

1 *Article*2 **Agritourism initiatives in the context of continuous out-migration:**
3 **comparative perspectives for the Alps and Chinese mountain regions**4 **Yanying Chen ¹, Thomas Dax ² * and Dachang Zhang ³**5 ¹ Guizhou University of Engineering Science, China; 1418034346@qq.com6 ² Federal Institute of Agricultural Economics, Rural and Mountain Research, Vienna, Austria;7 thomas.dax@bab.bmnt.gv.at8 ³ Water and Eco Crisis Foundation, San Jose, CA, USA; pgneg@yahoo.com9 * Correspondence: thomas.dax@bab.bmnt.gv.at; Tel.: 0043-1-71100-637528

10 Received: date; Accepted: date; Published: date

11 **Abstract:** After World War II, the economic recovery of Western Europe implied a swift economic
12 transition for all regions, including the area of the Alps, although affecting various parts at different
13 pace and stages. The resulting out-migration led to population decline in some mountain valleys
14 and regions already since the 1950s. A similar out-migration movement began in China after its
15 rural reform started in the 1970s. The effect was in some cases even more significant than in the
16 Alps, with the first village being deserted in the 1980s. Current estimations report of about 380,000
17 abandoned rural villages in China between 2000 and 2016, particularly in its mountain regions.
18 While lower population densities might alleviate the pressures on ecology and contribute to
19 environmental benefits, these movements aggravate a spiraling-down process of local economies
20 and culture. In the Alps many regions facing challenges of out-migration and economic changes
21 elaborated agritourism schemes that provided both economic incentives and stability to involved
22 mountain farmers, and continuation of local land management systems. In contrast, in China hardly
23 any comparable trends of rural tourism developed. However, in recent years China's interest for
24 tourism-oriented farm diversification increased and a range of rural tourism and agricultural
25 tourism initiatives emerged. This paper focuses on the analysis of successful initiatives, problems
26 and development prospects in the Alps and China's rural areas, redefining agritourism as a
27 systematic integrated activity. Agritourism might therefore be assessed as a core element of the
28 future sustainable development of the Alps and the Chinese countryside.

29 **Keywords:** Definition of agritourism; comparative studies; rural development; sustainable tourism;
30 mountain development; Alpine regions, Chinese mountains

31

32 **1. Introduction**

33 Despite the global increase in tourism [1] and the recent boom in agritourism activities in many
34 countries of the world [2] it seems important to analyze the background conditions and effects of
35 these developments. As the regional context and cultural foundations are different from country to
36 country, and also quite divergent by individual regions, the types and features of agritourism differ
37 substantially. These differences translate also in the search for capturing the phenomena of similar
38 types of "rural tourism" development and the terminology and essence of the specificities of
39 "agritourism" [3].

40 With respect to analyzing effects of agritourism an understanding of its linkage to both its
41 agricultural production base and its spatial embeddedness is required. "Authentic" agritourism
42 schemes [4;5], like they have been elaborated in the Alps in Europe already since the late 19th century,
43 are based on valuing the distinctness of experiencing leisure time in close relation to nature and to
44 agricultural activities to which particularly urban population groups are more and more distant, or
45 even alien. The demand for this type of tourism is therefore tightly linked to strengthening emotional
46 ties to agricultural activities and to "awe" for natural features which might imply a highly relevant
47 contribution to pathways towards sustainable tourism trajectories [6].

48 But agritourism activities can only be realized and become effective on a large scale if they are
49 conceived as an economic activity of diversification of farming activities, sustaining the level of
50 household incomes. Increasingly the interlinkages with local and regional (tourism) economy have
51 to be seen as an integrative part of their development. Particularly in remote areas, including
52 mountain regions, islands and other spaces of specific geographical contexts, such tourism activities
53 could imply substantial effects on small-scale regional development and contribute to spatial
54 strategies that nurture nature-based assets [7]. With regard to the development challenges of these
55 regions their contribution to cope with negative economic and demographic trends should not be
56 neglected. As could be shown for some European mountain regions trends of out-migration could be
57 stopped, not least because of numerous regional development initiatives, including agritourism
58 strategies [8]. Changes affecting migration trends are also due to shifts in attractiveness of those areas.
59 This paper focuses on these challenges and comments on selected agritourism initiatives that aim at
60 coping with such negative trends. By comparing approaches in various regions of China with
61 developments in mountains of Europe where such activities look back on a long-term experience,
62 useful lessons for future adaptation could be derived.

63 The migration of rural labor to cities in China began at the end of 1978 during the period of
64 reform and opening-up. China's rapid rural urbanization process has increased the migration of a
65 large number of rural labor to cities. According to official data, China's urbanization rate exceeded
66 50 percent for the first time in 2011. In the period before, China's urban population had increased
67 from 480 million (in 2001) to 813 million (in 2017), and the ratio of rural permanent population to
68 urban permanent population has dropped significantly. It was forecasted that China will have
69 another 150 million farmers moving from rural to urban areas by 2020 [9]. The forces driving rural
70 decline are particularly strong in China where this process has been on-going since decades and a
71 "rural revival is needed to counter urbanization" [9, 275] visible throughout all major regions of the
72 globe.

73 As the result of farmers outflowing, villages are rapidly disappearing. The first village was
74 abandoned in the 1980s. According to the statistical report data released by the Chinese Bureau of
75 Statistics, about 380,000 natural villages disappeared in China between 2000 (3.7 million) and 2016
76 (3.32 million), which means "65 villages disappear per day", especially in mountainous areas [10,11].

77 Following to the disappearance of villages, so does the village culture. Out of numerous
78 examples the case of a mountain village, Nankeng of Yongxiu County in northwestern Jiangxi
79 Province should be highlighted here. It developed a village-wide martial culture to defend against
80 foreign enemies during the past century. However, at present, with the outflow of the peasants,
81 everything, also those culturally specific elements have gone.

