

INTERDISCIPLINARY WATER RESEARCH NETWORK BUILDING WITHIN NORDIC AND BALTIC COUNTRIES

Tvärvetenskaplig nätverksbyggande inom nordisk och baltisk vattenforskning

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Abstract

Viable Water Management and Governance for Futures (VIWAFU), a professional network for international and interdisciplinary collaboration amongst researchers from the Nordic and Baltic countries, was built for providing and sharing knowledge on water management and governance for future policy and decision making during the years 2012–2014. VIWAFU organized four workshops for MSc students, PhD students, and post-docs, focusing on different topics, e.g. water services management, water supply infrastructure, innovative water strategies, and water management in tourist areas. In top of the seminar themes, the students discussed and practiced communication – orally in small and big groups, and as written communication aimed at appealing to diverse readers. The communication was challenging because of cultural differences, but also because of the diverse disciplinary backgrounds of the participants. Altogether, the VIWAFU seminars were successful in creating a strong network between coming researchers from Nordic and Baltic countries. Hopefully this will lead to a tighter cooperation within water-related research around the Baltic Sea in the future.

Key words – Network Building, interdisciplinary collaboration, Nordic and Baltic countries

Sammanfattning

Under 2012–2014 organiserade VIWAFU, ett nätverk för internationellt och interdisciplinärt forskarsamarbete i Norden och Baltikum, fyra seminarier för master-studenter, doktorander och post-docs. Var och ett av seminarierna hade ett tema, t.ex. VA-branschens reglering och styrning, infrastruktur för dricksvatten, innovativ utveckling inom kommunala vattenfrågor samt vattenhantering i turistområden. Utöver seminariernas teman diskuterade och tränade studenterna sig i kommunikation – muntligt i små och stora grupper samt genom skriftlig kommunikation med fokus på olika mottagare. Kommunikationen var utmanande, inte bara på grund av kulturella skillnader, men också på grund av att deltagarna hade olika ämnesbakgrund. Summa summarum: VIWAFU-seminarierna lyckades med att skapa ett starkt nätverk mellan kommande forskare från Norden och Baltikum. Detta leder förhoppningsvis till ett närmare samarbete inom vattenrelaterad forskning runt Östersjön i framtiden.

Introduction

Water is the most basic substance for human lives, which joins people across municipalities, nations as well as disciplines. The most challenging water related problems in our world require international and interdisciplinary collaboration. The Nordic and Baltic countries have several small research teams oriented towards water services management and governance, but unfortunately they are scattered and cooperation between them is rather limited. In order to enhance cooperation, an international group of researchers established a network called Viable Water Management and Governance for the Futures (VIWAFU). One of the main goals is to initiate research cooperation amongst Nordic and Baltic researchers. The network is based on the idea that all partners would benefit from collaboration between the research teams. Within the VIWAFU network, experiences and knowledge could be shared, and researchers are expected to gain different perspectives and to promote comparative thinking.

During the years 2012–2014, the network organized several meetings, seminars, field visits and four research training courses involving MSc students, PhD students, and postdocs. Professors and lecturers supported the courses. Each of the four host universities contributed to the course series with an emphasis on a topic relevant to the local area. The courses included a wide range of issues: from water management and policy to technical solutions for specific fields.

The very first and introductory research training course took place in Lund University, Sweden in June 2012. It aimed to improve the understanding of water services management, policy and governance. The second course was hosted by University of Latvia in Riga in May 2013, concentrating on drinking water, its sources, and water supply infrastructure. The third part, hosted

by Technical University of Denmark, Copenhagen in August 2013, focused on municipalities as platforms for innovative water strategies, as well as sustainable technological transition with emphasis on storm water. The final course, which was hosted by Kaunas University of Technology in June 2014, dealt with viable water management in tourist areas in Palanga, Lithuania, considering the challenge in accessing potable water and disposal of wastewater during the tourist season.

