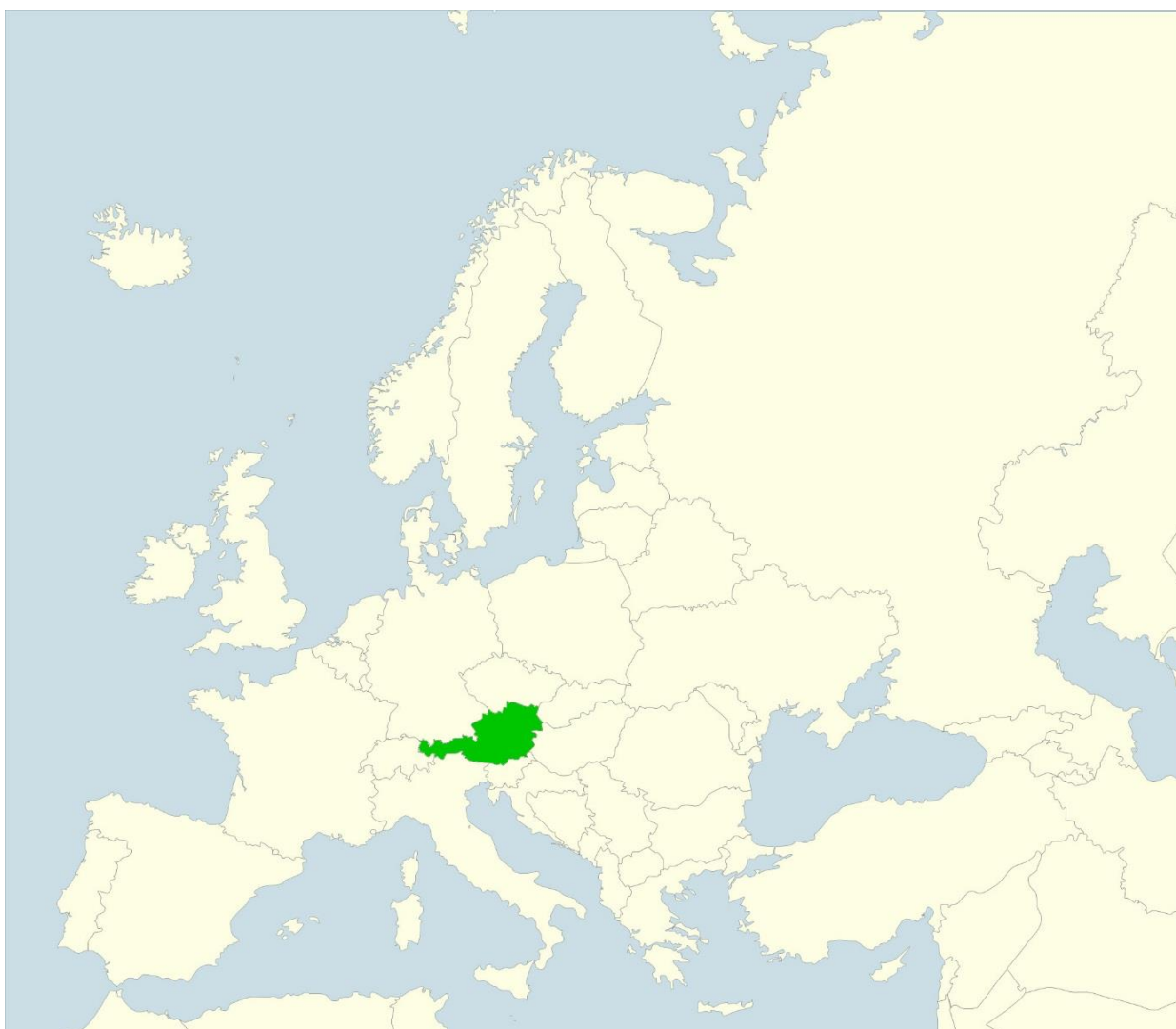


# **WOMEN AS DRIVERS FOR A SUSTAINABLE AND SOCIAL INCLUSIVE DEVELOPMENT IN MOUNTAIN REGIONS – THE CASE OF THE AUSTRIAN ALPS**

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**Abstract:** Women in mountain regions play an important role regarding the agricultural production and ensuring sustainable livelihoods. Furthermore, they are active in climate change adaption and preservation of biodiversity. Despite these important activities and performances the vital role of women for a sustainable and social inclusive development in mountain regions is often invisible and not appreciated enough in society. There still exists structural discrimination of women which is caused by patriarchal societies, social and cultural norms as well as difficult economic situations. Considering the need to foster the dynamic and sustainable development of mountain regions all over the world, it is of paramount importance to reflect and integrate women's issues, problems and needs to a larger extent in research, public policy and in worldwide decision-making agendas.