82 Also many mountain regions in Europe used to be characterized by weak economic performance
83 and suffered from negative population trends. Even if that assessment has to be differentiated, as in
84 more accessible and/or prosperous regions mountain areas were characterized also by more positive
85 demographic changes. A place-specific analysis is therefore required that is looking beyond the final
86 balance of population balance, but addresses its various components and territorial differences.
87 Selecting mountain areas of population decline in Austria provides an interesting case where
88 approximately one-third of rural areas have experienced substantial negative population change over
89 the past decades [12]. Shrinking rural regions have consequently been highlighted as an emerging
90 topic in European discussion of regional development [13]. The analysis of the Austrian situation of
91 mountain regions stressed the persistence of the phenomenon in an inner-Alpine context (which has
92 inspired the term of "Inner Peripheries") and highlighted that many initiatives are relevant in these
93 regions that aim at impacting on the economic performance, income levels and well-being patterns
94 of the local population. From the project analysis it is concluded that future approaches have to go
95 beyond 'traditional' strategies of targeting economic growth, but need to focus on local participation,
96 social innovation in line with technological development and particularly establishing trust as basis
97 to effectively address well-being in the region. The recent analysis did only marginally refer to
98 tourism development, and the scope for agritouristic initiatives as these were main preoccupations
99 about two decades ago. It should be highlighted that a wide net of agritourism structures is available

100 throughout these regions which have a particular influence on service provision, attractiveness of the
101 region and linking land management and farm production to tourism options at local and regional
102 level. But with the on-going population decline and problems of finding successors to agritouristic
103 facilities there is a renewed interest in strategy consideration for these tourism regions. Problems of
104 diverse tourism intensity add to this concern and call for a holistic approach to regional policy
105 development [14]. A synthesis of the long-lasting efforts to enhance agritourism in Austria was
106 presented and discussed in a recent workshop [15] revealed numerous challenges and opportunities
107 of this tourism form. It could provide findings from respective consumer services that this is an
108 adapted type of tourism offer that largely meets the emerging demand for high-quality and, at the
109 same time authentic, locally based tourism offer linked closely to farming activities, vernacular
110 elements, food, outdoor sports and nature. On the occasion of its 25th anniversary the national
111 association of agritourism in Austria boasts of hosting every year about 2 million guests, thereof
112 500,000 children, which is assumed as highly important to convey knowledge and experience of the
113 farming world to (mostly) urban visitors [16]. Linking demographic and urbanization trends with
114 agritourism interest is thus a chance for mitigating population decline and shifting the values of
115 urban and rural inhabitants towards a more balanced assessment which includes significant
116 opportunities for high-quality agritourism developments. The pertinence of the issue is underlined
117 by a recent resolution of the European Parliament [17] which refers to the importance of rural
118 depopulation in these regions (point E) and “(e)mphasises the need to support the further
119 development of rural tourism and mountain agritourism while preserving the specificities of these
120 areas, for example traditions and traditional local products, since tourism has a major social,
121 economic and cultural impact” [17, point 8].

122 2. Materials and Methods

123 The comparative analysis of this article is based on the intensive discussions of similarities and
124 divergences between the spatial contexts of mountain development in China and Europe. Drawing on
125 the experience of the long-term and most intensive application of the type of agritouristic development
126 in the Alps, an extensive field visit and investigation of various forms of application and with the
127 various levels of institutional support structures in all countries of the Alpine Convention is the basis
128 of this scientific exchange [14] [18]. With regard to the aim of this article, to investigate agricultural
129 initiatives contribution to mitigate out-migration tendencies from mountain regions, a series of case
130 studies have been carried out in China and a literature review on the analysis for the European situation
131 was applied. Both include a view on mountain areas and lowland areas as contextual regional
132 influences might be decisive and have to be taken into account for comparative purposes.

133 The main interest in observing and analyzing appropriate place-based initiatives at the local scale
134 [19] is targeted at exploring not just challenges, but particularly the drivers for realizing specific
135 opportunities available in those regions. This should enhance strategy building for making use of
136 potential for rural development in these regions by addressing local specificities and spatial inter-
137 relations [20]. There are specific benefits of agritourism initiatives which have close relationships with
138 regional development options and performance [21]. In addition to literature in Europe, and other parts
139 of the world, the scope for increasing potential and demand for rural tourism, and its sub-types of arm
140 linked activities of agritourism, in China [22] should be highlighted.

141 The exchange of the approaches is used to build on inspiration by accessing experience of
142 agritourism, particularly in the Alps (e.g. [14], [23], [24], [7]). The analysis reflects on the particular
143 scope of activities and the integration into the regional socio-ecological system (see [25; 26]). The specific
144 interest is to address issues of migration and indirect effects of agritourism on regional differentiation
145 and local attractiveness. As a consequence, these initiatives build on and, at the same time, have
146 implications for quality of life experiences in those mountain areas ([12]. A reflection of those inter-
147 linkages in the analysis of this article reviews the wide array of contributions in the field on arguing for
148 a revised perspective on “shrinking rural regions”, in particular including mountain regions in all parts
149 of the world.

150 3. Results

151 In many parts of the world, mountain regions have been included into human settlements quite
 152 early in historical perspective. This is linked to place-specific features of settlement development, but
 153 reflecting the evolving human-nature relationship. With demographic changes and technological
 154 development of agricultural production, movements and extension of settlement area towards
 155 mountain spaces that were previously not included in settlement became widespread. As mentioned,
 156 the time and pace of these changes are strongly related to spatial demographic, economic and political
 157 contexts which have tremendously changed in history. The settlement of large parts of the Alps can
 158 be observed throughout various periods of the Middle Ages. In general, this contributed to the shift
 159 of cultural spheres and exchange as well as areas of retreat (over longer periods). In many cases, and
 160 particularly in the Alps settlement and evolving land management were shaped by dependence on
 161 power relations and property rights, often depicting 'feudal' systems that assigned decision on land
 162 and its management to a small group of powerful people (c.f. for the Austrian Alps, [27]. Up to the
 163 present time, these historic foundations characterize settlement structures and land management
 164 patterns, even if socio-economic conditions have altered completely. To some degree, cultural
 165 elements related to the past land management practices dispose of significant elements of attraction
 166 for agritouristic use.

