



# Agroscope Research Programme AgriMontana

## Agriculture's Contribution to Sustainable Development in Mountain Areas

15th Meeting of the FAO-CIHEAM Mountain Pastures Network  
Integrated research for the sustainability of mountain pastures

7<sup>th</sup> to 9<sup>th</sup> October 2009 Les Diablerets

Dr. Christian Flury



## Background of the project

- Development of agricultural structures until now and into the future in steadily changing contexts
  - Development leads to structural and social problems in agriculture and threatens:
    - the sustainable development goal
    - the provision of socially desired multifunctional services
  - Controversial social claims and discussions about
    - the role of public policy in mountain areas
    - the desired services of mountain agriculture
- Question about the future development of mountain agriculture and about the multifunctional services

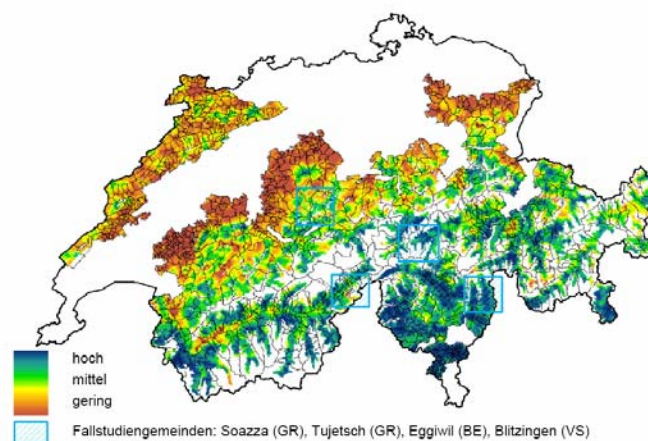


## Multifunctional services of agriculture in mountain areas

- Conservation of nature and maintenance of the cultivated landscape
  - Area-wide cultivation of the agricultural land
  - Ecological services
- Contribution to a decentralized settlement
  - Contribution to regional employment, value added and income opportunities in rural areas
  - Socio-cultural life, decentralized structures, infrastructure, etc.
- Contribution to food security
- Animal welfare and income maintenance as additional goals



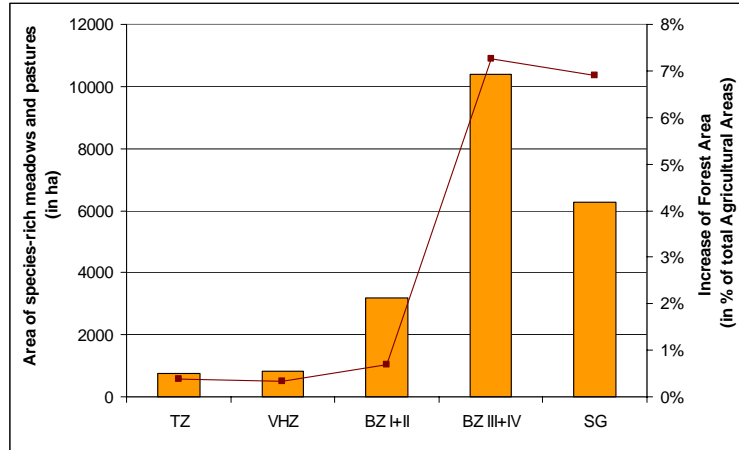
## Development of fallow land: Increase in forest area between 1975/85 and 1992/97



Source: Probability of an increase in forest area in Swiss mountain areas between 1979/85 and 1992/97 according to Arealstatistik: spatially disaggregated analysis (Baur et al. 2006, S. 18)



## Species-rich meadows and pastures in mountain areas and increases in forest area



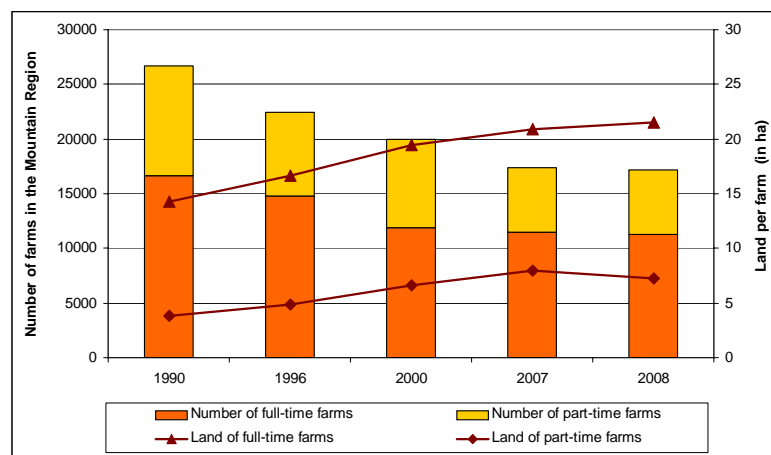
Source: Land use and biological diversity in the Alps (Stöcklin et al. 2007, S. 86) and increase in forest area between 1983/85 bis 1993/95 according to Swiss National Forest Inventory

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## Development of agricultural structures in mountain areas



