

# WATENV Newsletter

No. 6 July 2015

Dear WATENV alumni, students, and friends,

we are in the middle of summer and end-of-semester plannings, some of our current students will go on a field research trip to their home countries, and we are already awaiting the new WATENV students, arriving in August and September. The next two-year M.Sc. course, starting in October, is already fully booked since weeks, and we are happy that more than half of our prospective students were able to secure a scholarship for their studies in Hannover!

Every now and then some of our alumni join our events, or send news from around the world - it's always great to hear from you!

Best greetings,  
Eva Starke (WATENV course manager) & WATENV staff

## WATENV NEWS

### Second INTERNATIONAL DAY at Leibniz Universität Hannover

In May, the second international day was organized by the International Office, with the help of many volunteers. The WATENV study course had it's own information booth, but many WATENV students participated also with their country presentations, including dance shows and music performances. Visitors could travel the world in the University's main building (the castle) and taste delicious food and drinks of many different countries.



Pictures (from left to right):  
Raul and Mahmoud of the WATENV student team, the large glass-roofed courtyard, the Bolivian booth with WATENV students Claudia and Yara



## RECENT STUDENT ACTIVITIES

### Field trip report, module Ecology and Water Resources

From 28 to 30 May, Dr Jürgen Bätke and Dr Jörg Dietrich led an excursion for 15 WATENV students within Lower Saxony as part of the course "Ecology and Water Resources". The excursion began with a visit to Northeim lake, where we measured Secchi depth, oxygen concentration and saturation, temperature, conductivity and chlorophyll concentrations as well as taking algae samples.

Day 2 was a day for taxonomy, something few of us had any experience in. We split up into four groups, two in the river Ahle and two in the river Rehbach, and waded through the water collecting samples. Luckily the rain held off making this a thoroughly enjoyable experience. The problems began, however, when we returned to the bank with nets full of creepy crawly specimens to identify. And our task of matching these tiny organisms to the black and white drawings in our handbooks was certainly not made any easy by the fact that they kept trying to eat each other! With the help of Dr Bätke, however, we soon learnt to identify different families, and by the end of the day were able to draw conclusions about the quality of the water from the organisms that we had found. A personal highlight for our group was finding a lamprey or Neunaugen in the river Ahle. Dr Bätke turned up just in time to identify it as a critically endangered species and save it from being chucked into the ethanol jar, where our other specimens met a rather unfortunate end. We returned each evening to our base at the Gut Steimke farm, where we were incredibly well looked after. There we worked into the evening analysing and sharing our results before finishing the day with some games and, on day 2, an accomplished guitar performance from Dr Bätke.

On Day 3, by which time we were all getting pretty good at ecological investigations, we went to the river Weser to take similar chemical and physical measurements as well as sampling organisms in the littoral zone. After sharing our results and having a quick oral exam the field trip was over and it was back on the train to Hannover.

I would like to thank Drs Bätke and Dietrich for organising the field trip. A lot of fun was had by all.  
(Text by: Sarah Collins, England)



### WATENV STUDENT TEAM

The new WATENV student team members are:

Rahul from India, Regina from Hungary, Lina from Colombia, and Naveen from India.

The WATENV team supports new students during their first weeks in Hannover and organizes social and cultural activities.



Pictures: the field trip participants, taking samples at a lake and rivers in Lower Saxony (J. Dietrich, J. Bätke, R. Taha)



### Vegaswarasti Kumala, Indonesia

Vegaswarasti Kumala recently finished her M.Sc. in October 2014. She carried out her thesis in the Section of Waste Management, Material Flow Analysis and Anaerobic Processes under the supervision of Dr.-Ing. Dirk Weichgrebe. Directly after graduating, she joined the Research Institute Fraunhofer UMSICHT as an intern for 6 months. The internship was co-financed by the German Academic Exchange service (DAAD) the first months, and extended by Fraunhofer. Vega worked in a project related to biomass and residue utilization to increase the fuel capacity of materials, to obtain a better combustion and therefore a more sustainable energy production.

Through the WATENV office, Vega was informed about a seminar of „Returning Experts to Indonesia“, which she joined in November last year. The Returning Experts seminars are offered by the Centre for International Migration and Development (CIM) of the German Agency for International Cooperation (GIZ). Thanks to this approach, her competences and qualifications, she was offered a job position at the Division of Renewable Energy - GIZ Jakarta. She now works as Junior Advisor in a project about Least Cost Renewables in Indonesia, and provides technical support in the implementation of biomass and biogas applications in the agro-industry. She will also be involved in a climate change mitigation project. Vega is happy to work in her home country, and pleased with all the experiences and knowledge gained in the two years of her Master studies in Germany. „WATENV has given me the opportunity to work in a multidisciplinary environment, and has also provided me with an excellent background in Sanitary Engineering and Solid Waste Management. I would also like to thank DAAD for giving me the scholarship grant to study this program, which provides students with an excellent level of education, and for the internship experience. Both have helped me to extend my professional network in Germany with a connection to Indonesia“.