167 In current China, villages include natural villages and administrative villages. Natural village, a
 168 natural settlement formed by villagers who live together for a long time, is the most basic component
 169 of rural settlements. The administrative village is the lowest level in China's administrative
 170 regionalization system, which is usually composed of a large natural village or several natural
 171 villages, and has a villagers' self-governing body such as a villagers' committee or a village office. To
 172 a much higher extent than in the Austrian Alps mountain villages are located in deeply remote areas
 173 in high mountains where accessibility is very much restricted. Settlement in those regions was driven
 174 by villagers who fled to the mountains to escape from conflicts and fightings in other regions and
 175 strict government administration. In effect, this led partly to a higher population share and more
 176 villages in Chinese mountains which is expressed by considerably high population density levels for
 177 mountain contexts (e.g. about 270 inhabitants per km² in mountains of Bijie in Guizhou province, see
 178 [14]. But also in these remote areas many cultural expressions are visible and nowadays could
 179 provide elements of attraction for agritouristic use.

180 3.2. Factors of rural labor outflow in mountainous areas

181 As argued above, out-migration from mountainous regions is widespread, albeit in Europe, as
 182 well as in China, quite different developments are experienced [8]. In the following an account of the
 183 aspects impeding out-migration and aspects driving local people to leave mountains is presented.
 184 First, a number of factors impeding outflow comprises the following ones:

185 Rural tradition: native culture and customs (parents do not travel far, clan culture), hard-
 186 working, relatively closed vision, high satisfaction with the status quo of living conditions and
 187 local options.

188 Rural people used to be unwilling to go out: during the early years of China's industrial
 189 development in the 1950s, there were problems with factory recruitment.

190 Administrative reasons hindering migration: China's household registration policy has the effect
 191 of inhibiting movements: for the efficient management of the people, for a long time, the
 192 household registration has been used to restrict the migration from other places, especially from
 193 rural areas to cities, or small cities to relatively large cities ('hukou' system; [28]. Farmers are
 194 confined to retain their living place in the countryside. Education upgrading was eventually the
 195 common way, if not to say the only way, for young people to leave the countryside.

196 On the other hand, a series of important factors add to the motivation to find living places in
 197 other regions and strongly drives outflow from mountain regions:

- 198 • Excess labor: in many mountain regions, employment opportunities are scarce and structural
 199 change of agricultural labor increases the job surplus; in particular see for example the situation
 200 in the Wenzhounese area, Zhejiang Province.

- 201 • Low income levels and disparity to urban income chances: employment remuneration in cities
 202 is much higher and provokes search for urban work places and increases commuting patterns.
 203 Relatively spacious and quality houses in villages can only be realized based on working
 204 incomes from employment in cities, for most rural regions.
- 205 • The pursuit of urban spiritual life, material life and medical & social insurances: Given the
 206 attractiveness of cultural traits of urban life, and health and social security issues guaranteed to
 207 a higher extent in urban contexts, many young people are reluctant to return to their home
 208 places.
- 209 • Higher benefits of agricultural industry in non-mountain areas: Differentiation within
 210 agricultural structures and productivity aggravate challenges of mountain areas, including the
 211 impact of logistics and modern life on rural areas
- 212 Cultural experience and example of out-migration of deprived farming population: In history,
 213 in many mountain regions peasants migrated either to neighboring countries (such as Swiss farmers
 214 migrating to neighboring mountain areas in Vorarlberg in Austria [29] or to non-mountain or even
 215 far away regions, like to the Americas, particularly driven by severe poverty and desire to start a
 216 “new living” under quite different conditions.

217 3.3. Contributions and challenges of rural labor outflow to societal development

218 Out-migration from mountain regions is not just a spatial phenomenon and has impacts on
 219 demographic development, but inherently addresses the whole range of issues of society. This is a
 220 major reason that local changes of land management and employment developments have to be
 221 linked to cultural features. Tourism, and particularly agritourism, has a pivotal role in linking spatial
 222 changes, landscape development issues and cultural changes, which includes opportunities to
 223 influence and shape these processes. At first, some considerations on important (positive)
 224 contributions of labor movements are referred here, as for example:

- 225 • Make up for the lack of manpower in the social service industry,
- 226 • Make up for the lack of manpower in industrial development,
- 227 • Reduce the pressure on the fragile ecological environment of mountainous areas.

228 At the same time out-migration has severe problems for the society in mountain regions which
 229 have to be taken into account when elaborating strategies for agritourist initiatives:

- 230 • A detrimental effect on the existing municipalities and the spatial structures of these mountain
 231 municipalities: relevant sectors comprise in particular education, housing, municipal security.
- 232 • The disappearance of ‘rural homeland’ culture: China is a large agricultural country that has
 233 lasted for thousands of years. The disappearance of rural culture is an impairment and does not
 234 provide an adequate answer to the place-specific natural and cultural heritage.
- 235 • Taking away options of next generations: The problems of rural left-behind children (LBC) are
 236 mainly the matter of their psychological and personality distortion. Although a governmental
 237 report indicates that their number is decreasing, due to the open policies which allow the rural
 238 children to go to the city with their parents, this issue should not be neglected [30].
- 239 • Affecting social service provision: In particular decreasing population impacts on the potential
 240 to secure public services, in particular (quality) education in rural mountainous regions.
- 241 • Impact on social security and self-esteem: Awareness of severely restricted future options,
 242 inequality in society and a new generation of psychologically and temperamentally distorted
 243 rural people.

244 Accelerate changes in land management, leading to negative environmental performance: Even
 245 already in earlier stages of the process, a change in land management and a decrease the utilization
 246 rate of land and its resources might cause outflow, altered perceptions on regional opportunities and
 247 assets, and lead to environmental consequences with negative impacts. In the context of climate
 248 change these processes tend to gain in relevance and change processes might gain in speed.
 249 Moreover, changes of the natural resource use and its aesthetical appearance, expressed through
 250 landscape changes would directly impact on tourism attractiveness and capability to apply
 251 agritourist strategies in such mountain areas.