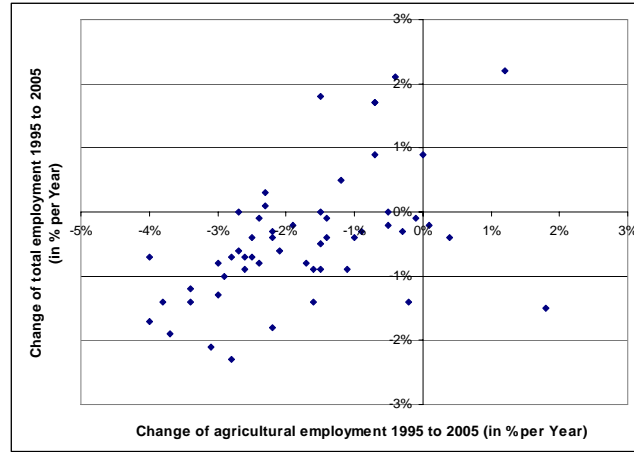
Source: Census of agricultural enterprises, Swiss Federal Office for Statistics

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## Development of agricultural and total employment in mountain areas



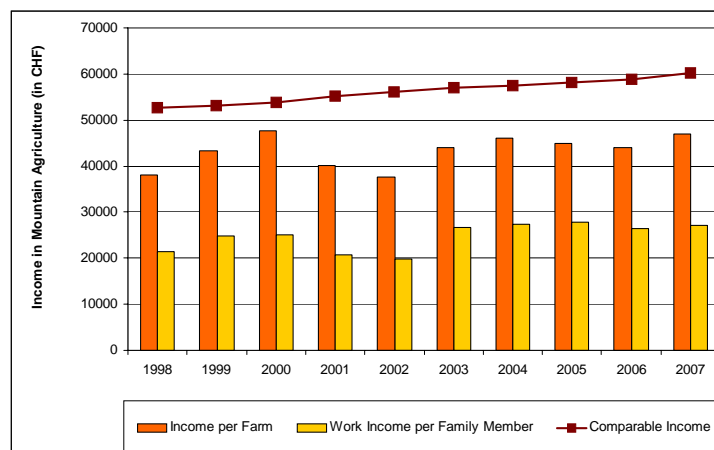
Source: Census of agricultural enterprises, Census of enterprises in the 2. and 3. sector  
Swiss Federal Office for Statistics

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## Income development in mountain agriculture



Source: Agroscope ART, reference enterprises of Central Analysis

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## Selected challenges and research questions for mountain agriculture

- Which production systems and farm management concepts enable a sustainable development of mountain agriculture? How can existing systems and concepts be optimized?
- Which are the impacts of different production and land use systems on the sustainability of mountain agriculture?
- How can we ensure the allocation of multifunctional services in the long run? How can we preserve an economically viable agriculture in mountain regions?
- How can the multifunctional services of mountain agriculture be compensated other than through direct payments? Which (economic) potentials do different production systems and products have?



## Guiding principle and goals of AgriMontana

**Guiding principle:** Mountain areas develop sustainably and thus fulfill economic, ecological and social claims of the local population and society at large.

- To identify, assess and optimize mountain agriculture's contribution to the creation of value added and to a sustainable development of rural areas  
→ „Best Practices“
- To develop bases for the design, evaluation, implementation and regulation of development strategies  
→ „Best Policies“
- To design development strategies for agriculture with its up- and downstream industries for typical mountain regions



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## Modules of AgriMontana

Challenges for mountain areas and mountain agriculture

Agricultural production systems  
- Economically and ecologically sustainable

Alternative activities  
as approach for mountain farms

Value chains  
- From production to marketing

Sustainable strategies for mountain farms

Regional land use strategies for mountain areas

Regional development strategies to ensure a sustainable development (incl. implementation in case study region(s))

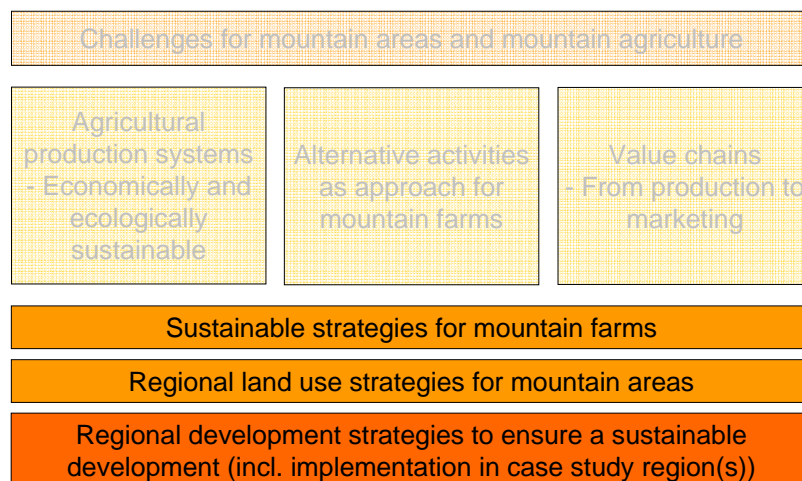


## Modules of AgriMontana

- Sustainable agricultural production systems
  - Potential for improving the economical and ecological sustainability of agricultural production systems
  - Influence of the structural change in agriculture and the adaptations in animal husbandry on land-use.
  - Influence of changes in agricultural production systems on multifunctional services performed by agriculture
- Alternative farm activities for mountain farms
  - Potential of activities in para-agricultural sectors such as agrotourism or social green care
  - Potential of special crops like berries or medicinal plants
- Value chains - from production to marketing



## Modules of AgriMontana





## Organization of AgriMontana

- AgriMontana is designed as an inter- and transdisciplinary research programme
  - AgriMontana is geared towards a common synthesis
  - Network enables the compilation of know-how and transfer of knowledge for the sustainable development of the mountain area.
- AgriMontana makes a contribution towards a coordinated regional and sectoral policy
- AgriMontana as research and communication network for research about mountain agriculture



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