity in crop development.

The good news is that near the end of the year, the corn and bean crops gave their first fruits and the first harvest of SAF was held! The next step is a meeting between the team leaders Lutz and João with Ubaldo, Gustavo and farmers of Ecovida network to define the next steps.

In parallel, the planning of the educational trail is being carried out by João Barchik and Jonathan Damasceno, both members of TwB Brazil. The work includes the development of information panels to explain different aspects of the project. The final work package of the project is the imminent start of construction of a shed that will be used for training purposes for local family smallholders and as a seed bank.

*Lutz Michaelis, RG Araranguá, Brazil*

## **Water for the village of El Cascajal, Ecuador**

**Neither the Corona pandemic nor the change of cooperation partner can stop the project - we bring the project to a successful end!**

Due to the ongoing pandemic, international development cooperation was affected by major restrictions to which we had to adapt without neglecting our project in Ecuador. In our case, the board of Technique without Borders decided to postpone trips to international locations in order to protect its members and our partners from possible infections. In June 2020, two members were scheduled to travel to the village in Ecuador's rural coastal region to begin implementation of the project with construction of the source capture and piping system. The decision to stop all work was positively received by our local cooperation partners and the

villagers of El Cascajal, hoping for an early end of the pandemic and better circumstances to continue the project.

In the meantime, our team in Aachen focused on further expanding our online presence on social platforms. By publishing our project locally in Ecuador, it received more attention from individuals and companies. Initiatives to acquire further donations for our project were carried out, enabling us to secure further funding for the project in the second half of 2020.

Our main partner in Ecuador, Tierra Viva, unfortunately disbanded due to the pandemic and its economic impact in the country. Shortly after, we were approached by the organization CODEINSE. They offered to build our planned fresh water supply system for the village of El Cascajal together with us. Our team decided to take this opportunity and continue our project with these new partners.

Our new project partner, CODEINSE, has many years of experience in the region and has completed over 300 water projects in rural parts of Ecuador, mainly in the highlands. The focus of these projects is on social acceptance in the communities, as well as economic self-sustainability to ensure a long-term life of the projects. This collaboration represents a great opportunity for our project.

Interest in the realization of the project in El Cascajal, CODEINSE and TwB Aachen signed a Memorandum of Understanding (MoU) formalizing their new partnership. In close cooperation with our project partner, concepts for the laying of the pipes were developed and simulated to ensure a fully functional water supply system for the entirety of the houses in the village. CODEINSE is responsible on site for the supervision of the further construction of the infrastructure, the measurements, and the quality management. Together with CODEINSE, we will provide training on hygiene, water and waste management, and monetary management of the community's fresh water supply.



*On-site project meeting of the project team*

The construction of the first water intakes will start with the end of the rainy season, expected at the end of March until the end of April 2021. After completion of the spring intakes, the entire piping system and tank construction of the project can be adapted to the total measured volume flow to ensure optimal functionality.

TwB Aachen and CODEINSE are looking forward to the coming year 2021 to realize the water project in El Cascajal and to provide the villagers with the long-awaited fresh water supply.

*Pierre Laßl, RG Aachen*



## TwB has an elective course at Rottenburg University

International development cooperation is one of many goals in the Resource Management Water bachelor program. Supporting this is an essential content of the elective subject "Technology without borders".

The study program "Resource Management Water" (B.Sc.) is unique in the form offered at the Rottenburg University of Applied Forest Sciences (HFR), as it addresses and links both natural and social science and technical aspects of sustainable water management. Students address current and future national and international water issues and seek to find interdisciplinary solutions to existing and emerging challenges in the water sector. One focus of the program is to qualify students for a job in international development cooperation. In addition to the professional orientation of the study program, a TwB regional was founded at the HFR several years ago. In order to motivate students to become members of the association and to actively participate in its work, "Technology without Borders" is offered as an elective course with one hour per week. In addition to other activities to recruit members, such as the organization of freshman parties and campus cinema hosting, it is thus possible to recruit new students from various courses of study at the university for the association's work and exciting TwB development projects every year.

*Matthias Friedle, RG Rottenburg*

## Well for students' home in Tanzania

In Hombolo, our partner is building a students' home, which will be optimized by us in a water- and energy efficient manner. Consequently, our first project was the construction of a well.



*The new well is already attracting many users*

This well will supply water to our and other nearby students' homes and can also be used by the inhabitants of Hombolo. They can buy the water for a small fee, which is 100 Tanzania-Shilling per 10 Liters of water (0.04€). The money contributes to the project's sustainability since it enables the funding of maintenance and repair work.