252 3.4. Future trends of rural labor outflows in mountainous areas

253 In analyzing future trends of migration from and to mountain areas a place-based approach is
 254 required as conditions and spatial trends are very diverse. Following analysis in the Alps the detailed
 255 observation at fine geographical scales suggest great variation in territorial response. Moreover, since
 256 more than two decades mountain regions in large parts of Western Europe share the change in
 257 migration movements, i.e. an increase in immigration from abroad due to international movements
 258 and flows towards (Western) European countries. As a consequence, most mountain regions show a
 259 positive migration balance of international movements, but in many cases a national negative one
 260 [31]. Aspects functioning as catalysts are:

- 261 • Most people believe that with the rapid development of industrialization, urbanization and
 262 agricultural modernization, some traditional villages have gradually disappeared, which is
 263 regarded as the inevitable historical development.
- 264 • Urbanization trends: Following the mainstream trend, the urban population is steadily
 265 increasing and has exceeded the rural population at the global scale, but also in China, and in
 266 many mountain regions trends of urbanization can be observed in a similar way.

267 However, with regard to these overarching trends we could postulate a number of
 268 countercurrent factors which might provide aspects for future strategy development of mountain
 269 regions that cope with the imminent challenges and simultaneously consider the opportunities and
 270 needs of local population and societal demands. Main aspects involved are:

- 271 • Social dependence on agriculture: No matter how the society develops, agriculture is a
 272 precondition for life (a 'must') that shapes landscapes, impacts on settlement structures and
 273 generates food provision and security. For China as a country with a large population it is
 274 essential to secure land management and food security by sustaining development options for
 275 adapted farming systems. This relation is relevant throughout our regions, affecting mountain
 276 regions as well, and must not be neglected in future development strategies. Therefore, the
 277 countryside will inevitably exist and resilience in resource use is a crucial aspect.
- 278 • The need to maintain rural culture: The foundation of Chinese traditional culture is in the
 279 countryside. Traditional villages retain rich and colorful cultural heritage. They are the
 280 important carriers for carrying and embodying the traditional civilization of the Chinese nation,
 281 aspects that have been shaped over long periods in historic times.
- 282 • China current policies: Rural household registrations are permitted to build their own houses.
 283 Many city residents now try to own or retain rural household registration (then, they can build
 284 their own houses while otherwise they would only be able to buy condos from real estate
 285 developers), owing to the traditional Chinese desire to own a house of their own and
 286 appreciating the attractive value of living conditions in the countryside.
- 287 • Future of labor market development: The demand for low-skilled labor will be reduced in the
 288 future and issues of high-level education gain in importance. Matching education and
 289 employment skills will become a rising challenge, and territorial specificity and attractiveness
 290 will add to these.
- 291 • Returning process to hometowns: Many farmers working in cities have broadened their horizons
 292 and ideas, accumulated the start-up fund, and returned to their hometowns: They engaged in
 293 using the unique environment and conditions of the countryside to start new businesses. An
 294 increasing number of good practice examples exist throughout the world, with strong emphasis
 295 on Alpine areas achievements (see [32] but also emerging examples throughout China's
 296 mountain areas (Mr. Wang Chuanxi, the village head of Daicun Village, Lanling County,
 297 Shandong Province, see Box 3; and Mr. Wei Jia, an undergraduate going back to his home,
 298 Huangdu Village, Xilong Township, Anji County, Zhejiang Province, see Box 1).

299 3.5. Findings and their relevance for future-oriented development

300 It is a key constraint how to realize the transformation and development of China's mountainous
 301 rural areas to the development of the whole country. The Alps have transformed from traditional
 302 villages and agriculture long time ago, and now are characterized by a mosaic pattern of economic

303 activities and living spheres. Yet, challenges remain high and on-going studies reveal the scope of
304 divergent options and considerable choices available to local and regional actors. The current
305 prospective study on the future of the Alps in 2050 provides ample indications for decision points
306 and transformation of social and economic and social pathways [33]. With regard to mountain
307 regions experiencing or threatened by long-term out-migration further analyses of changing
308 strategies, for design and implementation of transformation at various levels (including fine
309 geographical ones) are required.

310 The inclusion of the development of the tertiary sector, i.e. a focus on service sector employment
311 might be of specific benefit for mountain regions. It holds a strong opportunity for land management
312 and the linking of activities of agricultural actors and other local sectors. Agritouristic activities, like
313 those established since long in the Alps, dispose of a significant potential also for mountain regions
314 of China. The following Case Studies (see Boxes 1-3) serve as illustrations for exemplary approaches
315 of numerous and very diverse initiatives across these mountain contexts. All of them underpin place-
316 based opportunities that were not visible at first sight, but which had been addressed and nurtured
317 through the initiative of innovative people and/or strategies and programmes.

318 4. Discussion

319 From the analysis of movements of mountain population and the basic contribution of mountain
320 farming to the functions of mountain regional development it seems important to address the specific
321 assets of mountains of an inherent value potential. The case study presented on the Huangdu village
322 (Box 1) exemplifies the need for incorporating tourism development in a comprehensive regional
323 approach. In particular, many of those assets and activities are closely linked to land management,
324 food and valuation of landscapes, thus underpinning the scope for agritourist action. Developing a
325 rural (mountain) tourism strategy that takes advantage of these features relates also to the general
326 development of the tertiary industry which has a direct impact on jobs creation and regional
327 economic performance. In this regard there is a long and intensive experience of the Alpine mountain
328 tourism, and particularly agritourism business that could be used for drawing lessons for other
329 mountain regions around the world and key aspects might serve as “transfer knowledge” for
330 mountain development in China. With the huge population of China’s mountain areas, there is big
331 scope for appropriate agritourist activities. Due to the limited development of tourist destinations so
332 far, those rather few tourist spots tend to be overcrowded. In this situation of rising demand and
333 limited current offer mountain agritourism businesses have great potential for development.

334 This approach requires a joint perspective and action plan for developing agriculture (place-
335 adapted land management of agricultural and forest areas) and tourism bossiness planning. This
336 might be inspired by experience of the way how the resort industry in the Alps, and more specifically
337 activities linking agriculture and tourism activities through agritouristic concepts, faced the place-
338 specific challenges and addressed opportunities of mountain development.