**Keywords:** Women, Gender, Inequality, Mountain Regions, Agriculture, Diversification, Food Supply

**Abstract:** Frauen in Berggebieten nehmen eine wichtige Rolle bei der landwirtschaftlichen Produktion ein, sorgen für nachhaltige Lebensgrundlagen und sie sind aktiv bei der Klimawandelanpassung sowie bei der Erhaltung der Biodiversität. Trotz dieser wichtigen Leistungen ist die vitale Rolle der Frauen für eine nachhaltige und soziale Entwicklung in Berggebieten oft unsichtbar und in der Gesellschaft nicht ausreichend wertgeschätzt. Darüber hinaus besteht immer noch eine strukturelle Diskriminierung von Frauen, die durch patriarchalische Gesellschaftsformen, soziale und kulturelle Normen sowie schwierige wirtschaftliche Situationen bedingt ist. In Anbetracht der Notwendigkeit, eine dynamische und nachhaltige Entwicklung von Berggebieten auf der ganzen Welt zu fördern, ist es von größter Bedeutung, die Probleme und Bedürfnisse von Frauen in der Forschung, in der Politik und in weltweiten Entscheidungsfindungsprozessen umfassend zu reflektieren und integrieren.

**Schlagwörter:** Frauen, Geschlecht, Ungleichheit, Berggebiete, Landwirtschaft, Diversifikation, Nahrungsmittelversorgung

## 1. Introduction

Mountain regions all over the world provide indispensable goods and services like freshwater, energy in form of hydropower, preservation of biodiversity including agro-biodiversity, disaster risk reduction, and space for recreation and tourism, to a large portion of the world's population. Mountain regions cover 22 percent of the world's land surface and are home to more than 900 million people, representing 13 percent of global population (FAO 2015a). By providing key environmental services and amenities, mountain ecosystems play a decisive role in the world's development. The resilience of mountain regions has declined due to the negative impacts of changes in land use and climate change such as land and forest degradation, as well as the increasing number of natural disasters (FAO 2015b). Furthermore, market integration, extended tourism activities, changes in human life style patterns and aspirations have accelerated these developments.

The need to preserve mountain environmental assets and to improve local livelihoods was clearly expressed in chapter 13 of the United Nations Conference on Environment and Development's Agenda 21 in Rio de Janeiro (UN 1992):

*"Mountain ecosystems are, however, rapidly changing. They are susceptible to accelerated soil erosion, landslides and rapid loss of habitat and genetic diversity. On the human side, there is widespread poverty among mountain inhabitants and loss of indigenous knowledge. As a result, most global mountain areas are experiencing environmental degradation. Hence, the proper management of mountain resources and socio-economic development of the people deserves immediate action."*

The attention given to sustainable development of mountain regions by international fora has increased significantly since the 1990s. For instance, the Alpine Convention, an international treaty between Alpine Countries and the European Union (EU), was founded in 1991 to support sustainable development and the protection of the Alps (Alpine Convention 1991), beside other agreements like the Andean Community (1969), the Carpathian Convention (2003) or initiatives in the Balkans and Dinaric Arc and in the Caucasus Mountains (Church 2010; Hugill 2012). In many other international documents like 'The Future We Want' (UN 2012) or 'Agenda 2030 for Sustainable Development' (UN 2015) it has been stated that sustainable mountain development has to be a global priority.

Besides the increasing natural disasters and hazards, additional risks like inequitable land rights, low accessibility, resource grabs, dire poverty and starvation are affecting people and livelihood in mountain regions to a vast extent (Wehrli 2014). Almost 40 percent of the mountain population in Less Developed Countries (LDCs) – urban and rural – is considered vulnerable to food insecurity. The numbers are even more shocking if only mountain people are regarded as those who live in rural areas. While the global average of food insecure people in LDCs is one in eight, almost half of those who live in rural mountain regions of LDCs are vulnerable to hunger, and face poverty and malnutrition (FAO 2015a).

But mountain regions must also be seen as a gendered space, which means that the living conditions, resources, power relations and perspectives for a good livelihood are unequally distributed between men and women. A gender analysis in this context involves the critical examination of taken-for-granted assumptions about living conditions and development. Beside the given context that mountain regions are inaccessible, isolated, and remote, as many scholars stress in their research, a gender-analytical critique will challenge these assumptions and examine additionally the manifold powerful discriminatory practices, discourses, and norms that work against women in particular (Verma 2014, 192). The structural discrimination of women in many mountain regions is caused by patriarchal societies, social and cultural norms and difficult economic situations. Therefore, gender discrimination, gender exploitation, and disenfranchisement of women are still persisting. Feminist research revealed that gender relations play a critical role in the management of natural resources, and that women tend to be systematically disadvantaged in terms of access to resources, decision-making, and, ultimately, power relations (Molden et al, 2014, 297), though they bear the burden of a substantial part of the productive work and most of the reproductive work.

