

Editorial

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

we recently started a great new project. Here is the story behind it: More than 10 years ago, Claudia Koch emigrated to Bali with her husband Peter and has been running a diving centre as a partner ever since. Because of COVID, tourism has almost come to a standstill and so Claudia has used the time that was suddenly available in a sensible way and has turned her attention to the waste problem on Bali. Waste, especially plastic waste, causes devastating damage not only on land but also in the sea, for example by destroying coral reefs. Together with the organization Livingseas, she is committed to preserving coral reefs. Claudia came to us through a Rotarian diving trainee and the Rotarian initiative EndPlasticSoup, with which we have been working for a while now, and Claudia is now a member of TwB. Thus, a new project was born with the goal



More about this see below!

Sincerely your board

R. Schullan
M. Reinhard

F. Schofer
C. Zeidler

L. Hachmann
F. Enzmann

A. Fenn
A. Vierling
H. Blumenschein

A. Bruns
D. Schaffert
J. Mechau

Water supply in kindergarten and primary school Bayangam

Our regional group, which was founded in Cameroon only 2 years ago, can now look back with pride on a project that they developed and implemented themselves. The focus is on supporting the primary school and the kindergarten.

The Bayangam Regional Group, founded in 2021 in Bayangam, Cameroon, has completed its first project. A water pipeline was laid from an existing well to the primary school and kindergarten in Bayangam. Trenches had to be dug over a length of 500 metres and a 2000-litre tank installed on the grounds of the kindergarten, as well as another tank on the grounds of the primary school. A 5-metre high wooden structure was erected on the grounds of the kindergarten to safely place the 2000-litre water tank.



In the kindergarten, a water tap and a sink were installed in each classroom. The outdoor toilets also received a water connection and a sink to enable the children to strictly observe hygiene rules.

In the primary school, a water tap was installed in front of one classroom so that in future the 250 pupils will have access to clean water every day.



Another aspect is the renovation of the kindergarten's internal classrooms to improve conditions for the children. The work is close to completion.

As a small side project, vegetable beds were planted on the grounds of the kindergarten. The idea behind this project is to promote a sense of responsibility and practical skills to the children. By taking care of the small vegetable garden, the children also have the opportunity to do activities together. The first harvest is planned for the month of March.

Dr. Franziska Enzmann, RG Rhein-Main

Prepaid-Water-Meter Project

Water is becoming a more and more valuable resource. Unfortunately, we have to realise that it is not always appreciated accordingly, especially when it is given away free of costs.

The Prepaid Water Meter project focuses on supporting the public water supply in Aseesewa. The growing town in the mountains of the Eastern Region of Ghana has problems supplying water to all parts of the town. During the wet season, the public supply system pumps about 260 cubic metres of water per day, which is not enough for the more than 21,000 inhabitants of the town (12.4 l/person). The supply is therefore rationed and not all public water points in the city have water at the same time. Especially the people living in the new districts of the city have to travel long distances to fetch water for their households. Because public water is free, the city has no money to pay for repairs to the network and to expand it. In addition, the water is sometimes not used carefully, because "what costs nothing is worth nothing". To solve these problems, our long-time Ghanaian member Joseph Maudjorm launched the Prepaid Water Meter project and has so far implemented it without German support. A small-scale supply network with its own borehole and water tower was built in a new district of Aseesewa. Joseph, who is a self-employed consultant for groundwater localisation, drilled for water in the valley. The well now supplies clean water to the water reservoir on top of the mountain with the help of an electric pump. From there, the water is pumped downhill to 3 sales points. Customers pay 50 pesewes (= 0,04 €) for 25 litres of water, which is shared between the seller and Joseph. In this way, the infrastructure can be maintained and the network expanded. In the meantime, Joseph has been able to set up 2 more independent supply networks in Aseesewa.



