Chapter 10
Preparing a New Generation of Wilderness Entrepreneurs

Lessons from the Erasmus Intensive Programme 'European Wilderness Entrepreneurship' 2013

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Abstract This chapter discusses the role of education in the preparation of the next generation of entrepreneurs in nature conservation. Departing from the traditional conservation education, which emphasizes ecological management, the chapter is a plea for incorporating entrepreneurship in the curricula of educational programmes on rewilding ecosystems. An Erasmus Intensive Programme on European Wilderness Entrepreneurship is presented as a case study. A set of competences is defined and operationalized based on the evaluation of the first edition of the programme undertaken in Rewilding Europe's pilot area in Western Iberia. Aspects of the learning strategies and learning environment are presented and reviewed. The conclusion of this chapter is that to learn wilderness entrepreneurship competences, an environment should be created in which students, teachers and stakeholder co-learn at the boundaries of their comfort zones.

Keywords Entrepreneurship · Education · Competences · Learning strategies · Erasmus Intensive Programme · Western Iberia

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10.1 Introduction

Ever since the creation of national parks and other large-scale nature conservation efforts, the principal objectives of conservation, science, and recreation are bound together in an ever-changing interrelated triangle. Their dependencies, benefits and tensions are in a constant flow, often defined by financial contexts (Kupper 2009). This is also discernible in the current European situation of dwindling subsidies and uncertain finances for nature conservation, which calls for conservation activities that generate revenues to achieve economically sustainable conservation. Several actors in European wilderness conservation are adopting conservation strategies that aim to achieve economic sustainability. For instance, Rewilding Europe included wilderness-based entrepreneurship in their main objectives (see Chap. 9), and the NGO Wild Europe (wildeurope.org) launched an economic benefits group in 2013 to stimulate "a new breed of wilderness warrior". Due to the rise of these new European wide conservation initiatives there is a need to train students and professionals in wilderness entrepreneurship.

Nature conservationists are traditionally not trained in entrepreneurship and business development as it is often assumed that professions related to nature conservation are principally guided by ecological and sustainable principles. Those fields therefore define the educational design of nature conservation curricula. This chapter describes an exploration into this new field of education in the context of rewilding European abandoned agricultural land.

10.2 Entrepreneurship in Conservation Education

We found that scholars in conservation science hardly mention entrepreneurship in their publications. Using entrepreneur* as a search term in JSTOR Data for Research (http://dfr.jstor.org), we found that the term was introduced around the 1920's and 105,555 articles have used the term by 10 July 2013. Most of these articles are classified by JSTOR under the business (31%), economics (26%), history (16%), political science (15%), and sociology (11%) disciplines. We found that scholars in biological sciences, ecology, plant sciences, and zoology do not often mention ($\leq$0.6% of all articles per discipline) entrepreneurship in their publications (Fig. 10.1). When searching with the same term in a few major conservation journals in JSTOR on 15 July 2013, we found 48 (out of 4140) articles in Conservation Biology, 8 (out of 3149) in Ecological Applications, 1 (out of 14025) in Ecology, 3 (out of 4384) in Journal of Applied Ecology, and 4 (out of 9353) in The Journal of Wildlife Management.

Many nature conservationists have a degree in biological sciences or from a resource management programme. These programmes started to expose their students to the importance of other scientific fields due to the emergence of the new interdisciplinary field of conservation biology in the 1980's (Meffe and Carrol 1997). Although, economics and sociology are recognised as important fields within conservation biology, entrepreneurship is not mentioned by Meffe and Carrol (1997).