Drawing on the experiences gained from these courses, participants decided to communicate the major lessons learned from international and interdisciplinary collaboration in the early stages of their researcher's career. Overall, course participants got very good ideas from each other and they decided to continue the fruitful and productive cooperation in the future.

On the crossroad of different cultures

The first challenge working in an international group of students with different research background is communication. Despite of deep knowledge of the subject, the challenge is to make oneself understandable to the others, while communication ways may be very different due to culture and research background differences. The challenge became visible among the students coming from Nordic and Baltic countries as well as from China, India, Kenya, Pakistan, Kazakhstan, Italy, Iran, and Czech Republic. The course series gave an opportunity for practicing: each course gave flourishing inter-cultural communication (Figure 1a and 1b). In particular, the Palanga course concentrated on interaction training.

One of the communication challenges is to simplify the message. Sharing experiences offers an opportunity to see and discuss the same issue from different viewpoints. However, the variety of experiences is based on



Figures 1a and 1b. *Hard work at the discussion table (left: Palanga, photo: Erika Elijosiute, right: Copenhagen, photo: Johanna Sørensen).*



Figure 2. VTWAFU students and teachers on sightseeing among the dunes in Neringa, Lithuania (Photo: Jānis Bikše).

cultural differences, variety of research fields and the development level of each participants' country. Hereby, the challenge of expressing oneself arises. Through a simple communication assignment (Figure 1a), the participants from Palanga course understood that presenting their scientific work in short is not that easy as what they expected. It is a great challenge to present research results without losing the main message along the way, especially when the listeners comes from a wide range of cultural backgrounds.

In terms of development of water services in different countries, an important question was raised during the course series: What should developing countries do with their water management system? Should they find their own way forward or should they learn from the experiences from other countries? Is it really the best solution to walk the same way and do the same mistakes, or can developing countries find an even better track to follow? After a long and stormy open table discussion, the questions were still left open and it became clear that there are no simple answers to them. In another discussion, a related question was raised: Can we learn from each other when the climate as well as the technical and financial situation is different from place to place? The technical solutions are obviously different for e.g. tropical areas compared to temperate regions. Nevertheless, what about the technical development in different countries with *similar* climate? Probably we can learn a lot from each other, but we need to clearly specify under which circumstances the technical development in our country has taken place. When we understand the socio-technical history of a specific technique, a similar technique could be developed for another country under other conditions. This came even clearer when the stu-

dents presented long-term trends in the water sector of each participating country. All the presentations caused wonder amongst the students from the other countries: Do Lithuania *only* use groundwater as drinking water? Iceland has almost no wastewater treatment plants? In Denmark, do they almost have no natural rivers left? Moreover, it is not even worth to mention how different some things seemed to be India. After presenting the water sector history for each country, the students discussed the differences and similarities in smaller groups.

Almost all courses included pre-assignments related to the course theme and the students' home countries. Accordingly, participants from different countries had a chance to present and discuss their own problems or achievement in the water sector. In this way, the pre-assignments gave valuable facts as input to discussions during the courses. In addition, during the course in Copenhagen, scientific articles on the topic were read and discussed. The students were divided into groups to discuss the articles that were of most interest to each of them. These sessions, together with study visits, lectures and the other pre-assignments, further enriched the learning process for the students. Altogether, this was a great opportunity to learn differences and similarities in the challenges and progresses made in water-related issues as experienced in the various countries and cultures that were represented. The students developed a deep understanding of the water sector in their home country in perspective to other countries, which will be beneficial in future cooperation with researchers from other countries.

Beside all hard work done in classrooms, the participants got the chance to experience some culture in each country (Figure 2). The courses offered interesting ex-

cursions and some local degustation. Together we concluded that free time and additional programme during the courses were important parts of group formation and getting to know each other better. It was further discussed that different cultures have different impacts on relations. For example, some are not very strict with time for arrival at meetings while others are very strict on the same. This and other culture connected to relations can lead to misunderstanding and poor cooperation between the parties involved. During the courses, both students and lecturers practiced new forms of cooperation with social rules that sometimes were different from what they personally were used to.