Manifold legal, normative and economic arguments underline the importance of gender issues and of women's involvement in the development of mountain regions (Oedl-Wieser 2015a): Firstly, it is simply a democratic principle that women who represent more than half of the rural population are represented adequately in the political decision making bodies in the regions (descriptive representation). Gender equality is widely endorsed as a central policy goal by governments and international organisations across the world. It is increasingly framed as central to the realisation of modernisation and economic efficiency (Squires 2007, 1). Secondly, from a feminist perspective, it is necessary that the needs and interests of women find their expression in development programmes and measures (substantive representation). There is often great scepticism of stakeholders regarding the possibility and necessity of linking gender equality issues to measures and projects in mountain development processes. The missing gender awareness and gender competence as well as individual and institutional resistance may prevent an effective implementation of gender equality. Thirdly, it is a far-reaching loss for mountain development discourses and processes if the manifold potential, knowledge and expertise of women are not utilised. Fourthly, enhancing the discourse about gender equality in mountain regions can raise the people's awareness for women's potentials and problems and can help to transform conservative views in gender role models.

A study by FAO (2011) revealed if women in agriculture would have the same amount of land and same access to productive resources as men, they could increase yields on their farms by 20–30 percent and the production gains of this magnitude could reduce the number of hungry people in the world by 12–17 percent. If women control additional income, they spend more of it on food, health, education and clothing for their children than men do. This has positive implications for immediate well-being as well as long-lasting human capital formation and economic growth.

The relevance of rural women in the reproductive and productive sphere of agriculture, their knowledge of the value and use of local plant and animal resources for nutrition and their role in preserving agro-biodiversity has been highlighted and appreciated in many international documents like CEDAW Article 14, Agenda 21, Rio+20 and Agenda 2030 (UN 1979; 1992; 2012; 2015).

Despite the acknowledgment of women's contribution to agricultural production, climate change adaption as well as ensuring sustainable livelihoods and environments in mountain regions, there are hardly cross-references between women's agenda and mountain regions development made in international documents. This can be demonstrated very well when looking at the Rio+20 document-outcome entitled 'The future we want' (UN 2012). The mountain issue is treated in the paragraphs 210–212 and the issues of gender equality and women's empowerment is discussed in the paragraphs 236–244, but there is almost no linkage between these paragraphs.

Regarding the decisive role of women in mountain regions, it seems curious that there is no reference to the critical importance of this inter-relationship. In this context, Verma et al. (2014) stress a bigger problem, namely, the gender-blindness of most research on natural resource management, sustainable mountain development and gender relations in decision-making bodies. From a feminist point of view, it is necessary to highlight the needs and achievements of mountain women, so that these are reflected and integrated in public policy and in decision-making agendas (Zimmermann 2002; Schmitt 2014; Anand and Josse 2002, 233; Oedl-Wieser 2014).

On account of the glaring disadvantages of women living and working in mountain regions but also on their valuable knowledge and agency, this paper outlines their role as drivers for sustainable and social inclusive development in mountain regions. After an introduction, the relevance of mountain farming will be discussed in general to address the negative impact of climate change on men and women in mountain regions. This will be followed by highlighting the decisive contribution of women in mountain farming in the Austrian Alps in the field of pluri-activity and (social) innovations. In the conclusion, the emphasis is put on both the vital role that women are playing in the economic, social and ecological sphere of mountain regions and on the need for more appreciation for their manifold activities and efforts for a sustainable and social inclusive mountain development.

## **2. Negative impact of climate change on mountain farming**

Over the centuries, mountain people have developed unique, resilient and sustainable production systems adapted to their local environments, which favour the production of niche and mountain-specific products and services (FAO 2015a, b). Mountain regions and their population are disproportionally affected by climate change and its various impacts on nature and socio-economic development which are increasing natural disaster, food and energy crises, water scarcity and desertification, as well as loss of biodiversity, degradation of ecosystems, out-migration, and the growth of urban areas (FAO 2011). Furthermore, the human pressure is constantly rising in mountain regions all over the world through changes in land use, the intensification of agricultural production and growing conflicts of interest within industry, tourism, transport infrastructure, settlements and ecosystems (Euromontana 2016; Oedl-Wieser and Schmitt 2017).

For instance, the European Alpine region is expected to be considerably affected by global warming in the 21<sup>st</sup> century. This refers not only to rising temperatures (+2°C), but also to changes in the seasonal cycle of precipitation, global radiation, and humidity, to changes in temperature and precipitation extremes, and closely related impacts like floods, droughts, snow cover (drastically decreased below 1500–2000 m), and natural hazards (such as floods, debris flows, landslides and rockfalls associated amongst others to glacier and permafrost retreat). This changing in climatic parameters and related quantities will have considerable impact on ecosystems, agricultural production and Alpine societies, and will challenge their resilience (Gobiet et al. 2014, 1138ff).

Through the provision of positive externalities, mountain farming contributes to maintaining settlement structure and shaping the cultural landscapes in areas which otherwise would lose

significant parts of their development potential (Dax 2009, 3). However, there are also negative externalities of mountain farming like land-use change, increased concentration of milk production in the mountain valleys, the abandonment of alpine pastures and afforestation which are caused by intensification of the agricultural production and increased competition (Oedl-Wieser and Schmitt 2017). Mountain farming is largely family farming which encompasses all the activities within the realms of agriculture, forestry, fisheries, pastoralism and aquaculture that are predominantly reliant on family labour. All over the world, mountain regions with their dispersed patches of useable land at different altitudes with different climates and with often highly fragmented landscapes as well as narrow limits for mechanization, are most efficiently and effectively managed by family farms (FAO 2013; Hovorka and Dax 2009).