339 Building on this repertoire of empirical knowledge, agriculture and tourism need to be
340 integrated into a new agritourism system industry. It refers to a redefinition of agricultural tourism
341 which focuses as a core element on the future sustainable development of the Chinese countryside
342 (following the history and insights from activities in the Alps). Core activities would include:

- 343 • Understanding and fostering the variety of multi-faceted approaches to suit the interests and
344 needs of various groups of local people.
- 345 • Redefining agritourism as a systematic engineering: agriculture is designed for tourism and
346 supporting tourism as well as its original basic functions (see Box 2).
- 347 • Enabling the complementary functions of agriculture and tourism to support and promote each
348 other in order to achieve the required contribution to ‘sustainable’ development (see example of
349 the case of Beili Dujuan in Guizhou Province [34]).
- 350 • Enhancing the transformation of the economic efficiency of rural smallholders to agricultural
351 companies, by addressing place-based options of product development, niche product
352 development, regional and high-quality labelling focus, and diversification activities that link

- 353 natural resource use with increasing social demand for those kinds of (highly valued) products
354 and services.
- 355 • Establishing a comprehensive linkage chain of sectoral activity, local anchoring, and
356 diversification of family farms is based on social capital development (see case study in Box 2).
 - 357 • Linking farm tourism activities with local tourism attractions (see case study in Box 3) to broaden
358 the scope of attractive elements and increase demand for these agritourist offers.

359 5. Conclusions

360 The paper explores the potential of enhanced agritourism activities in the context of regions with
361 affected by population decline trends since many years. While this situation has been a prominent
362 issue in the Alps, and countries like Austria put a strong emphasis on diversifying activities of land
363 management towards other activities, the outflow of mountain population, and particularly young
364 people is a more recent phenomenon in China. Consideration and analysis of the history of land
365 management, challenges and opportunities and scope for tourism and agritourism concepts to cope
366 with rising regional problems are addressed for both spatial contexts and, to some extent, comparison
367 indicates lessons for future strategy building and action development. The exploration of Chinese
368 development of agritourism cases emphasizes two further aspects: A strategic concept for agritourist
369 development needs to consider its role in tourism at the time when planning agricultural
370 development. This is an additional perspective that goes beyond the European model that is
371 primarily based on historical structures and conveys less scope to planning devices (so far). The
372 second issue is partly discussed in Europe as well, i.e. the issue of cooperation: In China the focus is
373 on community development in the form of cooperation of a whole village which is regarded as
374 essential to establish agritourist activities, as highly efficient and sustainable rural tourism is not
375 shaped just by individual events, but more importantly requires a whole setting of the environment
376 and the place-specific atmosphere.

377 The case of Austria (like similar regions of the Alps, e.g. Italian Alpine regions) engaged since
378 long in wide-spread agritourist activities, enhancing a small-scale tourism operation. This model
379 builds on the specific agricultural and business structure of these regions and favours family
380 enterprises and linked agricultural and tourism operations. The application of this approach
381 throughout the country has led to a situation where about one tenth of the overall tourism activity is
382 linked to agritourism, in a very intensively used mountain country. The main success factors are
383 linked both to structural features and the asset base which is characterized by mountain amenities
384 highly appreciated within the national society and at international level as well [35]. Although
385 mountain agritourism is just a minor economic sector in the overall regional economy it is remarkable
386 that this activity builds on and nurtures attractiveness of the area, thus indirectly contributing to
387 mitigate out-migration, respectively increase pull-factors for immigrants. A thorough survey of the
388 effects of the agritourism business across Austria's mountain areas is not at hand, but action plans
389 and rising awareness of these linkages underpin the relationships addressed.

390 These issues are of a substantially higher impact and extent for the mountain regions in China
391 which are affected by a particularly strong urbanization process, structural changes and commitment
392 to new approaches and developing models, including agritourism activities. The high diversity of
393 regional situations in China prevent a standard application and summary evaluation of present
394 implementation of such approaches. Nevertheless, the case studies presented point to three major
395 issues for conceptual development of agritourism in this country: (i) addressing the amenity value
396 and landscape features as an attractive element to conceive fruitful agritourism activities; (ii)
397 engaging in a comprehensive planning process that links the various actors and business levels in the
398 cross-sector activities; and (iii) integrate specific local tourism attraction elements, as drivers for
399 attracting and supporting more local organized small-scale agritourism business activities. Rural
400 tourism is currently a "hot trend" in China [36] with about a third of tourists heading to rural regions
401 which means an estimated 2 billion rural visits by 2020. This provides a substantial scope for agritourism
402 development.

403 Experience from both mountain contexts underpins the need to appreciate natural and cultural
 404 heritage as basis of agritourism and the need for a carefully conceived business development. It
 405 highlights that it is not so much depended on “optimal” planning devices, but on the long-term
 406 commitment of local actors, a deep cultural connotation of the selected strategies [37], national
 407 appreciation and support and stable structures for enhancing social capital formation in these
 408 mountain areas.

409 **Author Contributions:** Conceptualization, T.D. and D.Z.; Investigation, Y. C.; Methodology, D. Z.; Project
 410 administration, T. D. and D. Z.; Validation, D. Z.; Writing – original draft, T. D. and D.Z.; Writing – review &
 411 editing, Y. C. and T. D.

412 **Acknowledgments:** Authors gratefully acknowledge support given by Marco Onida, then general secretary of
 413 the Alpine Convention during the field visit to the countries of the Alpine mountain range and for information
 414 on the wide range of agritourist initiatives in that area. Moreover, the present article could integrate valuable
 415 comments provided by participants at the presentation of a former version of the article at the First World
 416 Congress on Agritourism in Bozen/Bolzano, Italy, 7-9 November 2018.

417 **Conflicts of Interest:** The authors declare no conflict of interest.