Water as lubricator for collaboration

The students came from diverse fields of disciplines including water engineering, water governance, water history, water safety, water law, environmental science, geology, modelling, etc. In the end, this proved to be a fruitful mix for sharing experiences and knowledge, where everyone was viewing the water issues from different perspectives. Furthermore, interdisciplinary discussions gave a deeper understanding of a certain issue, thus improving projects conducted in research themes with researchers from diverse fields. However, interdisciplinarity also raises significant challenges. For example, it is known that engineers might have difficulties with management issues, or that water managers have problems to fully understand geological topics, technological solu-

tions or the relevance of water history, and so on. During several field visits, this caused confusion for the guides at the sites: there were many different questions from various fields varying from engineering to political, from geological to sustainability studies, from law to economical.

Communication between various disciplines is an important research issue in the world. These skills are essential in conferences, during a research exchange, and in practical projects, as well as in a coffee room of one's own department. During the course series, the interdisciplinary group had occasional problems in absorbing information about specific topics that never or very briefly were analysed before. Herein, we may note that researchers do need to know how to popularize their studies also among the academics. Thus, in addition to disseminating the results for wider public or research funders, the communication in an interdisciplinary group of researchers requires similar skills. Fortunately, communication skills are gained in practicing.

During the course in Palanga, the students were given a task to practice written communication. The students wrote about their own research for both an audience within academia and for the public. It was definitely easier for the students to communicate their research to scientists in their own field. After a workshop about communication with the society, the students were able to re-write their text with a clear message to the public.

Every student got some practical or theoretical benefits as well as new perspectives from other disciplines during this course series (Figure 3a and 3b): governance

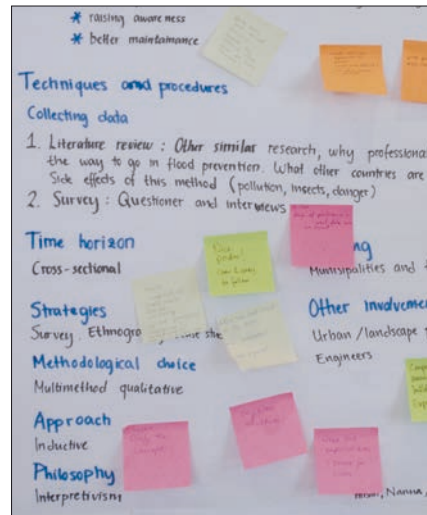


Figure 3a and 3b. The VIWAFU students were given different perspectives on water research. At Riga's drinking water treatment complex, chemical engineering was in focus. Here, Daugava water before and after treatment are shown in the laboratory (Photo: Ruta Sidaraviciute). In Copenhagen socio-technological development were discussed. The picture shows a visualisation of a project development (Photo 4b: Johanna Sørensen).

and management-oriented students obtained some knowledge about practical matters, whereas engineers gained knowledge about society and governance. Furthermore, some of the students had a possibility to train their communication skills in practice with a journalist. A big international and interdisciplinary group got attention during the visit at Roskilde site visit where the local newspaper (Sjællands Nyheder, 2013) interviewed some teachers and students.

Concluding remarks

One of the main goals of the VIWAFU network was to bring together doctoral students with similar interests and to create a strong network. It is not too brave to say that the courses indeed created an international and

interdisciplinary network of students. The students have continued to communicate through social networks, emails, and open online sites after the course series. This network, as well as the knowledge gained during the courses, will indeed be valuable in the future activities such as common applications, consultancy, education, and for sharing information in the field of research. If well prepared, such a course series gives a great opportunity for PhD students and early year researchers to broaden both their knowledge and their network.

Reference

Sjællands Nyheder (2013), Kurset hvor det godt må regne, published online 24th of August 2013, <http://sn.dk/modules/fsArticle/index.php?articleid=349059>