While mountain farms in LDCs are producing mainly for family consumption, mountain farming in Europe is increasingly determined by policies that emphasize to a larger extent the role of landscape preservation. Furthermore, agriculture is often not anymore the only economic activity because the family farm is performing a wide range of activities on and off their farms, going far beyond food-provision (Dax 2009, 3). As most of the agricultural production in mountain regions in LDCs is subsistence production, it plays a key role in ensuring household food security and avoiding malnutrition and starvation.

Worldwide, the demand for, high-quality traditional food and crafts produced in mountain areas, such as coffee, cheese, herbs and spices, as well as handicrafts and medicines is on the rise. Small-scale mountain agriculture cannot compete with lowland production, but it has the potential to tap into niche markets such as organic, fair trade, or high-end quality ones, and fetch premium prices (FAO 2015). The contribution of family farming to sustainable development in mountains, thus differs a great deal from continent to continent, from region to region but commonalities can be seen that family farms in mountains help to shape mountain landscapes, provide ecosystem services which are vital for development far beyond mountain areas (Hurni et al. 2014, 313; FAO 2013).

### **3. Women and their role in ensuring sustainable livelihoods in mountain regions**

All over the world, scholars and stakeholders in politics do not give enough attention to the production of food crops for domestic consumption, which are essential for household food security and environmental protection. The main focus is often on the intensive farming sector and export-oriented crops. In spite of this, analyses reveal that small-scale farmers, particularly women, play a key role in promoting sustainable methods of farming based on traditional knowledge and practices. Women often have knowledge about the value and use of local plant and animal resources for nutrition. They try to find strategies to adapt to the impact of climate change in their roles as plant gatherers, home gardeners, herbalists, informal plant breeders and seed custodians. In many cases they experiment with and acclimatize indigenous species and thus become often experts in plant genetic resources (IAASTD 2009, 78).

In general, the gendered division of labour in agriculture influences the way resources are used and where the benefits of these resources flow. Men's and women's different roles in family, on the farm and in the community in terms of labour, property rights and decision-making processes generate different knowledge and skills in relation to agriculture, biodiversity and ecosystems. Besides caring for the family, women farmers perform tasks such as planting, transplanting, hand weeding, harvesting, picking fruit and vegetables, small livestock rearing, and postharvest operations such as threshing, seed selection, and storage. On the other hand, mechanized work such as preparing the land, irrigation, mechanical harvesting, and marketing is generally a male task. This may increase women's and girls' manual and time burden, which tends to keep girls out of school, and holds their productivity below their potential (IAASTD 2009, 75).

It must be taken into consideration that the status of farm women in mountain regions varies enormously, even within a region (Anand and Josse 2002, 234). In many contexts, cultural and legal conditions are hindering women to strengthen their agency like patrilineal inheritance systems, restrictions for women to own property or restrict women's ability to move freely which also limits their chances to survive a natural disaster. Although the awareness of mountain farming

and the difficult living and production conditions has been growing in the international development discourse, the problems seem to get worse in view of global economic and social change. Even in the most remote places, these changes have eroded traditional mountain livelihoods, changed gender roles, led to a loss of crucial local knowledge and many mountain inhabitants have chosen to migrate to lowland areas and urban centres in search of employment and income (Wehrli 2014).

The growing out-migration of men and young adults has increased the number of female headed households in many mountain regions. It has also shifted the mean ages of rural populations upwards, resulting in considerable shrinkages in the rural labour force. The extended workload, lack of knowledge in agricultural production schemes and increasing responsibilities are in many cases causing an overburdening of mountain women. As a consequence, this leads to negative effects in food security and service provision (IAASTD 2009, 76; Anand and Josse 2002, 233; Molden et al. 2014, 297). Considering the manifold challenges of farming and good livelihoods in mountain regions, it seems that sustainable and social inclusive mountain development issues do not receive the attention and priority they deserve in the international discourse. To address the current challenges, it needs to support all aspects of mountain environment and society – economic, ecological, social and cultural.

Despite some progress made in national and international policies since the first World Conference on Women in 1975, intensified efforts and actions are necessary to implement gender equality as integral in agricultural policies and practices as well as mountain development processes. Therefore, it is necessary to look at women's access to education, information and technology, and to enable improvement of women's access to ownership and control of economic and natural resources. Analyses and experiences show that enhancing the role of women in adaptation and disasters risk reduction will lead to more resilient mountain regions (Verma et al. 2014; StartClim 2013). It is decisive that adaptation programmes in food security and managing natural resources are gender-sensitive and responsive to the different and multiple roles women and men play in various spheres of natural resource management, as well as their households, communities, livelihoods, and customary and statutory institutions and relations on local, national, regional and global level (Mountain Partnership s.a.).