According to a hydrogeological measurement, the well in Hombolo was drilled 150 meters deep. An electrical pump then transports the water to a 5000-liter storage tank. This tank has two outlets allowing two buckets being

filled simultaneously. The pump is switched on and off manually to fill the tank.

The quality of the water is suitable for human consumption according to an analysis, so boiling prior to use is not mandatory anymore. The salt content is also lower than in another well in Hombolo. Conclusively, that means students and inhabitants of Hombolo now have access to healthy water.

*Franziska Enzmann, Christine Dillmann, RG Rhein-Main*

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## Short Messages

### Invitation to the online general meeting on May 29, 2021

Dear members,

Hereby we would like to invite you according to our general meeting for the association year 2020.

Agenda:

- Welcome and determination of the quorum
- Approval of the protocol of the MV 2020 for the association year 2019
- Report of the board of directors for the association year 2020
- Report of the treasurer and cash auditor for the association year 2020
- Discharge of the treasurer and the board for the association year 2020
- Election of the 2nd chairman of the board - proposal: Dr. Markus Reinhard\*.
- Re-appointment of the Executive Board Regional Organization, Jakob Faßnacht as of 1. 6. 2021
- Discussion and adoption of amendments to the statutes - a mail with the proposed amendments will be sent to all
- Preview of the association year 2021
- Date and place of the general meeting 2022

\* Introduction of Markus:

Dr. Markus Reinhard is one of the 17 TwB founding members and has one of the first TwB projects, an uninterruptible, solar-based power supply for the operating theaters in Bator - Ghana. He has been a Rotarian for several years and is therefore able to maintain the connection to our main sponsors, the Rotary Clubs, and the Rotarian organizations (German Rotary Volunteer Doctors and Water without Borders).

*Board*

### Final deactivation of Owncloud

In the process of migrating our IT infrastructure to Microsoft 365, the remaining instances of our Owncloud, including the folders of our national subsidiaries and regional groups in Ghana, Uganda, and Brazil, are now also being shut down. All files have been moved to the respective sharepoints. The final shutdown will take place on March 31, 2021.

If you have any questions, please contact [it-support@teog.de](mailto:it-support@teog.de).

*Daniel Schaffert, WG IT*

### TwB spys on a deep dive – RG Rhein-Main digital game night

Since we could not meet physically since November, the small talk in our RG meetings is somehow missing. So we thought it might be time for some kind of socializing without budget files and project plans. Our “social team” Julia, Cora and Stefan organized the very first digital game night this year. As painters and spies, with egg liquor and potato crisps, we did a dive down to a virtual coral reef to do some giant art and find foreign agents. Looking forward to the next session!

*Franziska Enzmann, RG Rhein-Main*

## **RG Rottenburg in a puzzling mood**

The first sunrays this year have woken us up from hibernation too! Even though we couldn't meet in person during these wonderful spring days, there was still a lot to do at our regional group in Rottenburg. During the winter we held our meetings online, so that we could work on our projects despite Corona.

Due to a lot of commitment of the members we managed to expand the group. We are very happy that we can count so many great members from different areas to our team.

On February 19, we also had an event to promote team spirit. In an online escape room, we were able to show how well we work together and found a solution to even the trickiest puzzles.

Furthermore, there are news regarding upcoming projects. For example, an agroforestry project for a childrens' home in Uganda is planned, which will create food security and income for the local population in Masaka. To be able to implement the projects, many connections have already been made and ideas collected. In addition, several members participated in the project leader workshop last December.

We are looking forward to all the exciting things that we can expect this year. Best regards from Rottenburg!

*Carola Haas, RG Rottenburg*

## **Annual Report 2020 in final spurt**

Technology without borders was founded in 2010. So we are now just in time to write the first annual report of TwB for this anniversary. It will not only include overall information and developments of TwB, but also present the regional groups and give project reports. Although 2020 was surely different from all years before, we are proud to say that we did a great job. As soon as it is finished, you will all get a digital copy of the annual report 2020!

*Franziska Enzmann, RG Rhein-Main*

## **Membership fee for 2020**

The 2020 membership fee will be collected in the near future.

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## **Currently running and completed projects:**

[www.teog.ngo](http://www.teog.ngo)

V.i.S.d.P. Dr.-Ing. Frank Neumann, Annika Mücke, Stefan Leimbach

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