Based on the experience gained, similar projects will be implemented independently in unsupplied villages in the future. In this way, sustainability can be guaranteed. I was able to inspect the project during my own project trip and made a video about it, which can be found on the TwB Youtube channel. => <https://www.teog.ngo/videos/>

Jonas Groß, RG Bayreuth

Waste management in Bali

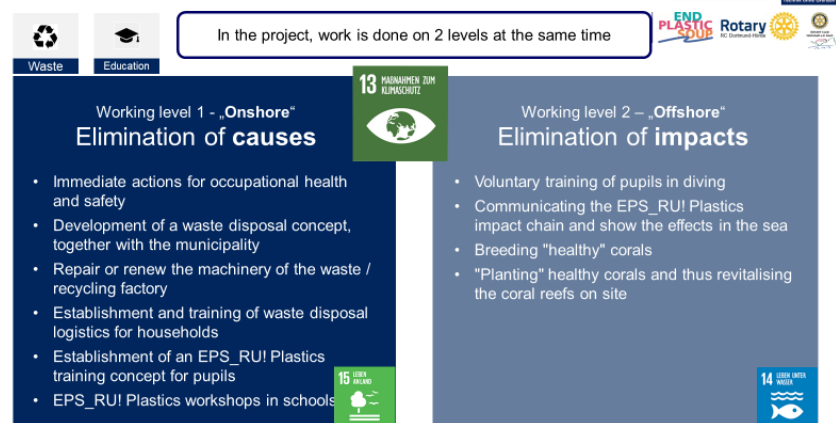
Like everywhere else in the world, the COVID crisis also left its mark in Indonesia, Bali. With a concept that works on two levels, our new TwB member Claudia Koch and our long-time (Indonesian) member Florianus Josopandojo will fight together with the RG Aschaffenburg against the causes on land as well as against the effects of plastic in the sea.

Padangbai, a village in the province of Karangasem on Bali being one of the most popular tourist islands in Indonesia, is facing a challenge in waste management not only because of tourism. The province of Karangasem has decided to stop taking care of the waste removal from the villages. This forces the residents of Padangbai to build up their own waste management structure.

Our partner organisation Livingseas, which was founded by Leon Boey and which is already planting corals in the ocean, has recognised the possibility that these circumstances could lead to waste being dumped in the ocean. To counteract this, it is important to support the local residents in managing their own waste.

This initial situation led us, together with Claudia, to set up a project that combats both the **causes** and the **effects** at both the "Onshore" and "Off-shore" levels. Besides Livingseas and TwB, the organisations EndPlasticSoup, the Rotary Clubs of Dortmund-Hörde, Höchststadt an der Aisch and Horizon 1850 are involved in the project.

Project structure EPS_RU! Plastics



On the onshore level, Florianus is currently in the process of designing a plastic waste collection contract between the local recycling centre, the municipality and a recycling plant in East Java. In discussions with both institutions and the mayor of Padangbai, initial positive results have already been achieved.

In order to be able to process the waste, investments in machinery are planned. A washing machine and a hydraulic press will be provided so that cleaned recyclable plastic can be made available in bales for transport. Training courses are planned to enable the staff to handle the machines supplied competently. The MARK 9 incinerator, which TwB already uses at 22 locations worldwide, is to be built for the incineration of residual waste in the near future.

Funding at the onshore level is largely ensured by the Rotarian initiative EndPlasticSoup and the RC Dortmund-Hörde, whose contact person, Bernd Austermann is. In an immediate initiative, TwB donated appropriate clothing for the employees of the recycling centre to ensure their safety at work.



However, the priority at the moment is to make the local people aware of the necessity of waste separation, as well as to set up a logistical disposal concept for the waste that arises. These activities should contribute to establishing a sustainable waste management system.

In summary, Padangbai is facing a big challenge, but thanks to the fact that we have a member on site with Claudia and with Florianus, our Indonesian main project leader here in RG Aschaffenburg, we are firmly convinced that we will achieve sustainable development in Padangbai.

We will report further on the activities at the offshore level in the next newsletter.

Jan Ackermann, RG Aschaffenburg-Alzenau

Hospital Support and Implementation of Swift App in Nepal

Namaste - welcome to Nepal. The Hospital Support Project in October was at the Dhulikhel Hospital in Dhulikhel. The project team introduced the TwB Swift App and supported the maintenance department on site.

In mid-October, the time had come: the trip to Nepal could start. The project location was the Dhulikhel Hospital in Dhulikhel, about 1 hour drive from Kathmandu. Here, the "Swift" app developed by TwB was introduced. This is used by the technicians to digitally inventory the clinical equipment. In addition, they can network with each other and thus share their knowledge to solve problems faster.



TwB launched the first steps of the app in a pilot project here back in 2018. Now the application is fully developed and can be deployed for daily use. Within the three-week stay in Dhulikhel, the entire clinical equipment inventory was digitized. This includes about 1600 devices in the main location of the hospital. However, during our project time we also visited three Outreach Health Centers: Dolakha Hospital, Kirnetar Hospital and Dumja Hospital. Again, all clinical equipment was included in the database. Aside from the work there, the trip to the outreach

clinics was also a great insight into rural areas of Nepal!