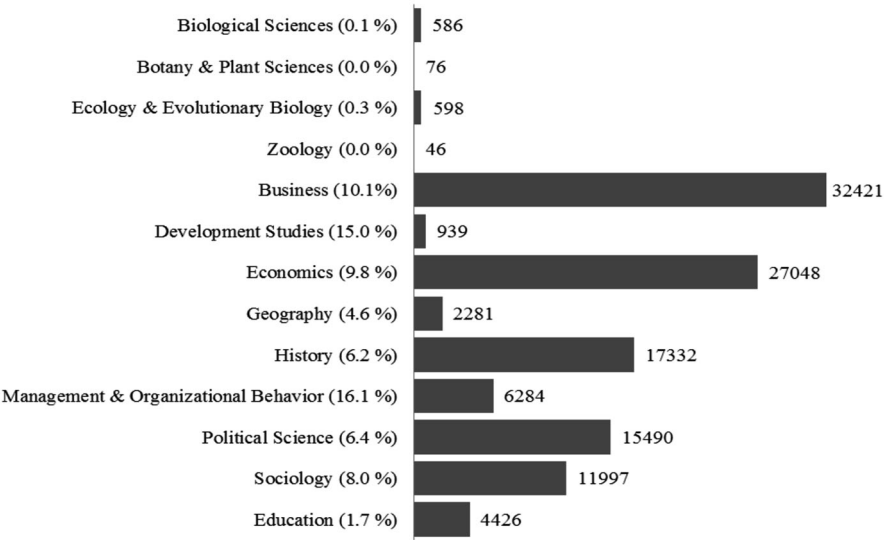

Fig. 10.1 Number of journal articles found when searched for entrepreneur* per discipline on JSTOR Data for Research (http://dfr.jstor.org) on 10 July 2013. Percentages are calculated by dividing the number of articles found by the total number of articles published per discipline. Individual journals can be included in more than one discipline

Nor is it included in the recommended guidelines for conservation literacy from the Education Committee of the Society for Conservation Biology (Trombulak 2004).

The European Commission (2006) recognises the importance of entrepreneurship in (higher) education and mentions entrepreneurship as one of the eight key competences for lifelong learning. Nonetheless, they reported that "the teaching of entrepreneurship is not yet sufficiently integrated in European higher education institutions' curricula" (European Commission 2008). They further conclude that the majority of entrepreneurship courses are offered in business and economic studies.

Since 2000, Dutch governmental policies are in place to stimulate entrepreneurship in Dutch education (Van der Aa et al. 2012). This policy encouraged several Dutch universities of applied sciences to integrate entrepreneurship in their curricula. Currently, entrepreneurship is part of curricula of several programmes in agribusiness, forestry and nature management, agriculture and rural development at the authors' home institution.

10.3 Case Study: The Erasmus Intensive Programme on European Wilderness Entrepreneurship

In the project 'European Nature Entrepreneur', the NGO Rewilding Europe and three Dutch educational institutes who deliver life sciences, rural development and nature education at vocational, bachelor, master and PhD levels, collaborate to de-

velop new curricula that innovate on thematic contents and corresponding learning strategies. In this project, new curricula are being developed to offer (nature) entrepreneurship competences for students with an interest in forestry and nature conservation, wildlife management, applied animal sciences, rural development, and sustainable tourism/recreation. The project envisages students of different educational levels collaborating with each other and with professionals in Rewilding Europe's pilot areas.

One of the project outputs is a 14-day Erasmus Intensive Programme on European Wilderness Entrepreneurship (IP EWE) funded by the European Lifelong Learning Programme. IP EWE is an experimental course that introduces the concept of wilderness entrepreneurship to students from various disciplines in higher education in Europe. The first edition of this IP was held in Rewilding Europe's pilot area in Western Iberia in spring 2013.