418 Appendix A

419 Box A1: Case study Huangdu village

Rural model of mountainous area

Development experience of Huangdu Village, Xilong Township, Anji County, Zhejiang Province
 ([38-40])

Huangdu village, 11.5 km², 6 natural villages, 423 farmers with a population of 1,516 is one of the poorest villages in Anji County. In order to get rich, village officials led the villagers to run bamboo production enterprises, wire drawing factories, iron casting factories, etc., to plant red bamboo, pepper, chestnut, bayberry, chrysanthemum. However, there has never been a desire to "get rich." Since the large-scale planting of white tea in 1997, the per capita annual income of the villagers had increased from 400 yuan (about 47 US\$) in 1997 to more than 10,000 yuan (about 1176 US\$), for the first time in 2003. Today, running the tea garden of more than 3,200 ha, the villagers take the white tea industry as the leading factor and combine it with rural tourism development. With its unique scenery of thousands of acres of tea gardens, and various tourism programs, such as farm experience, colorful outdoor leisure activities and “tent” hotels, the Village has become an excellent destination for leisure travel and holiday. The Village’s output value exceeds 400 million Chinese Yuan (about 61.5 million US\$), per capita annual income is more than 36,000 yuan (5,538 US\$) in 2018, all villagers live in their new houses, and have their cars.

Today, Huangdu not only sells white tea, but also sells the tea landscape and tea culture, striving forward by making use of the integration of the three products. Their cultivars cover nearly 200,000 ha in 18 provinces.

420

421 Box A2: Case study Lujia village

Rural model of mountainous area

Development experience of Lujia Village, Xilong Township, Anji County, Zhejiang Province ([40-42].

Lujia Village, situated half an hour South of Huangdu Village, 16.7 km², population 2,200, is also one of the poorest villages in Anji County: The collective economic income was less than 18,000 yuan (2,117US\$), but the average debt was 1.5 million yuan (17,6470 US\$) in 2011. However, at the end of 2017, the per capita annual income of this village exceeded 35,000 yuan (5,385 US\$), and the total assets of the village collectively exceeded 140 million yuan (21.5 million US\$).

In 2013, Lujia Village spent 3 million yuan to hire a team of experts to engage in a comprehensive planning for the village. With the model of “company + village + family farm”, the village fully introduced the concept of social capital to develop its beautiful area relying on rural tourism activities: rural areas were transformed to scenic spots, resources were changed to capitals, and villagers became shareholders. The village uses the collective assets of the whole village as the stock to buy shares, and the corresponding project company is jointly registered with the external capital. The villagers gradually diversify their income channels by renting land, starting a business farm, participating in other operation services of the scenic spot, etc. At the same time, the villagers will receive dividend income from the equity each year.

Regarding family farms as a pillar industry, Lujia Village established 18 family farms (bamboo farms, Chinese medicine farms, orchard farms, vegetable farms, tea farms, flower farms, alpine pastures...) according to local conditions, and initially created a scenic spot, so called “opening the door is the garden”. A small sightseeing train connects the 18 family farms, and drives the development of leisure tourism. On average, there are more than 10 tour groups with 600 visitors every day.

In 2017, the Village further proposed the concept of regional management—the “Landscape Lujia” complex, with Lujia Village as the center, and radiating around it to include the three neighbouring villages Nanbeizhuang, Yishita and Chizhi, covering 55.9 km² in total. This project has been included in the country's first package of national rural complex pilot projects.

The positive changes in Lujia Village have promoted the return of young working people and university graduates who had left the village. They came home to run Bed and Breakfast homes, do e-commerce sales of agricultural products, or participate in business management of the project companies.

423

Box 3: Case study Daicun village

Lowland development model

Development experience of Daicun Village in Lanling County, Shandong Province ([43]):

At the beginning of 1999, Daicun was poor, and the collective debt of the village was over 0.48 million US\$ (the income of a professor was about 300 US\$ in China at that time). However, a new Mission was approved: "Born in the countryside, Grow in the countryside, Take root in the countryside". The new village leader, Mr. Wang, began to explore the way of large-scale modern agriculture. Under the guidance of experts, all land was centralized and joint-stock large-scale operation was carried out. Experts were invited to design and build a first-class modern agriculture demonstration park in China, which became a rural complex integrating agricultural science and technology demonstration, seed and seedling cultivation, industrial incubation and leisure agriculture.

In 2012, the first pilot project the "National Agricultural Park" was established with the approval of the Ministry of Agriculture and the National Tourism Administration. The project covers a total area of 1,300 ha, with an investment of 150 million US\$, and now receives more than 1 million tourists annually. At the same time, over 200 training courses for over 100,000 farmers have been held here.

There are agricultural companies, tourism companies and shopping malls in the village. Every villager and every family will find their own suitable job and development opportunities. Villagers can also develop and start businesses according to their own characteristics, skills and wishes.

This thousand-year old village thrives due to the development of multiple industries. The old debts could be paid off within a few years, and the village wealth has been growing day by day. In 2017, the total output value of all industries in the village was more than 310 million US\$, and the village collective operation profit was 17 million US\$. The per capita net income of villagers increased from about 170 US\$ in 1999 to 9,500 US\$ in 2017.

The development of Daicun has brought more and more benefits to the villagers and gradually solved the problems of employment, education, medical treatment, endowment and housing. Villagers moved into their houses from dilapidated mud houses, and all people over 60 years old live in well-equipped "senior apartment", and enjoy "senior pension". All villagers have been paid by the village to participate in the programs, "New Rural Cooperative Medical Scheme" and "New Rural Social Security Scheme". The village also provides financial aid and scholarships for all children from primary school to university level. At the same time, the traditional culture of the village is also carried forward,

"The village has changed, the farmers have become richer, the life has been better than ever before, and the attraction has become more and more." At present, though there are only about 3,600 villagers in Daicun, there are more than 4,000 workers commuting to the village from other places. More than 200 university graduates either come back home to the village to run their own businesses or are recruited by the village.