#### **4. Women's role in agriculture in mountainous areas – the case of the Austrian Alps**

The Alps are a coherent mountain region covering 190,568 km<sup>2</sup> across eight European countries, with a population of 14 million people. This mountain range disposes of rich heritage of cultures, traditions, place-based know-how and shows manifold economic activities. The Alps provide goods and services like water, hydroelectricity, cultural landscape, agricultural products, handicrafts, recreation sites and are a hotspot of biodiversity, with many endemic species (Mountain Partnership 2012). Mountain farming plays an important role in maintaining attractive landscapes, although the agricultural production is often very challenging through small-scaled structures, natural obstacles, less possibilities of mechanization, poor accessibility and limited production alternatives.

Austria is characterised by a high proportion of less-favoured regions mostly classified as mountain regions. The mountain regions comprise 70 percent of the Austrian territory (see Figure 1) and 58 percent of the Utilized Agricultural Area. The area of permanent settlement in the mountain regions is also very limited. Mountain farms are characterised rather by a small-scale structure – with a high proportion of part-time farming and are operated primarily by family labour input. In terms of local food production, environmental impacts, and the threat of land abandonment and natural hazards, multifunctional mountain farming has been discussed as a subject of major national concern since the 1970s (Dax 2009, 3). Since that time mountain farming support was conceived as one of the main instruments of structural policy in Austria aimed at the prevention of land abandonment, to preservation of the farming population and maintenance of cultural landscapes. Multifunctional mountain farming is also an important basis for tourism since many regions in the Alps are winter tourism hot spots (Hovorka und Dax 2009, 26f).

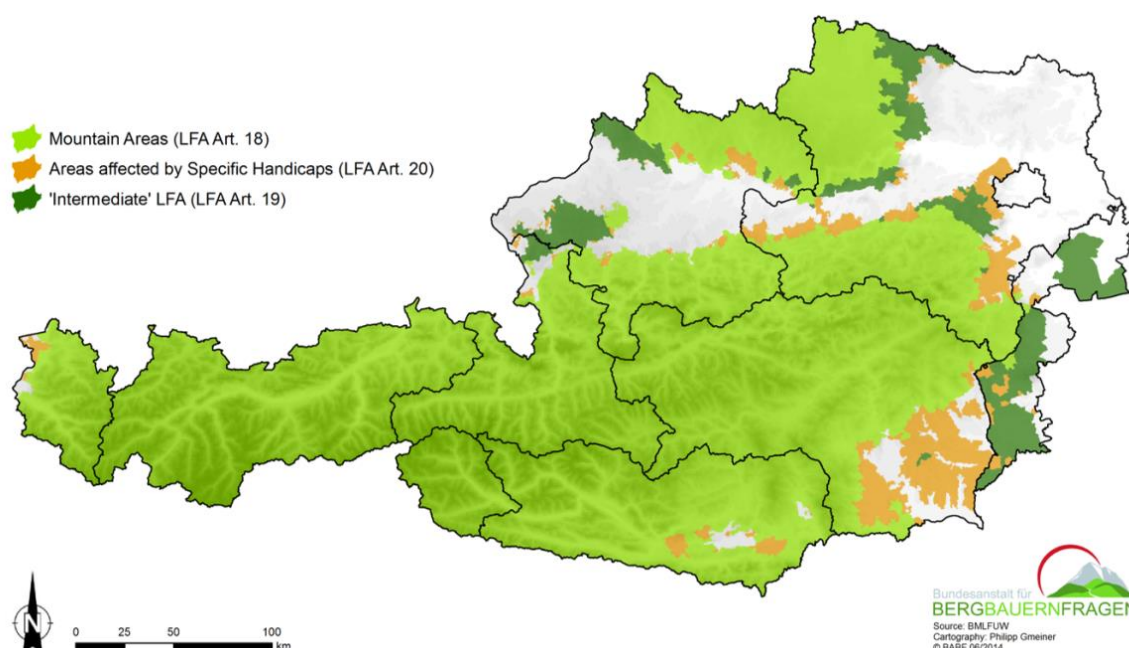


Fig 1. Mountain areas in Austria.

Mountain farming in the Austrian Alps has a long tradition and there exists a lot of tacit knowledge of processing milk and meat, especially on alpine pastures. Therefore, the management of alpine pastures, which represent extremely sensitive eco-systems, is of great importance in the multifunctional context. This is not only relevant for tourism development, but also significant from the point of view of society as a whole, maintaining biodiversity, protection against natural hazard, issues of nature protection and general environmental performance being the main aspects of social demand (Groier 2011; Oedl-Wieser 2007). Despite these manifold effects for society, one has to consider that there are many threats against mountain farming caused by winter tourism, urbanisation trends in mountain valleys, and often, unlimited infrastructural developments.