The Western Iberian pilot area was proposed to Rewilding Europe by a Portuguese and a Spanish NGO, Associação Transumância e Natureza (ATN) and Fundación Naturaleza y Hombre (FNYH), respectively. Officially, since the end of 2011, Rewilding Europe and the local NGOs collaborate to develop and execute a strategy for rewilding an area of 100,000 ha (see Chap. 9). Within the pilot area, the two local NGOs own and manage two nature reserves (Faia Brava and Campanarios de Azaba) and they are in the process of buying more land to expand their reserves. Buying land is not an easy task even when money becomes available (from donations and commercial activities), because owners in this region are often absent or not known due to a lack of registrations in the Portuguese national cadastre. The small sizes of properties makes it even more complicated in the Portuguese region; Faia Brava includes 860 ha of land, which is divided in 140 different properties (Beukers 2013). Besides managing their own land, the NGOs also make agreements with other landowners to manage their land for conservation purposes. For instance, ATN owned in 2013 around 650 of the 860 ha of the Faia Brava reserve and the remaining land is owned by others. Some owners still use their land to grow olives, almonds or grapes, while others only harvest cork or do not use their land at all. Scaling up to rewild 100,000 ha is a real challenge and can only take place if local stakeholders (landowners and governments) support the idea, even if farmland continues to be abandoned. Just north of Faia Brava there is even an expansion of vineyards due to rising exports of Douro wines. Besides the reserves managed by the two NGOs, there are other natural protected areas in the region recognized by the Portuguese and Spanish authorities. None of these areas is designated as wilderness, but they are mostly managed to protect certain species and scenic landscapes. The Western Iberian pilot was an interesting location for the IP because both ATN and FNYH work together with Rewilding Europe to explore and experiment with wilderness entrepreneurship in and around their reserves (see Chap. 9).

During the IP, a group of thirty students and fifteen lecturers from seven higher education institutes (HEIs) in Bulgaria, Croatia, the Netherlands, Portugal, Spain and Sweden looked at the role of entrepreneurship to promote the future wilderness of Western Iberia. Participating students were enrolled in bachelor or master programmes in Biology, Agriculture, Tourism, Sustainable Land Planning, Land

Fig. 10.2 Execution of landscape observation exercise using creativity tools to train students to look from different perspectives in Celorico da Beira, Portugal. (Photo Credit: Judith Jobse)

Management, Environmental Science, Forestry and Nature Conservation, Tropical Forestry, Landscape Architecture, Socio-spatial Analysis, and Communication.

The IP was organised in a variety of locations in Spain and Portugal: Aveiro (Portugal), Ciudad Rodrigo (Spain) and Figueira de Castelo Rodrigo (Portugal). During the first day at the University of Aveiro, the programme was explained and students were introduced to each other. In Aveiro, and also later in the programme at other locations, lectures were given on subjects such as rural tourism, wildlife management, planning and land use strategies, but also about transdisciplinarity and the actor network theory. During the second day the IP group moved to the Mediterranean landscape of Rewilding Europe's pilot region in Western Iberia. On the way to the region, participants were given a landscape observation exercise using creativity tools (Fig. 10.2). The tools (sketchbook, drawing pencil, 3 colour pencils, eraser, and pencil sharpener) were later used in an exercise to create a group vision for an area, and students used these tools more spontaneously when preparing for their final presentations.

In the pilot region, participants visited a variety of natural and cultural attractions in the pilot area such as the Spanish and the Portuguese nature reserves owned by the NGOs, historical sites, such as the ruins and the restored village of Castelo Rodrigo, the Côa Valley Archaeological Park and the Côa Museum. They experienced the low population density in most of the small villages in the region where mostly

retirees were encountered. Meetings with various local stakeholders were organized to discuss the problems and possible alternatives for regional development and nature conservation. Among stakeholders were: the NGOs responsible for the local nature reserves and Rewilding Europe; mayors of Portuguese and Spanish villages; the president of a hunting association, local entrepreneurs such as producers and retailers of cheese, jam, almonds, wine, and Iberian pig meat products; and the owners of a bar and a bed & breakfast.