The medical staff was also incorporated into the application's reporting system to facilitate communication exchange with technicians. In addition, during our last week at Dhulikhel Hospital, we had many important discussions with both the technicians and the Administrative Director of the hospital. These were mainly about the integration of maintenance into processes of the hospital, but also about the planning of new premises and further demands. At the end of our stay in Dhulikhel we also met our longtime cooperation partners of the GRVD.

We are very satisfied with all we have achieved here and hope that a good motivation and cooperation basis has been created for further projects. The success of the project will be evaluated in regular meetings with the local technicians. In addition, further future cooperation is planned.



Katharina Mai, RG Erlangen

Newsflash

Announcement of the General Assembly

The next General Assembly will take place on 13.05.2023 from 11:00 am in Presence in Aschaffenburg.

Preliminary agenda for the General Assembly 2023

- Welcome and determination of the quorum
- Approval of the minutes of the extraordinary general meeting 2023 for the year 2021
- Report of the Executive Board on the Association's year 2022
- Report of the treasurer and the cash auditor on the association year 2022
- Discharge of the Treasurer and the Executive Board for the association year 2022
- Elections (confirmation of the 2nd Board Dr. M. Reinhard, 2nd Treasurer Dr. Chr. Zeidler)
- Appointments and confirmations to Board positions (Andi Vierling, Daniel Schaffert, Dr. Franziska Enzmann)
- Elections of the auditor
- Preview of the association year 2023
- Date and place of the General Assembly 2024

Board

Founding of a new regional group in Freiburg

Using the energy of the sun for heat and electricity is already taking place in a number of TwB projects around the world. A regional group specialising in photovoltaics and very well networked in the local and national solar industry is now being founded in Freiburg, Breisgau. Johannes Dörflinger (project engineer for renewable energies, johannes.doerflinger@teog.de) and Philippe Ruß (philippe.russ@teog.de) are currently paving the way for the foundation of the new RG



Freiburg is considered the sunniest region in Germany, and the Fraunhofer Institute for Solar Energy Systems ISE conducts research on the latest solar technology. The location is therefore predestined for a TwB-RG with a focus on PV.

To ensure that the official foundation can take place soon, we are still looking for new or existing members who are interested in using the power of the sun for more than just sunbathing and a summery complexion. Perhaps there are also contacts (locally) to potentially interested people who can be approached. Please contact Johannes or Philippe by e-mail.

Philippe Ruß, RG Freiburg

Students of the Höchststadt High School construct a collection tower for Water Sachets

We are the students Konrad Markus, Florin Nücker and Johannes Laubinger from the high school in Höchststadt. With the help of Frank Neumann (TwB), we have designed a Water Sachets tower and built a first sample in a fast prototyping process. This tower is supposed to bundle about 200 Water Sachets into a small package so that they can be transported cleanly, compressed and ordered to a recycling factory or directly to a factory for further processing. There, the sachets will be recycled or up-cycled (into new products) for sustainable reuse.


Waste

Location:
Höchststadt / Ghana

Timeframe:
2023 / 2034

Costs:
App. each 50 €


Training

Project: Water Sachets Tower

Main target

- Recycling of plasticwaste

Activities

- Building a sample tower for the collection of Water-Sachets
- Making a film for the construction of the tower
- MakeAthon for the sachets tower together with students in Ghana via videoconference
- Setting up collection centres for Water-Sachets in Ghana




Joint building "without borders"





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For the construction of the column, we have exclusively taken materials from a nearby recycling depot and processed them.

This project is intended to start a recycling system to reduce the waste problem caused by carelessly disposed Water Sachets in Africa. It is planned that we will build columns together with pupils from Ghanaian schools via video conference, in order to use them in their schools. Our goal is to have more than 50% of Ghana's 32,000 schools participating in the project by 2027.

Our next goal is to use the findings from the fast prototyping to build a sample, to record this building process in a short film and then to distribute it to the now 80 schools that are already familiar with the "RecycleUp! Water Sachets" project, so that they can build and use the Water Sachets tower. It is planned that the pupils will be supported by Ghanaian members of Technology without Borders.

Johannes Laubinger

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

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