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**FRAGILE ECOSYSTEMS AND SCARCE RESOURCES MEET  
GROWING FOOD DEMAND: IS “BUSINESS AS USUAL” LAND USE  
AN APPROPRIATE LONG-TERM SOLUTION  
FOR THE ALPINE COUNTRIES?**

**SUMMARY**

The Alpine region is exposed to two major challenges in terms of sustainable agriculture: 1) topographical conditions constrain the area, which can be used for agricultural production and 2) the Alps have suffered a dramatic loss of biodiversity in the last few decades. This loss is to great extent caused by a) intensified use of agricultural land in high-yielding areas (e. g. excessive nitrogen depositions) and b) abandonment of agricultural areas with low productivity. In the near future, these challenges are expected to amplify, as the Alpine region will have to contribute to a growing global food demand. In order to find anchor points which help to tackle these challenges a qualitative system analysis was conducted to identify and analyze the variables which influence agricultural land use in Austria, Liechtenstein and Switzerland. Results suggest that our Alpine land use system exerts an enormous pressure on the level of certain variables. If current trends of land use continue, level of the variables “ecological quality of agricultural areas” and “attractiveness of landscapes” will most likely decline. Contrarily, the level of “land use intensity on arable land and grassland” will increase further. This shows an imminent need to substantially change land use especially if we seek for long-term food security and conservation of natural resources.

**Key words:** land use, food production, ecosystem services, Alpine region, qualitative system analysis

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