The main assignment for the IP students was to explore economic dynamics that could contribute to the ecological restoration and future wilderness in the region. In groups of three to four, they articulated a vision for the region, together with a business model that would give both the ecological system and the local community new perspectives. Many of the business models that students produced were in the tourism sector, which is in line with what Rewilding Europe promotes in this region (see Chap. 9). Some student groups perceived the lack of publicity for the area as its main problem. Therefore, they came up with a web portal for local (tourism) enterprises and a marketing brand for the whole region. They also came up with models to expand the local variety of tourist activities. One group proposed to diversify the local economy by introducing a snail farm from which part of the profits would go to nature conservation and education. Two groups proposed ideas to stimulate the use of land, which would perhaps only fit with Rewilding Europe's vision for the area if these activities were outside of a core wilderness area. One of these groups launched the idea for an organization that could bring conservation volunteers from all over the world to Western Iberia to help maintain the agricultural production on some of the terraces. Another group proposed a company that mediates between local communities and businesses new to the area to smoothen the purchase of land. A final business model introduced the concept of small self-sustaining office units in the landscape to rent to people who would like work in a sustainable office with a great view for inspiration. During a 'market presentation', which was open to the public, students shared their visions and business models with local stakeholders and interested community members (Fig. 10.3). One of the IP students arranged during the IP her return to the region to conduct a MSc thesis research project on the use of social learning to increase levels of local involvement (Leuvenink 2013). Another MSc student helped organize the IP as an internship assignment and stayed in the region after the IP to conduct an analysis of the relation between Rewilding Europe, the Portuguese conservation partner ATN, and the local population (Walet 2014).

10.4 Designing a Wilderness Entrepreneurship Curriculum

The process of putting together a new IP with seven different universities spread out over Europe is a complicated task. It was the first time that this consortium of universities worked together to offer a collaborative curriculum and organizing the programme became a priority, rather than the documentation of the educational de-

Fig. 10.3 Locals inhabitants of Figueira de Castelo Rodrigo (Portugal) listen to students presenting their vision for the region and their business model. (Photo Credit: Judith Jobse)

sign process. Even though articulated programme principles were not documented beforehand, it is possible to carry out a critical analyses of the IP EWE.

The case study is based on observations of participating lecturers, on the minutes of a review meeting and on the results of a questionnaire distributed to participants at the end of the programme. Students participated in the whole IP. From the 30 participants, 20 returned the questionnaire including 9 bachelor and 11 master students (5 Bulgarians, 2 Croatians, 6 Dutch, 2 Portuguese and 5 Spanish). Most lecturers (11 out of 15) participated in more than 50% of the programme and 8 returned the questionnaire (2 Bulgarians, 4 Dutch, 1 Spanish and 1 Swedish). Nine lecturers joined a review meeting at the end of the programme.

Creating new entrepreneurship curricula or integrating entrepreneurship in existing curricula requires the identification of the competences that students should attain. In the Netherlands, competence based learning is mainstream at universities of applied sciences. Competences encompass knowledge, skills, and attitude. They "enable successful task performance and problem solving with respect to real-world problems" (Lans et al. 2013). A second aspect to consider is the way students learn these competences; which learning strategies are used for the different competences? When describing those learning strategies, we include all learning methodologies applied such as lectures and practical work and the role of teachers and stakeholders in the process. A third aspect to consider is the environment in which learning takes place. Learning environments have certain qualities that enable or disable the specific learning strategy that is envisaged. We divide the learning environment into physical and social aspects. For the social learning environment, we focus on cultural and linguistic aspects. The physical learning environment often used in formal education is a classroom setting. Literature shows that changing this setting—getting outdoor, working in other cultures or countries, in new landscapes—can increase the learning capacity of students (Meijles and Van Hoven 2010; Peacock and

Pratt 2011; Nedovic and Morrissey 2013). These new or unfamiliar environments can increase motivation, enhance imagination, and create focus.