Mountain farming is by its nature multifunctional. The concept of multifunctionality recognizes agriculture as an activity producing not only commodities like food, feed, timber, agro-fuels, medicinal or ornamental plants, but also non-commodity outputs such as environmental services, landscape amenities and cultural heritage (IAASTD 2009). Through the provision of positive externalities, mountain farming contributes to maintaining settlement structure and shaping the cultural landscapes in areas which otherwise would lose significant parts of their development potentials. Thus the support for mountain farming is core for the positive direct and indirect effects in safeguarding sensitive ecosystems and maintaining multifunctional landscapes in mountain regions and prevention against threats of land abandonment and marginalization processes.

The mountain regions in Austria are characterised by a high environmental quality, large forests and environmental friendly agriculture; 24 percent of the mountain farms are organic farms (BABF 2016). Many initiatives have been established in the last 20 years which combine organic production and regional marketing like 'Bio vom Berg' [Organic productions from the mountains] in Tyrol or 'Zurück zum Ursprung' [Back to the Origins] in Styria. Most of the farms in Austrian mountain regions are pluriactive. Pluriactivity means that in addition to agricultural activities, off-farm work and other activities such as food processing and marketing, agri-tourism (85 percent of the agritourist farms are located in mountain regions), farm pedagogics, green care and machinery ring services, handicrafts and energy generation are carried out by family farm household members.



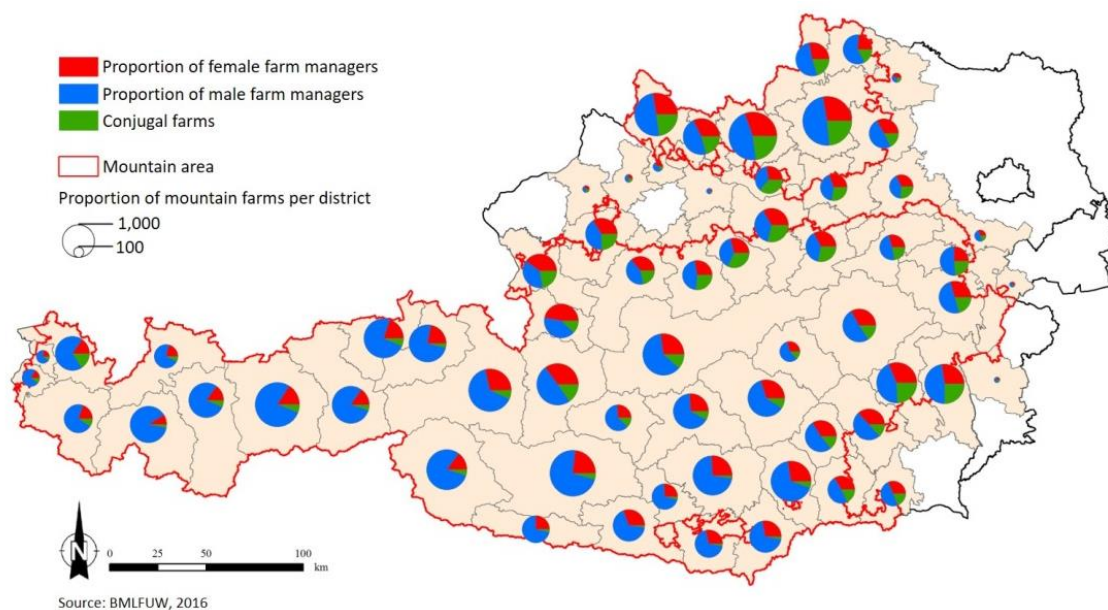


Fig 2. Farm management in mountain areas in Austria by gender and conjugal farms.

In particular, these activities are oriented towards an increased value-added through the strategy of high quality mountain products. In times of diversification and tertiarisation, women are often the engine for the development of new, innovative and sustainable modes of production and activities on farms (Oedl-Wieser and Wiesinger 2010; Schmitt 2010). In Austria, 30% of mountain farms are managed by female farmers, as shown in Figure 2 shows (BMLFUW 2016).

Farm women's contribution is essential both for the agricultural sector and for the development of rural regions in general, and particularly for mountain regions. On the one hand, farm women are involved in all spheres of work on the farm – productive and reproductive (housework, child care and elderly care) and on the other hand, they are contributing through their manifold activities to family income as well as to civil society and social life in rural areas. Despite this important contribution of women it is astonishing how underestimated and weakly appreciated this involvement is in the agricultural decision making bodies and in the political sphere in general (Oedl-Wieser 2014). Furthermore, farm women and women in mountain regions possess much knowledge about traditional food processing and the cultivation of old local seeds of cereals and vegetables (Oedl-Wieser and Schmitt 2017; Oedl-Wieser 2015b).

The prevailing responsibility of women in Austria for private unpaid care and household work (traditional gender roles are still widespread) makes them very influential players in the food system both as care-suppliers and consumers. They have to decide every day which kind of food to buy and to cook. Analysis show that women are more aware about carbon footprints, the impacts of global food chains or animal welfare issues than men, and that they have more sustainable dietary habits. Although women's food provisioning endorses their subordinate gender role, it also tightens family ties and maintains cultural traditions that are at the heart of many women's identity (Allen and Sachs 2007, 3; Oedl-Wieser and Wiesinger 2010).

