

## Sustainable regional development approaches in Alpine biosphere reserves - Farmers' perceptions

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### Abstract

The selected biosphere reserves focus on conservation of cultural landscapes, therefore Alpine farmers as managers of the land, play an important role in the model regions for sustainable regional development. Qualitative interviews with forty farmers in the UNESCO BR Salzburger Lungau und Kärntner Nockberge (AT), UNESCO BR Engiadina Val Müstair (CH) and UNESCO Biosphere Entlebuch (CH) give an insight on their opinion on the obligation of agriculture, nature conservation, BRs and why participation and cooperative approaches are essential.

This research should help to identify, strengthen or complete approaches for sustainable regional development in conservation sites in the Alps. Generally, the BR as shared platform for participatory concepts of various stakeholder groups for sustainable regional development is highly accepted and appreciated by the stakeholder group of farmers, once it's acknowledged as a long and slow process, which calls for numerous dialogues and relying on open minds amenable for mutual understanding.

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### Keywords

Biosphere reserves, agriculture, farmers' perception

### Introduction

The stakeholder group of farmers has been chosen as agriculture fulfils a high variety of essential functions like maintenance of the Alpine landscape, nature conservation and sustainable rural development. Farmers were asked where they see the duty of agriculture and the relevance of the biosphere reserve in their point of view. Since 1995 the concept of UNESCO (2016) biosphere reserves (BR) has been revised. People working and living in and around BRs should participate in decision making processes and be able to meet their economic, social, cultural and ecological needs. The management offices take over tasks of moderation and co-ordination, in a continuous process incorporating heterogeneous stakeholder groups. They serve as neutral point of contact for ideas from the community, to support them in sense of the common mission statement. The aim of this research is to identify to which extent BRs and nature conservation matters for farmers and where they see their role within this frame. What affects farmers' attitudes towards BRs and does it change over time? Further their point of view concerning improvements of development strategies and conservation measures are discussed.

### Methods

Qualitative interviews with forty farmers in the UNESCO BR Salzburger Lungau und Kärntner Nockberge (AT), UNESCO BR Engiadina Val Müstair (CH) and UNESCO Biosphere Entlebuch (CH) were conducted between November 2014 and July 2015. In the course of personal conversations farmers were asked to share their opinion on the relevance of duties of agriculture, cultural landscape, nature conservation, biosphere reserves and knowledge transfer, with regard of agriculture in general or their farm in specific. Interviews, all performed in the local dialects, were recorded, transcribed, and combined with mind records and participatory observations. The analysis is carried out with the software MAXQDA (KUCKARTZ 2010). Addressed topics are elaborated and different positions were grouped and interpreted following principles of *grounded theory*. The focus of the sample selection along an adapted snowball sampling was on a high variety of farm sizes and farming systems (cf. HUMER-GRUBER 2017).

### Results

As expected in mountainous research areas, all BRs cover high ranges of altitudes between 600-3200 masl, cattle are the most typical animal in the area (n=38). The high variety of other animals on the farm is a sign of small structures and diverse farming systems, which is of interest for nature conservation. Additional, due to market structures the ratio of organic farms is very high in some areas like Salzburg (50% organic farms) and Val Müstair (80% organic farms). Farms are family run, inherited over generations and in 17 cases more generations live on the farm, which emphasize the social functions. The interview partners (23 to 62 years old) were mainly male (n=32), corresponding to MAYR et al. 2016 as farming is men's business. Almost all farmers have an additional income and considerable fifteen farms (n=15) offer guest beds. Different obligations are identified whereof the most important are landscape maintenance and food production (n=38 resp.). Cultural and social obligation (n=31) are considered as an important task, mentioned are farms as family run operations, offering employment and settlement in rural areas. Nature conservation as a duty of farmers is mentioned by every second interviewed person (n=20). Some (n=15) see raising awareness of nature, agriculture and cultural knowledge as a task of their profession, as tourism and food advertisement impart an unrealistic picture of agriculture.

## Discussion

In the initial phase, expectations on BRs are very high. BRs are not economic wonder pills for rural areas, and their success relies on the commitment and creativity of local communities. The single areas might be seen as a time lapse for a development process of BRs. BR Entlebuch evolved over more than 15 years, Val Müstair over seven years, while the Austrian BR was only designated two years before conducting the interviews. Fewer sceptical arguments are recognised in Entlebuch, which supports assumptions of an ongoing output of this research: expected negative impacts are often based on fears and apprehensions and over time they vanish (HUMER-GRUBER 2016). Gained positive experiences over a longer period are of major importance for a BR's success, because it equals peoples' participation, sharing ideas and empowerment.

Regional value creation and regional processing are central for BRs and for a successful participatory process balanced power structures are essential (WALLNER & WIESMANN 2009). Thematic round table sessions in the starting phase of the BR Lungau were appreciated. In the research areas in Austria and Val Müstair emigration is a major issue. BRs try to use the potentials in place to fight emigration of rural areas by regional value creation. The vivid agricultural community is a basis of a decentralised settlement. People should be able to earn a viable living (DARNHOFER et al. 2016) from farming in an area where agriculture with its surrounded economies is the most important livelihood. Good examples of sustainable development could be observed in all research areas.



Figure 1: The cultural landscape is shaped by agriculture, like here in the UNESCO Biosphere Entlebuch. (Foto: Humer-Gruber 2015).

## Conclusion

This work shows that the BR has an influence on farmers and vice versa. To become a model region for sustainable regional development, it needs a strong community, which participates, discuss and brings up the courage to break new ground in their region to create a sustainable living, also for future generations. BRs support these participative structures.

The interviews with farmers show that support is given and motivation to participate is generally in place, although it is not always actively put into practice. An observant attitude of farmers has been reported from the initial phase in all research areas. Over time farmers became strong partners to the BRs management as seen in other examples. Experiences from BRs existing over a longer period give an insight that BRs have a huge potential to address farmers' concerns with support in product development, value added processing in the region, nature conservation training and awareness building, shared workforce, sustainable tourism or product marketing. The BR is appreciated and highly accepted as a shared platform for participatory concepts, open to all stakeholder groups. Albeit BRs have to be acknowledged as a long and slow process, which calls for numerous dialogues and relying on open minds amenable for mutual understanding.

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