424

425

426

427

428 **References**

- 429 1. Organization for Economic Co-operation and Development (OECD). OECD Tourism Trends and Policies
430 2018. OECD Publishing: Paris, 2018.
- 431 2. Lane, B.; Kastenholz, E. Rural tourism: the evolution of practice and research approaches – towards a new
432 generation concept? *Journal of Sustainable Tourism* **2015**, 23(8-9), 1133-1156. DOI:
433 10.1080/09669582.2015.1083997
- 434 3. Tew, C.; Barbieri, C. 2012. The perceived benefits of agritourism: The provider's perspective. *Tourism
435 Management* **2012**, 33(1), 215-224. DOI: 10.1016/j.tourman.2011.02.005
- 436 4. Streifeneder, T. Agriculture first: Assessing European policies and scientific typologies to define authentic
437 agritourism and differentiate it from countryside tourism. *Tourism Management Perspectives*, **2016**, 20, 251-
438 264. <https://doi.org/10.1016/j.tmp.2016.10.003>
- 439 5. Eurac Research. Outcome Statement, 1st World Congress on Agritourism 2018. Bozen/Bolzano, Italy, 2019.
- 440 6. Lu, D.; Liu, Y.; Lai, I.; Yang, L. Awe: An Important Emotional experience in Sustainable Tourism.
441 *Sustainability* **2017**, 9, 2189. DOI: 10.3390/su9122189.
- 442 7. Gløersen, E.; Price, M.F.; Borec, A.; Dax, T.; Giordano, B. *Cohesion in Mountainous Regions of the EU – Research
443 for REGI Committee*. European Parliament, Directorate-General for Internal Policies, Policies Department B:
444 Structural and Cohesion Policies, Regional Development, IP/B/REGI/IC/2015_175. European Parliament:
445 Brussels, 2016.
446 [http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573420/IPOL_STU%282016%29573420_EN.p](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573420/IPOL_STU%282016%29573420_EN.pdf)
447 [df](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573420/IPOL_STU%282016%29573420_EN.pdf). (accessed on 26 04 2019).
- 448 8. Gløersen, E.; Dragulin, M.; Hans, S.; Kaucic, J.; Schuh, B.; Keringer, F.; Celotti, P. *The impact if demographic
449 change on European regions*. Committee of the Regions, European Union: Brussels, 2016.
- 450 9. Liu, Y.; Li, Y. Revitalize the world's countryside. *Nature* **2017**, 548, 275-277. DOI: 10.1038/548275a. Author
451 1, A.B.; Author 2, C.D. Title of the article. *Abbreviated Journal Name* **Year**, *Volume*, page range.
- 452 10. National Bureau of Statistics of China. Communiqué on the Main Results of the Second National Census
453 of Basic Units in China. 2003-01-22.
454 http://www.stats.gov.cn/enGlisH/NewsEvents/200303/t20030312_25984.html (accessed on 26 04 2019).
- 455 11. National Bureau of Statistics of China. Third National Agricultural Census, 2017-12-16.
- 456 12. Dax, T.; Fischer M. An alternative policy approach to rural development in regions facing population
457 decline. *European Planning Studies* **2017**, 26(2), 297-315. DOI: 10.1080/0965313.2017.1361596.
- 458 13. ESPON. *Shrinking rural regions in Europe, Towards smart and innovative approaches to regional development
459 challenges in depopulating rural regions*. Policy Brief. ESPON EGTC: Luxembourg, 2017.
- 460 14. Zhang, D; Dax, T. Transition of mountain farming towards a stronger involvement of local population
461 services in China. Paper at IAMO Forum 2013 "Rural areas in transition: Services of general interest,
462 entrepreneurship and quality of life", IAMO and vTI, 19-21 June 2013, Halle (Saale), Germany.
- 463 15. Netzwerk Zukunftsraum Land. Tourismus und Landwirtschaft, Innovative Kooperationen und Strategien
464 für die Zukunft. Innovative Werkstatt, St. Veit an der Glan, Austria, 24.05.2018.
- 465 16. Urlaub am Bauernhof. 25 Jahre Urlaub am Bauernhof Österreich. Eine perfekte Verbindung von Tradition
466 und Moderne. Salzburg, Austria, 28.04.2018. Available online:
467 [https://www.tourismuspresse.at/presseaussendung/TPT_20160428_TPT0009/25-jahre-urlaub-am-](https://www.tourismuspresse.at/presseaussendung/TPT_20160428_TPT0009/25-jahre-urlaub-am-bauernhof-oesterreich-bild)
468 [bauernhof-oesterreich-bild](https://www.tourismuspresse.at/presseaussendung/TPT_20160428_TPT0009/25-jahre-urlaub-am-bauernhof-oesterreich-bild) (accessed on 26 04 2019).
- 469 17. European Parliament. EU Agenda for Rural, Mountainous and Remote Areas. European Parliament
470 resolution of 3 October 2018 (2018/2720(RSP)), document P8_TA-PROV(2018)0374. Brussels, 2018.
- 471 18. Dax, T.; Zhang D.C. Strategien der Berggebietsentwicklung im Alpengebiet und im Berggebiet Chinas,
472 Analyse von Lernprozessen der lokalen Entwicklung. *Ländlicher Raum* **2013**, Online-Fachzeitschrift des
473 Bundesministeriums für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, Wien.
- 474 19. Dax, T. Why are Local Initiatives So Important in Mountain Regions? *Mountain Views, Chronicles of the
475 Consortium for Integrated Climate Research in Western Mountains, CIRMOUNT* **2015**, 9(2), 44-46.
476 http://www.fs.fed.us/psw/cirmount/publications/pdf/Mtn_Views_dec_15.pdf
- 477 20. Copus, A.; Shucksmith, M.; Dax, T.; Meredith, D. Cohesion Policy for rural areas after 2013, A rationale
478 derived from the EDORA project (European Development Opportunities in Rural Areas) ESPON 2013
479 Project 2013/1/2. *Studies in Agricultural Economics* **2011**, 113, 121-132. <http://dx.doi.org/10.7896/j.1113Xx>
- 480 21. Tew, C.; Barbieri, C. 2012. The perceived benefits of agritourism: The provider's perspective. *Tourism
481 Management* **2012**, 33(1), 215-224. DOI:10.1016/j.tourman.2011.02.005