Considering the role of women as producers of food in mountain regions, one can say that they possess rich traditional knowledge about the processing of high quality food products and that women are often the driving force for a sustainable or organic way of production. Local food in mountain regions is very often related to specific and unique raw material characteristics as well as traditional and local adapted technologies of production and processing (Schermer 2010). In Austria, on 41% of farms that are involved in professional direct marketing, the farm woman is the responsible person for this branch. The increasing consumers' demand for regionally produced food meets with alternative marketing networks like farm shops, farmer markets, direct delivery or mail order schemes (Blasi et al. 2015; Kupiec-Teahana et al. 2010).

Farm women are often regarded to be more able to bring in new incentives to the agricultural system, as they have a propensity for innovation and they are successful to quickly adapt their



offer to the market demand (Zirham and Palomba 2016; Farnworth and Hutchings 2009; Oedl-Wieser and Wiesinger 2010). Farm women are often combining their on- and off-farm expertise to develop new activities on the farm. The following examples from mountain regions in Austria show that women have followed innovative ways in establishing new branches on the farms and they are revitalizing old knowledge and contributing to biodiversity in their mountain region.

### ***Examples for diversification***

#### **4.1 Case ‘School on the mountain – Kalchkendlalm’ (Rauris, Salzburg)**

The ‚Kalchkendlalm‘ is located in the Rauris Valley in the Pongau district of Salzburg and is an old cultural site. The oldest parts of the building are more than 400 years old. In 1996 the old buildings on the Alpine pasture were restored and the female farmer offers bread baking and milk processing courses. Furthermore, this alpine hut is the venue for reading events and writing courses with authors as well as seminars and symposia. Many courses are visited by school classes from the region. The aim of these activities is to revive the culture of the farmers and farm women of the region and make it understandable and tangible for the visitors<sup>2</sup>.

#### **4.2 Case ‘Good fruits - fruit gardens’ (Absam, Heiligkreuz and Raitis in Tyrol)**

The ‘fruit gardens’ in Absam, Heiligkreuz and Raitis lie in Tyrol about 900 m above sea-level and are cultivated organically. The oldest trees in the orchards are nearly 100 years. A short time ago the fruit gardens were taken over by a woman and she processes the fruits to manifold products such as juices, jams or chutneys, which she sells in a local shop for organic products, which she co-founded with other farmers. In the medium term, both the fruit gardens and the shop will be managed according to the concept of community supported agriculture (CSA). In general, in the case of CSA, several private households partly bear the costs of a farm, for which they receive products from the farm all over the year or products for a lower price<sup>3</sup>.

### ***Examples for preserving biodiversity***

#### **4.3 Case ‚Lungauer Arche’ (Lungau, Salzburg)**

The association ‚Lungauer Arche’ was founded in 2010 by a group of very active female farmers in the district of Lungau together with other farmers which were interested in old local varieties of crops, vegetables and herbs. They want to preserve and share the existing traditional knowledge in the mountain region. Within this association different activities were established: Herbal Region Lungau, Slow Food Lungau Travel, preservation of the traditional and local breed Lungauer Winter Rye. Female farm women are offering herbal walking tours, milk processing on an alpine pasture and bread baking courses<sup>4</sup>.

#### **4.4 Case ‚Alchemilla herb women’ (Großes Walsertal, Vorarlberg)**

‚Alchemilla herb women’ is a group of women located in the Biosphere Reserve Großes Walsertal which aimed at bringing the hidden knowledge of farmers and farm women about alpine herbs to the fore. Over the past centuries, through sustainable agricultural practices and careful treatment a big variety of herbs could develop in the alpine valley Großes Walsertal. The Alchemilla herb women are processing herbs to products like tea, sweets, herbal syrup and body care products. They want to share their knowledge about the alpine herbs with other people and make it tangible for the visitors. Therefore, they offer different herb walking tours in the Biosphere Reserve Großes Walsertal<sup>5</sup>.

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<sup>2</sup> (<http://www.schule-am-berg.at/>)

<sup>3</sup> (<http://www.gutefruecht.at/>)

<sup>4</sup> (<http://www.tauernroggen.at/de/home.html>)

<sup>5</sup> (<http://www.grosseswalsertal.at/Alchemilla/>)

#### **4.5 Case ‘Male and female mountain farmers are observing biodiversity’**

The project ‘Schau ma auf der Alm’ – [Mountain farmers are observing biodiversity] started in 2014 and currently has 45 participants. During the vegetation period, the male and female mountain farmers document the development of selected indicator species, learn more about the relationships between land-use management and biodiversity, and thus become experts in their own alpine meadows and pastures. The main goal of this educational measure is to strengthen the awareness and understanding of biodiversity in alpine pastures. They are also guided to share their acquired knowledge to interested visitors in a comprehensible and memorable way. The purpose is to promote awareness of the peculiarity of the mountain landscape and the importance of alpine farming<sup>6</sup>.

