

## International Student Exchange 2016 – 2019

### Student Feedback Questionnaire

The purpose of this questionnaire is to evaluate the lessons learnt of the AIR international student exchange.

By filling out this feedback report, you agree that your picture and experience will be published on the homepage of the AIR project. <http://www.air-project.org/>

Name of student:	Tanja Mast
Gender:	Female
Age:	30
Degree:	Master of Science
Hosting university:	University of Malawi
Sending university:	Technische Hochschule Ingolstadt
Period of exchange:	2 weeks
Field of study/major:	Energy Systems and Power Market
Field of interest during exchange:	Visit of projects with biogas, pv, wind, hydro; Operation of the power grid in Malawi
Further graduation plans (e.g. PhD programme):	PhD programme

Please tick the respective box	I strongly agree	I agree	I neither agree nor disagree	I disagree	I strongly disagree
<b>Programme</b>					
I gained insights into the practical implementation of RE in the host country (sight visits etc.)	x				
I gained knowhow in field of my study			x		
The courses were helpful for my further research				x	
The agenda was well structured			x		
<b>Organisation</b>					
The journey preparations were well organised		x			
The support during the exchange was good			x		
The post processing of the exchange was well organised		x			

The reimbursement process was satisfactory		X			
The accommodation was pleasant	X				
Local transportation was well organised	X				
I socialised with local students			X		
I recommend the exchange	X				
Other	<p>What would you suggest to be changed/improved for future exchanges?</p> <p>Did you experience any difficulties during your exchange?</p>				

*Please write a brief report about your student exchange, including organisation, agenda, experience, lessons learnt, suggestions for improvement, and recommendations for other students (max. 590 words, Arial 12).*

I was warmly welcomed on my first day at the Polytechnic in Blantyre. After a short introduction to the team of WASHTED, I attended the course of "Environment and Sustainable Development". The module was scheduled as a one-week block seminar, so I attended the daily course from Monday to Friday and I had the opportunity to hear the complete subject matter. I was impressed by the interactive lesson and student's awareness of development potential for Malawi. Therefore I was animated to reflect about the self-evident availability of electricity in every German household.

For the second week a few excursions were scheduled. The first trip was to the Kapichira Hydro Station in Chikwawa District, one of the four run-of-the-river hydroelectric generation plants at the Shire River. Here we had the opportunity to see the whole generation chain, from the intake, turbine, generator to the transformer and control centre. I was fascinated by the dimension of the aggregates. It is totally different to learn the theory of operation of a hydropower plant and calculate the power output of a power plant in studies, and to see the real power plant. Unfortunately, only two of the four turbines were running this day.

Next trip was to visit a solar shop in Chikwawa District. It was nice to see how good the system is established and maintained. It is a sustainable project which enables villagers the access of electricity and the development of businesses.

The last excursion was a trip to the Mulanje Mountain Area. There we visited the micro hydro system Bondo. The electricity generation and distribution are operated by the Mulanje Electricity Generation Agency (MEGA). The system is an off-grid system and supplies a rural area (around 600 customers) with sustainable electricity. The generation scheme consists of three power houses at different river levels with a total capacity of 260 kW. The system is regulated by an electronic load controller that

monitors demand and dumps excess power. I was impressed by the villagers involvement in building the power plant and how few high-tech is needed to supply hundreds of people with energy. But I find it incomprehensible that only 10 % of the produced power is used or demanded by the costumers and 90 % is wasted through the dump resistor.

As summery of my exchange, I can say I learned much about struggling with energy supply and that reliable energy supply is not self-evident everywhere. Though access to electricity remains low in Malawi, I get exciting insights into electrification pathways such as sustainable models for off-grid systems for rural areas.

*Please add at least one picture showing you during your stay at the partner university (e.g. yourself together with local partners at the university/excursion – please send it also as a separate file via email).*

### Visit of the Kapichira Hydro Station, Chikwawa District



### Visit of the Bondo Micro-hydro project, Mulanje