Wilderness Entrepreneurship Competences

For the first edition of IP EWE, the competences for entrepreneurship were not clearly articulated before the programme implementation. However afterwards, a set of competences that capture the learning goals of the IP were identified. Based on a free interpretation of the study by Lans et al. (2013), and in line with the initial ideas that shaped the IP, five clusters of competences for wilderness entrepreneurship were constructed:

- Opportunity competence, which refers to problem spotting, an eye for innovation, a sense of creativity and foresight thinking. It is also considered as an action oriented competence with aspects of self-efficacy.
- Social competence, which refers to dealing with diversity, interdisciplinarity and multi-stakeholder contexts at the interpersonal level referring to communication, facilitation and enabling participation.
- Normative competence, which refers to the ability to deal simultaneously with diverse dimensions. These dimensions may be perceived as conflictive yet require to be integrated in a sustainability perspective such as economic, ethic, political social and environmental dimensions. This integrative view on society and environment makes that this competency also deals with moral decision-making and citizenship (Closs 2011).
- Complexity competence, which refers to the ability to focus on complex problems and system thinking. It is the ability to identify and analyse (sub) systems and domains, and the ability to understand and reflect on boundaries and interdependencies. This competence also refers to the ability to explore uncertain futures (Enserink 2010).
- Business competence, which refers to the ability to realise and manage project and business opportunities.

The main IP assignment aimed for the integration of the above-mentioned competences by giving the IP students the task to create a business model for regional development in Western Iberia. This assignment challenged students, while working in interdisciplinary and international teams, to transfer problems into business opportunities and to come up with innovative and sustainable solutions in a complex situation within multi-stakeholder contexts.

Students operationalized the business competence on the level of creating a business model while the other aspects of the business competence (ability to realise and manage a business) was considered outside the scope of this IP. When creating a business model students also worked on the opportunity competence as it deals with innovation and creativity. From the questionnaire it became clear that students recognized this competence: "*I learned how to make my idea creative and at the same*

time convincing." Students remarked that being creative is hard, but considered it a must in solving new kinds of problems and added that an open mind is necessary. When asked what they learned about nature entrepreneurship, the majority of the participants indicate that they now have a broader view on the topic. They now see that entrepreneurship is a nature conservation strategy that brings opportunities and have a reservoir of examples on how to connect business to nature. Especially the students with a background in ecology or ecology-related subject considered nature entrepreneurship as an eye opener.

During this assignment, students were deliberately put together in mixed groups. The interdisciplinary and international groups led students to work on their social competence. They had to deal with diversity and interdisciplinarity and came to learn the importance of social skills such as negotiating and clearly communicating. The majority of the participants indicate that this interdisciplinarity was very important and needed for good results or right decisions. Students reflect on this as follows: "*Interdisciplinarity is necessary to make the right decisions when solving complex situations*". They also express doubts: "*Not sure if it worked, because it felt more as if we were just adding different disciplines together* (*so including everything*) *instead of going in between*." Learning outcomes in relation to intercultural communication and language were mentioned by many students: "*I learned that intercultural communication is even harder than I remembered and that it is challenging to stay open minded while you feel like others don't.*" In a general way they praised the collaboration with all the different cultures, because it opened up new ways of thinking about and dealing with the issues involved: "*Different cultures also leads to different interpretations of issues. Learning how to deal with this can minimize the conflicts. It was really important*."

During the stakeholder meetings, students developed their social, normative, and complexity competences. They came to learn the importance of social skills such as communication while recognising the complexity of a situation in which different norms come together. A student remarked that the Rewilding Europe's concepts sounded pretty easy and logical in theory, but that is was almost impossible to do in practice. Although recognized as hard, students appreciated being exposed to the diverse opinions as this quote exemplifies: "*One thing can be bad for someone and good for another person. It is good to hear different and sometimes even completely opposed opinions about one thing*."

