Training Future Decision-Makers in Park Management: Transatlantic Capacity Building through the EU's ERASMUS Programme

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Introduction

EFFECTIVE MANAGEMENT OF NATURAL RESOURCES AND RECREATIONAL ACTIVITIES in protected areas is an important issue for landscape and environmental planners worldwide, requiring complex strategies, knowledge, and competencies. The areas concerned range from large, pristine wilderness areas to small urban parks, from areas with strict nature protection to those with sustainable resource extraction, according to the IUCN protected area management categories (Dudley 2008). Conflicts are common wherever different land use or recreational activities occur in the same area or where upper-level administrative decisions affect local communities (Pretty and Pimbert 1995). In order to successfully address these issues, future managers and planners need to acquire a profound knowledge of the application of ecological and sociological methods and the ability to work in multi- and interdisciplinary environments. Students in the fields of environmental planning, natural resource management, and related disciplines are the future leaders in this professional community and thus a core target for capacity-building measures early on.

An understanding of the potential impacts of human activities on particular natural resources, together with sophisticated knowledge about visitor numbers, demographics, preferences, and behaviors in specific protected area settings, is vital for managing the quality of resource conditions and recreational experiences (Eagles et al. 2002; Kajala et al. 2007). For example, in many countries, recreational activities are considered one of the primary drivers of the decline of threatened species and habitats (Czech 2000; Scherfose 2009). Examining such an issue provides an opportunity to explore the potential of often-demanded integrated and interdisciplinary science and management approaches in the context of protected areas (van Riper et al. 2012).

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The European Union's Lifelong Learning Programme as a framework

With a budget of nearly €7 billion for the current European Union (EU) funding period from 2007 to 2013, the European Commission-administered Lifelong Learning Programme (LLP) funds a range of actions, including exchanges, study visits, and networking activities. Projects are intended not only for individual students and learners, but also for teachers, trainers, and all others involved in education and training. The LLP's objective is to enable people at all stages of their lives to participate in stimulating learning experiences, as well as providing support to further develop the education and training sector across Europe (European Commission DG Education and Culture 2013a). LLP is an integral part of the EU's strategic framework for education and training, which emphasizes countries working together and learning from each other by achieving four strategic objectives:

- Making lifelong learning and mobility a reality;
- Improving the quality and efficiency of education and training;
- Promoting equity, social cohesion, and active citizenship;
- Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training (European Commission DG Education and Culture 2013b).

Measures (called "activities" in EU jargon) vary by specific education objectives, of which the ERASMUS¹ Intensive Programme (IP) funding scheme served as the format to develop what is now being called the "International Summer School on Global Challenges in the Management of Parks and Protected Areas."

An IP is a short study program that brings together students and teaching staff from higher education institutions of at least three participating countries. It can last from ten continuous full days up to six weeks of subject-related work, with the objective to encourage efficient and multinational teaching of specialist topics that might otherwise not be taught at all. Also, it enables students and teachers to work together in multinational groups, hence creating special learning and teaching conditions not available in a single institution, and to gain new perspectives on the topic being studied (European Commission DG Education and Culture 2013c). In order to obtain funding, one institution has to serve as the coordinator, whereas the other consortium partners provide local contact persons to manage the program. The funds are based on flat-rate payments for both participating students and teachers, covering travel to the IP location plus lodging and food. Additionally, the coordinating institution receives a small amount of funds to supplement the organizing costs borne by the institution. Participating students usually also pay a minimal fee to bolster the rather meager subsistence rates. In our specific case, the course fee is €125 per student which, in relation to a two-week course, can be considered quite low.