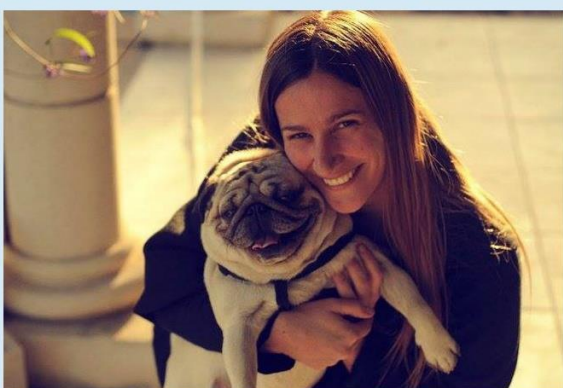


Photo: Vega (second from right) with her colleagues at Fraunhofer Institute

### María Mercedes Buzzella, Argentina

Mercedes Buzzella received her WATENV M.Sc. degree in 2013. Afterwards she moved to Sao Paulo, Brazil, where she is currently working as Water Resources Engineer for an American Company called CH2M HILL. Mercedes has been involved in a waste water treatment plant modernization program for the METropolitan Region of Sao Paulo, which is a very populated area with around 20 million inhabitants. Within her activities, she leads the water quality modelling front of the Tiete river basin, which includes domestic, industrial, and diffuse pollution. Nowadays, Tiete River has a very poor water quality with extremely high rates of organic matter, heavy metals, as well as very low dissolved oxygen concentration. Therefore, the goal of the project is to compare the influence of distinct waste water treatment technologies on the improvement of water quality. The project will not only investigate the actual situation, but also future scenarios until 2040.

During her studies in the WATENV Master's Programme, Mercedes worked in the calibration and validation of hydrological models (HBV-IWW), regionalization of parameters, and basin's delineation with Arc GIS. These experiences, in addition to specific subjects such as hydrology, and sanitary engineering have helped Mercedes to skillfully develop her current work.



According to Mercedes, the Master's courses provided her with the necessary background to face different working challenges related to water management. "Although I didn't have a specific course of water quality modeling, by combining the information of several courses I took in WATENV Program, I gained enough knowledge to capably fulfill my tasks at work". Studying in Germany a Water Resources Management Program was an advantage for Mercedes of finding a job.

Photo: Mercedes Buzzella (and her dog)



## Katrina Elaine Mariner, Samoa

Katrina E. Mariner concluded her studies of the WATENV Program in September 2013. She is currently working in her native country for the American Samoa Power Authority (ASPA), as the Water and Wells System Engineer. ASPA is a development-oriented public utility, which provides electricity, water, waste water and solid waste services to the people of American Samoa.

“My role is to plan, design and supervise drilling works, well’s construction and rehabilitation, and ensure proper ground-water management”.

Katrina manages a drilling crew of six people including a drilling contractor. Together, they are in charge of drilling groundwater wells, leakage identification, and maintenance of water supply lines to avoid water losses. “Our aim as ASPA is to provide all residents of American Samoa with a sufficient supply of good quality drinking water. Besides our drilling works, part of my job is to ensure that this precious resource is not over-exploited, and our existing and new wells are pumped at sustainable rates and not at rates that could incur saline up-coming”.

To carry out the simulations of ASPA’s groundwater wells, Katrina applies the numerical modeling software FEFLOW 6.2. This software she utilized for her WATENV Master’s thesis under the guidance of Dr. Georg Houben, and the Federal Institute of Geosciences and Natural Resources (BGR) in Hannover.

For Katrina, all the knowledge and experiences learned in the WATENV Program have been an important tool to contribute to a better approach of water management in American Samoa. “I acquired a great wealth of water resources management knowledge during my studies in Germany, and it has been an absolute blessing to apply them in my country. Thank you to all my lecturers, colleagues, and friends from the WATENV Program. All that you have imparted upon me, is of great benefit to the people of American Samoa.

Faafetai tele Lava!”  
(\*means\* Thank you very much!)

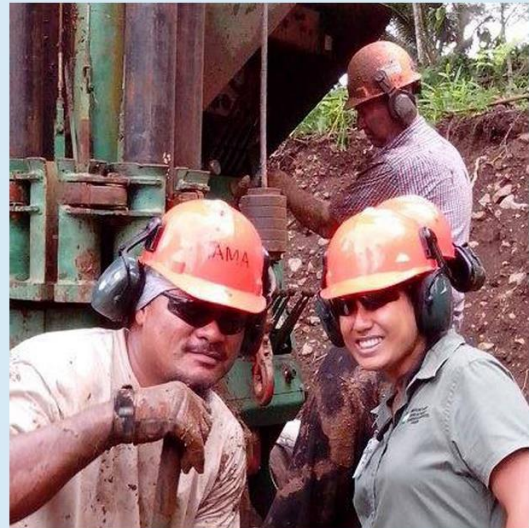


Photo: Katrina (right) and colleagues working at one of the well sites

If you would like to get in contact with our alumni, and find out more about their work, or if you would like to be featured in one of our newsletters yourself, please get in contact with the WATENV office:  
[watenv@iww.uni-hannover.de](mailto:watenv@iww.uni-hannover.de).

Thanks to all who contributed to this newsletter.

Have a nice and sunny summer break!



WATENV alumnus Anis (left) performing at the International Day

Picture:  
D. Cairano Hansen/International Office

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