Learning outcomes regarding the potential of the Rewilding Europe initiative and entrepreneurship further laid the foundation for the complexity and normative competences. Whereas students had seen the potential of the Rewilding Europe initiative before and used to consider it as a 'simple' answer to land abandonment, they increasingly realised the associated complexities and the diverse contexts. They were able to contest the concept of 'wilderness' and realised the relevance of local support. This made them doubt the possibilities of rewilding areas. Normativity became also apparent when dealing with the concept of nature entrepreneurship. Students remarked that they changed their view on 'making money' and started to see it as a necessity for a sustainable company or NGOs. This concern for the economic aspects seems to be a delicate issue as one student concludes that this is

especially important for those conservationists or ecologists who seem to think that "nature is more important than mankind and that money is wrong": "*You can also use money to do good things.*"

The majority of the participants considered networking and the use of networks as a very important part of entrepreneurship, which relates to both the social and the business competences. Students reflected on that aspect with remarks about the importance of networking for the development of business. They acknowledge especially the examples provided. Networking is mostly regarded as positive but students also problematized it: "*Networking is very important to make choices that work for a longer time, but it also makes things more difficult, because opinions of people differ. I was thrown between different world views when speaking to one person and then to another*."

Learning Strategies for Wilderness Entrepreneurship Education

During the IP, a large variety of learning methodologies were used, such as lectures, meetings with local people and stakeholders, field visits, group work, scenario simulation, roleplaying and informal conversations. When participants were asked what made learning interesting and effective, most participants pointed out the variety of people and perspectives. This was expressed in excursions, open discussions and group work and not so very much in lectures. Most of the participants favour the "untraditional" approach when explaining interesting and effective learning. Participants gave some critique on the lecturing activities, which were sometimes copies of formal academic lectures. Even though for most lectures the location was not in a school, the set-up was similar to formal educational settings. Lecturers suggested more interactive lectures and discussions, to prevent long days with traditional lectures.

Both students and lecturers considered that the programme would gain from more reflection and enhanced connections between the various activities. They noted that they would like the programme to be less or differently intensive, but recognised at the same time that this intensiveness was important for not getting distracted. It created a sense of connection with the local issues and an atmosphere where innovation could take place.

During the programme several moments were built in for students to engage with local stakeholders. These engagements consisted mostly of students receiving information from the stakeholders to get them acquainted with the local situation. The information flow between students and stakeholders was reversed during the final presentations of the students' business models to which the local community was invited (Fig. 10.3). The media attention for the IP, with broadcasts on several Portuguese television stations and dissemination on various websites, can be labelled as another form of stakeholder interaction. IP participants also recommended diversifying engagement with the local community, as this quote from a lecturer ex-

emplifies: "*To amplify our cross-pollination I would add more informal gatherings, particular with youngsters, using the school and the teachers as gate-keepers*."

Learning Environments for Wilderness Entrepreneurship Education

The physical learning environment during the IP was the Rewilding Europe pilot area in Western Iberia, as it was assumed that being present in an area where conservation NGOs actively experiment with wilderness entrepreneurship would enhance the learning process. It gave participants the chance to observe and experience the landscape, and to communicate with the stakeholders involved. Students praised this aspect, expressing that the fact that they '*were there*' was of major importance. Nonetheless, lecturers stated that the programme, the area, and the stakeholders require sound introduction. As a matter of fact, they observed that '*being there*' and '*talking to stakeholders*' did not automatically lead to a good understanding of the situation. Although field visits and excursions occupied a considerable part of the programme, a significant amount of time was spent between walls for lectures, workshops and presentations. This provoked some critique especially from lecturers as they assumed that the IP provided a very conducive outdoor environment with unique opportunities which are most appreciated by students. The regular indoor confinement was considered as a sub-optimal use of the available learning environment.

The IP offered a rich social learning environment (causing students to work on their social competences) because of the variety of learning methodologies applied, and the fact that participating students and lecturers were from many different nationalities and educational backgrounds. Another aspect of the social learning environment was the importance of a common language, which was English in this case. A student explained: "*I learned that it is hard to communicate when not all the people can speak English. Especially when you have to work with each other*." Difficulties were most significant during the group work of students. They experienced limited language proficiency as the inability to express oneself clearly in English or working with someone who is not able to do so. Lecturers indicated that considering the language issues, time is needed for setting the scene, respecting cultural and contextual requirements, as well as considering the diversity of roles that define the learning experience.