- 482 22. Su, B. Rural tourism in China. *Tourism Management* **2011**, 32(6), 1438-1441. DOI:
483 10.1016/j.tourman.2010.12.005
- 484 23. Embacher, H. Marketing for Agri-tourism in Austria: Strategy and Realisation in a Highly Developed
485 Tourist Destination. *Journal of Sustainable Tourism* **1994**, 2(1-2), 61-76. DOI: 10.1080/09669589409510684
- 486 24. Hummelbrunner, R.; Ernst Miglbauer, E. Tourism promotion and potential in peripheral areas: The
487 Austrian case. *Journal of Sustainable Tourism* **1994**, 2(1-2), 41-50. <https://doi.org/10.1080/09669589409510682>.
- 488 25. McGinnis, M.D.; Ostrom, E. Social-Ecological System Framework: Initial Changes and Continuing
489 Challenges. *Ecology and Society* **2014**, 19(2), article 30. <https://doi.org/10.5751/ES-06387-190230>.
- 490 26. Nigmann, T.; Dax, T.; Hovorka, G. Applying a social-ecological approach to enhancing provision of public
491 goods through agriculture and forestry activities across the European Union. *Studies in Agricultural*
492 *Economics*, **2018**, 120, 1-7. <https://doi.org/10.7896/j.1721>.
- 493 27. Krammer, J.; Rohrmoser, F. Im Kampf um ihre Rechte. Geschichte der Bauern und Bäuerinnen in
494 Österreich. Wien: Promedia: Wien, 2012.
- 495 28. Yeh, E.T.; O'Brien, K.J.; Ye, J. Rural politics in contemporary China. *The Journal of Peasant Studies* **2013**, 40(6),
496 915-928. <http://dx.doi.org/10.1080/03066150.2013.866097>.
- 497 29. Häfele, E. *Europäisch, jung, mobil – Neue Zuwanderung nach Vorarlberg 2008-2014*. AK Vorarlberg: Feldkirch,
498 2015.
- 499 30. Beh, L.S. China's Left-behind Children: Development and Challenges for the Future. *The Copenhagen Journal*
500 *of Asian Studies* **2014**, 32(2), 58-83.
- 501 31. Gretter, A.; Machold, I.; Membretti, A.; Dax, T. Pathways of Immigration in the Alps and Carpathians:
502 Social Innovation and the Creation of a Welcoming Culture. *Mountain Research and Development* **2017**, 37(4),
503 396-405. <https://doi.org/10.1659/MRD-JOURNAL-D-17-00031.1>.
- 504 32. Dax, T. Neueste Entwicklungen und Erfolgsfaktoren der Ländlichen Entwicklung. In *Berglandwirtschaft und*
505 *Ländlicher Raum, Broschüre zur 4. Schwerpunktveranstaltung im Rahmen der österreichischen Präsidentschaft der*
506 *Alpenkonvention*. BMLFUW Abt. V/9 (Ed.). BMLFUW: Wien, 2007, pp. 12-18.
- 507 33. Chilla, T.; Heugel, A.; Streifeneder, T.; Ravazzoli, E.; Laner, P.; Tappeiner, U.; Egarter, L.; Dax, T.; Machold,
508 I.; Pütz, M.; Marot, N.; Ruault, J.F. *Alps 2050 Common spatial perspectives for the Alpine area. Towards a common*
509 *vision*. Final Report. ESPON EGTC: Luxembourg, 2018.
- 510 34. Chen, Y.; Dax, T.; Zhang, D. (2018). Complementary Effects of Agricultural Tourism and Tourist
511 Destination Brand in Resource-Preserved Scenic Areas, Comparative Findings from Mountain Case studies
512 in China and Europe. 1st World Congress on Agritourism, 7-9 November, Bozen/Bolzano, Italy, 2018.
- 513 35. Dax, T. Recognising the amenities of mountain agriculture in Europe. *Mountain Forum Bulletin* **2009**, 9(1),
514 3-5. <http://www.mtnforum.org/sites/default/files/publication/files/2013.pdf>
- 515 36. Travel Gumbo. Agritourism a growing trend in China, 2015. Blog entry:
516 <https://www.travelgumbo.com/blog/agritourism-a-growing-trend-in-china> (accessed on 26 04 2019).
- 517 37. Youxoue, J.; Shujin, W.; Tsai, C.-C. Study on the Consumption of Agritourism in China. Paper at the 2016
518 Joint International Conference on Service Science, Management and Engineering and International
519 Conference on Information Science and Technology, 2016.
- 520 38. Ding, Y. Huangdu Village of Anji County, Zhejiang — A piece of Leaf Riches the Whole Region. *China*
521 *Daily* **2018**. http://www.sohu.com/a/238587562_99962390 (accessed on 26 04 2019).
- 522 39. Ren, X. Huzhou adhered to 13 years: Economic Development and Ecological Protection both Win-Win. *Sina*
523 *Finance* **2018**. <http://finance.sina.com.cn/roll/2018-04-19/doc-ifzihneq2031626.shtml> (accessed on 26 04
524 2019).
- 525 40. Ye, P. The Legends of Two Mountain Villages in Anji, Zhejiang. *China News Network*, 2018.
526 <http://www.chinanews.com/sh/2018/06-30/8552484.shtml>
- 527 41. Li, R. Lujia Village, Anji, Zhejiang: Creating a Pastoral Complex to Help Integrate the Three Industries.
528 Xinhuanet, 2017. http://www.xinhuanet.com/photo/2017-11/14/c_1121954143_5.htm (accessed on 26 04
529 2019).
- 530 42. Zhejiang Satellite TV. The road to revitalization of Lujia Village, Anji, Zhejiang: a 7-year change in a village,
531 2018. <https://baijiahao.baidu.com/s?id=1591830682078737122&wfr=spider&for=pc> (accessed on 26 04 2019).
- 532 43. Shan Dong Culture. Embrace nature at Lanling National Agricultural Park, 17.09.2018. Available online:
533 http://www.chinadaily.com.cn/m/shandong/shandongculture/2018-09/17/content_36930789.htm (accessed
534 on 26 04 2019).
- 535