Building an international network

Knowing that creating and maintaining international collaborative networks in the academic sector requires a lot of time, patience, and dedication, the initial network was founded between West Virginia University (USA), the University of Natural Resources and Life Sciences in Vienna (Austria), and Leibniz University of Hannover (Germany), based on an existing research collaboration. The objective was to develop an international teaching experience in the field that would focus on the management of natural resources and recreation in parks and protected areas. From the beginning, it was clear that the initial course in 2011 would be held as a pilot course, with only these three institutions involved to reduce "teething" problems and plans to mature the curriculum later on. After a successful test run, an application was filed to the EU to obtain funding for a three-year period from 2012 to 2014, complemented by a grant from the United States Department of Agriculture (USDA) for the years 2011 and 2012 in order to initiate US participation early on.

The product: The International Summer School on Global Challenges in the Management of Parks and Protected Areas

Partners and student selection. For the first EU-funded course in 2012, two new partners were invited: Mendel University in Brno (Czech Republic), and Wageningen University (Netherlands). In 2013 and 2014, the University of Catania (Italy) and the Swedish University of Agricultural Sciences in Umeå will be added, respectively. Thus, in its final funding year, the network will contain at least seven universities altogether. Every participating EU university has a contingent of six students and one to two teachers, which are covered by ERASMUS. Adding the US partner, the overall size has doubled from 18 to 36 student slots. Potential candidates must apply through their local institution's coordinator and are selected based on their grades, a curriculum vitae, and a letter of motivation.

Course format and objectives. The objectives of the IP course were derived from a needs assessment based on exchanges among the network partners and practitioners in the field. Thus, the curriculum was developed from a managerial perspective rather than purely on a theory-based, academic approach. The guiding principle is to help students develop an understanding for the complexity of protected area management and how disciplines other than their own are required to develop solutions for the most imminent challenges in this field. For the involved lecturers, the objective is to develop and enhance teaching methods in a European and transatlantic context and to disseminate and publish the findings from the course. Topics covered are habitat management, wildlife conservation, recreational and visitor planning, environmental education, and human dimensions of ecosystem management.

The concepts, methods, and tools that are taught and applied during the program include ecological (e.g., habitat and species mapping and monitoring), geographical/digital (e.g., application of GIS, computer-based simulation) and sociological (e.g., visitor counts and surveys, conflict management) techniques and skills. Scientists and practitioners from all relevant disciplines have contributed to the course.

In total, students spend twelve teaching days (plus one day each at the beginning and the end as travel days) in two surroundings: a two-day acclimatization phase starts out in seminar style at the Leibniz University's campus, with all participating students and lecturers contributing to the program. This is followed by an eight-day field seminar in Harz National Park, about one hour south of Hannover.

Harz National Park provides a unique setting: It is one of the country's most frequently visited parks with a rather small overall size (246 square kilometers). Since its designation in 1990, many former land uses (e.g., logging and mining, the latter with a history of more than

3,000 years in the area) have been discontinued. The forest, heavily altered by human activities, is now in transformation from a plantation-style spruce forest to beech–oak communities. Until 1990, the former Iron Curtain also ran through what is today the park's core zone, implying that the area does not only contain valuable natural resources, but also cultural and historical resources. Although the park is located in an area where tourism has been present for more than 100 years, the exact number of visitors (estimated between three and five million a year) remains unclear due to a lack of accurate visitor counting procedures and due to the geographical dispersion of ingress and egress points.

On site, students work on actual planning and management challenges provided by the park's administration. The topics include habitat management, wildlife conservation, recreational and visitor planning, environmental education, and landscape architecture and design. Whereas the tendency in 2011–2012 was rather leaning to focus on the underrepresented social sciences, the mix of collected data will be more interdisciplinary in 2013–2014, reflecting the overall objective.

Methods of teaching. The acclimatization phase and the final day in Hannover resemble a traditional seminar-style approach. All lecturers are involved in moderating topic-related sessions with an individual length of 90 minutes to three hours. This approach is intended to familiarize students with the different topics and to help them develop their own research program that they would like to carry out in the field under supervision from the teachers. Throughout the course, students have to participate in an active manner (e.g., by giving presentations about protected area management in their home countries or in the field studies), thus creating an awareness for differences and similarities in managerial approaches or cultural/social differences between the countries. During the field phase, participants implement the work projects and thus gain hands-on experience with the methods and tools that are being used. After the full week on site, final presentations are given to Harz National Park managers, so the students' work receives instant feedback from practitioners in the field.

