

Insights from Transatlantic Comparative Studies on Land Use and Political Driving Forces: The Example of Massachusetts, USA - Switzerland

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A solid knowledge of driving forces of landscape change is crucial for a better understanding of current land use trends and dynamics related to society, economy, and environment.

Furthermore, the current land use is always the result of a history of site specific interactions of people and their environment. It is therefore vital to study the causes of land use changes and to interpret the results in their historical context.

We refer in our research to an analytical framework identifying five major types of driving forces, namely political, economic, cultural, technological, and natural driving forces (including driving forces that derive from the spatial configuration). This study focuses on the political driving forces and specifically on “land use planning”. Land use planning is the term used for a branch of public policy which seeks to order and regulate the use of land in an efficient way. In many parts of the world, land use planning is an important part of social policy, ensuring that land is used optimally for the benefit of the wider economy and population as well as to protect the environment. Land use planning therefore directly affects the amount and configuration of land uses through, for example, zoning, protection status, and laws. Since planning and policy are shaped by the national political system and cultural values, we expect that land use planning is a powerful factor for explaining transcontinental differences in past, current and future land use.

In order to investigate these transcontinental differences we chose the approach of a double comparative study (Bürgi and Russell 2001) with comparisons being conducted over time in two large regions on either side of the Atlantic (Massachusetts, USA and Switzerland) and between the regions for two points in time. The study focuses on private lands in agricultural, forestry, and urban uses and their associated land covers.

Preliminary results of this comparative land use change study show an increase in population and percent forested area in Massachusetts as well as Switzerland since the middle of the 19th century. However, landscape change has been much more dynamic in Massachusetts. Both study areas showed in the middle of the 19th century a landscape mosaic with woodland patches and villages scattered in a matrix of open land. This pattern still dominates Switzerland in the year 2000. In Massachusetts, however, we find patches of open land and patches of urban uses in a Matrix of forest. We expect that Swiss land use policies, and specifically their early focus on preserving agricultural land, significantly contributed to the development of these unlike patterns.

We are convinced that such transatlantic comparisons can generate innovative potential explanations for causes of land use change, initiate the development of innovative scenarios of future land use change, and stimulate new ideas about the design of land use planning policies.