#### **4.6 Case ‘Preservation and breeding of old farm animals in the mountain area – example Pfauenziege’ (Rauris Salzburg)**

For many centuries, farmers and farm women have produced a big variety of breeds of farm animals in mountain regions through continuous selection. Considering the natural and climatic conditions carefully, races adapted for the mountains like the ‘Pfauenziege’ [peacock goat] were bred. However, the structural change and intensification processes in agriculture have led to a massive loss of racial diversity. A female breeder from Rauris in Salzburg has been making great efforts for the conservation and breeding of peacock goats for more than 20 years. As good feed converters with modest feed requirements, they have the best prerequisites for landscape care in the mountain regions. Because of its pronounced maternal instincts, it is also very well suited for mother goat keeping. However, structural changes and intensification processes in agriculture have led to a massive decline in the stock. The female breeder has set herself the goal of preserving and breeding the peacock goats. For more than 20 years, she has been searching all over Austria for phenotypically similar peacock goats, in order to re-establish a pure-bred stock<sup>7</sup>.

These examples indicate that (farm) women in mountain regions are contributing in manifold ways to agro-biodiversity, producer-consumer-alliances, civil engagement and the maintenance of traditional agricultural techniques in the Alps. They are drivers for sustainable and social inclusive forms of agriculture in the ecological very sensitive mountain regions and provide social spaces for exchange of (old) knowledge and experiences.

### **5. Conclusions**

All over the world women living in mountain regions are facing structural discrimination caused by patriarchal traditions, customary laws and strongly gendered social organisation. They are mostly lacking control over productive resources and are exposed to unfavourable conditions for agricultural production and difficult economic situations. Considering the manifold challenges of farming and good livelihoods in mountain regions, it seems that sustainable and social inclusive mountain development issues do not receive the attention and priority it deserves in the international discourse. Apart from gendered structural inequalities, vulnerability and invisibility of women, it must be stressed that women in mountain regions are not only passive victims, but also own quite a lot of valuable knowledge and agency.

Gender analysis is a valuable tool for visualizing the disadvantaged situation but also the potentials of women in mountain regions. Scholars should pay more attention to women’s role in sustainable mountain farming, to their contribution to rural food supply chains and to their part in climate change adaptation as well as disaster management. A sustainable and social inclusive mountain development is only possible through the utilization of the far-reaching productive and social competences as well as valuable knowledge of mountain women. Further research is urgently needed in mountain regions all over the world to explore the specific cultural and environmental characteristics and analysing gender roles and gender relations, which are often inequitable and detrimental to women.

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<sup>6</sup> (<http://alm.biodiversitaetsmonitoring.at/>)

<sup>7</sup> (<http://www.arche-austria.at/index.php?id=111>)

A more dynamic development of mountain regions can be fostered by the acknowledgement, appreciation and understanding of the vital role that women play in the economic, social and ecological sphere. It is necessary, to have a look at their resilience, strength, and power which is an enormous potential for mountain regions. Experiences have shown that efforts of policy interventions often do not address the local realities of women and men and are therefore inappropriate to improve their situation. If sustainable and social inclusive mountain development should be intensified through policy intervention it needs to identify innovative strategies which build on women's and men's experiences and knowledge. Furthermore, it is important to find a common language and an approach to promote awareness and action for gender equality in mountain regions.

After decades of limited progress towards a higher appreciation of the role of women in mountain regions, it is necessary to push initiatives to support committed actors and women networks. It is decisive to learn more about the status and the role of mountain women in different countries and regions in order to further support women as potential agents of change and let their strengths, their vulnerability and their progress be seen by the world. Several factors are required to ensure that women will be an integral part of sustainable mountain and social inclusive development in the future; more mountain-specific and local research through a gender-lens, tailored trainings and awareness raising for women's own potentials, support women's access and control of resources, assistance with entrepreneurship, information and raising awareness of the rights of women and finally, networking among mountain women all over the world. Furthermore, funding initiatives should be provided by transnational (UN Organisations, EU), national and regional authorities. Civil society organisations which are active on mountain regions (e.g. CIPRA, CONDENSAN) should also pay greater attention to women's issues in mountain regions.

As often experienced, transformation in gender power relations in mountain regions is a rather difficult task because gender equality processes are inherently political and demanding. Due to these circumstances, it is necessary that mountain women's issues and needs are reflected and integrated to a larger extent in research, public policy and in worldwide decision making agendas. Since the turn of the century, there were held several Conferences on women's issues in mountain regions – Bhutan Conferences (2002, 2012)<sup>8</sup> Utah Conferences (2007, 2011, 2015)<sup>9</sup> and an Alpine Convention Conference (2017)<sup>10</sup> organized under the Austrian Presidency. In the adopted declarations of these conferences, the status quo and the urgent need to improve the situation of women in mountain regions all over the world are clearly expressed. However, it needs a strong commitment of transnational, national and regional authorities and organisations, to enhance the situation of mountain women and the livelihood of their families.

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<sup>9</sup> <http://www.womenofthemountains.org/>

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