Organizational aspects. The organizational approach and structure developed within the partnership to manage the project can be split up into the content and the logistics. Whereas the latter is mostly in the hand of the coordinating institution, the former is mostly decided upon in a bottom-up effort. While the general topic is clear and individual thematic responsibilities are assigned to the lecturers, the exact contents and the format used in order to deliver the content (i.e., the didactical approach) is at the discretion of the individual lecturers. Among the students, one person from each university delegation is also appointed to the role as a student coordinator.

Evaluation and course adaptation. The philosophy behind the course concept is that constant feedback loops will help to improve the program every year. Therefore, feedback sessions are part of the course. Also, the teacher-student ratio of about 1:6 helps to create an atmosphere where informal feedback is also common. Finally, the EU does require a formal evaluation at the end of the course. Without adding any individual questions, the EU standard questionnaire already contains more than 70 items. Many of these concern student demographics, operational or organizational aspects, but open-ended questions leave room for detailed critique of the course contents. In 2011 (pilot course) and 2012, 16 and 27 questionnaires were returned, respectively. Thus, the overall sample size is still too small to

draw conclusions, but it allows to point out some observations. Notably, about three quarters of the participants were female. The main motivation for participating was evenly distributed among academic, cultural, and linguistic reasons. Eighty-one percent of the participants ranked their satisfaction with the course as "high" or "very high." Sometimes, evaluation results may be contradictory or adverse. For example, in 2011, students had remarked that they considered the acclimatization phase too short with insufficient cultural activities. In reaction, the program was changed in 2012, adding an additional day to address this issue. In the following evaluation, students criticized the extended cultural program. This anecdote illustrates that even in the third year, the program and the curriculum are still a test bed. Most importantly though, the students in the 2011 and 2012 courses came to the conclusion that the topics being addressed in the IP course were both important, but also of value for the advancement of their individual careers. Because of their comments, the field research phase, where students actually apply methods and tools, has been increased from five days (2011) to eight days (2013).

Outcomes and impact on park management

As the course title implies that it is based on case studies of current management challenges in a national park setting, one of the most important contributors to both the organizers' and the students' satisfaction is the question of whether the program has an actual impact on park management at Harz National Park. One important issue at the study site is the management of visitors at one of the park's tourism hot spots—Torfhaus (Figure 1), where the existence

Figure 1. The Torfhaus visitor center area serves as the sample site for visitor-related activities during the ERASMUS IP course. Photo courtesy of Eick von Ruschkowski.



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of the national park was assumed not to be a major contributor to the motivation for the visit. The park operates a large visitor center at this site. A consideration was that visitor services offered at the center could be better targeted to meet visitor (and park) needs by gaining a better understanding of visitor demographics and motivations. Hence, the IP group designed and implemented a study to assess visitor characteristics. Since 2011, the sample size of the visitor survey has grown (n=1,456), giving the park managers valid data, such as the visitors' awareness of the national park (96.8%) and the fact that many (94.8%) still would have come if the park did not exist. Cross-tabulation and other bivariate analysis revealed that 3.5% of the survey visitors could be considered "true" national park visitors, in the sense that the park's existence played a very important role in the decision to come to the area and that they would not have come if the national park did not exist. About 70% of the sample stated they were day visitors, whereas the average length of stay for overnight guests was about six days.

Foreign visitors made up about 8% of the sample; on the other hand, no so-called non-traditional users (e.g., minorities or non-native residents) were encountered at all. Given that 18.6% of Germany's population has an immigrant background (Statistisches Bundesamt 2007), this result was noteworthy. Overall, the survey results were presented to the park managers who consider this information important for long-term planning, especially for interpretive services offered by the park.