10.5 Lessons Learned for Wilderness Entrepreneurship Education

By articulating the lessons learned during the IP, we aim to contribute to a growing understanding of educational programme design to prepare the next generation of wilderness entrepreneurs in Europe.

Our first lesson originates from evaluating competences in the IP. The partition of competences as described can be contested, as they seem to ignore overlapping elements. For example, it can be argued that consulting stakeholders is an essential aspect of both social and complexity competences. Stakeholder consultation deals with communication in practice and with appreciating diverse, and even contrasting, views on problem perceptions and alternatives. The formulated competences can equally be contested for ignoring important requirements of (learning) wilderness entrepreneurship. For example, the aspect of critical reflection is not articulated in any of the competences. Similarly absent is the aspect of conflict transformation, which is often mentioned as part of interaction between local people and nature conservationists (Martin 2012). However, the five formulated competences provide a good entry point to design education on wilderness entrepreneurship, taking into account that the competences are interlinked and overlapping. This leads to a first lesson learned: curricula for wilderness entrepreneurship should include the following competences: opportunity competence, social competence, normative competence, complexity competence and business competence.

Creativity cannot be learned from textbooks or by thematic lecturing, nor can other important aspects of wilderness entrepreneurship such as negotiating or dealing with complexity. These are learned best when they are put into practice. Therefore, it might be supportive to frame the field visits as action research to move away from its understanding as an outdoor lecture. Considering local informants and stakeholders as partners in the learning experience enhances the relevance for all parties involved. Such an approach articulates opportunities for a more circular knowledge exchange between students, teachers and stakeholders, which could be indicated as a social learning process. Reed et al. (2010) defines social learning as "a change in understanding that goes beyond the individual to become situated within wider social units or communities of practice through social interactions between actors within social networks". These thoughts lead to formulating a second lesson learned: the learning strategy for wilderness entrepreneurship should be all inclusive. All actors involved have to meet and engage in exchange of knowledge, expertise, opinions and other communicative resources (see also Leistra & Stobbelaar 2015).

The second lesson requires that learning for wilderness entrepreneurship competences should take place where the action is happening. On top of that, we also found that these competences seem to flourish outside formal educational settings. Creativity and out of the box thinking, both essential for building a new future for wilderness entrepreneurship, need unique experiences in which learners embark on unknown activities with a basic feeling of comfort. This consideration of comfort zones coincides with Wals (2007) whom states "The trick is to learn on the edge of people's individual comfort zone with regards to dissonance: if the process takes places too far outside of this zone, dissonance will not be constructive and block learning. However, if the process takes place within peoples' comfort zones—as is the case when homogenous groups of like-minded people come together—learning is likely to be blocked as well". Other authors refer to dissonance as issues of friction and congruence between self-regulation and external regulation (Vermunt and Verloop 1999). When analysing these findings we realised it is not only learning on the edge but also 'instruction on the edge'. This analysis leads to the formulation of a third lesson learned: wilderness

entrepreneurship takes place where the practice is discernible and aspects of dissonance should be added to this learning environment, such as intensiveness and exposure to different cultures, disciplines and backgrounds. The environment should challenge both learners and lecturers in a way that learning takes place at the boundaries of comfort zones, building on positive friction between self and external regulation.

The three lessons learned relate to each other and provide tools to use for curriculum development on wilderness entrepreneurship. To learn wilderness entrepreneurship competences, an environment should be created in which students, teachers and stakeholders learn from each other in a challenging way. Once educational designers find ways to get good programmes put in place, we may have filled the earlier identified gap between nature conservation curricula and the current European context, which calls for conservation activities that generate revenues to achieve economic sustainable conservation.

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