Additionally in 2012, three design proposals were developed by the students to improve the overall appearance of the parking lot and visitor center area as an entrance to the national park (Figure 2). Some elements of the proposals were considered and actually implemented by the park in early 2013 (Figure 3), indicating the significance of the results to the park administration. On a micro level, a summative evaluation of the permanent exhibits in the visitor center was launched to identify popular exhibits and areas where the connection between the park and its visitors can be intensified. Activities by the IP group will complement park assessment activities through the 2013 field season.

Lessons learned and outlook

The ERASMUS Intensive Programme funding scheme provides a great opportunity to implement a curriculum that reflects the current training needs for future protected area managers in Europe and beyond. In this specific case, funding has been confirmed for the 2014 course already. However, the funding guidelines require a shift in the coordinating role after three consecutive years of funding. On the one hand, this ensures constant innovations in the course's structure and the curriculum; on the other, specific niches where a teaching need exists are in constant danger of being lost, as the funding is not sustainable in the long run. A specific concern is the discrepancy between the rather well-endowed budget for lecturers and the minimal sufficiency rates for students. Although probably intended to attract teachers to the program, it is safe to assume that students usually have the tighter budget to live on.

These noted shortfalls are being reflected in the results of a recent public consultation contracted out by the EU in preparation of a new program in the field of education and training for the next funding period from 2014 to 2020 (GHK 2013). Experts stated that future programs should aim at fostering long-term stable partnerships and making learning for sustainable development an urgent theme, something the developed course would fit well



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Figure 2. Student proposal for the redesign of the Torfhaus area from the 2012 course to improve the visitor experience.

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Figure 3. Actual site of the visitor area in July 2013 after student proposals were considered during the planning process. Photo courtesy of Eick von Ruschkowski.

into. Additionally, it was suggested that ERASMUS should be widened to countries that are of strategic importance to Europe, namely the USA, Canada, Brazil, China and Japan.

Overall, the ERASMUS IP on Global Challenges in the Management of Parks and Protected Areas is currently in its second official cycle. Feedback from participants, but also from managers in the field, indicates that the contribution to capacity building in this field at this specific educational level is valuable. A full evaluation will be completed after termination of the third cycle in 2014. At that time, a questionnaire will also be sent out to alumni to determine whether the project has made a long-lasting impact on the participants or proven helpful in their individual career advancement.

The results from the courses will not only make a contribution to enhance management on site in Harz National Park, but also to academia. In particular, the data from several program-related surveys are currently being analyzed and will be published in peer-reviewed journals. Aside from the benefits of teaching in an international context, this outcome provides some added value for the involved lecturers.

Areas to improve the program also remain in the context of the didactical approach and the use of new media. Students have proven to be very advanced in using modern information technology and social media, whereas the E-learning platforms used by their institutions do not always allow for formal interaction with the partner institutions' networks. A specific additional enrichment to the program has resulted through international enrollment at all the partnering universities. Participants from non-EU and non-US countries (e.g., Indonesia, Tanzania) have had a chance to participate and have contributed additional facts and perspectives. Because of the interdisciplinary approach of the IP, students always found a topic that allowed them to relate the program to their home institutions, where a variety of programs (e.g., environmental planning, landscape architecture, wildlife management and ecology, recreation planning, media design, forestry, etc.) was represented.

The program's success is partially reflected by the fact that several other European and US institutions have expressed interest in this program, as well as universities from Africa and South America. As the EU requires a shift in the coordinating role after three years, potential continuation and changes in the format will have to be discussed among the existing partners in the network, taking these expressions of interest into account. One of the core issues that comes with the increased popularity is how to maintain a group size that is manageable even with limited resources. Current member institutions are exploring ways to achieve a long-standing program to support capacity building through this international field school approach.

Acknowledgments

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Endnote

1. For "EuRopean Community Action Scheme for the Mobility of University Students." The name recalls that of the great Dutch Renaissance humanist Desiderius Erasmus.

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