Land-use change after the collapse of the Soviet Union, and its implications for bison, bear, and saiga antelope conservation

Research Questions

1) How do socio-economic shocks affect land use?
The collapse of the USSR, and subsequent shock therapy with open markets, subsidy cuts and privatization is one of the major shocks of the 20th century.

2) How do broad-scale/national drivers affect land use?
Countries in Eastern Europe transitioned very differently to new governance and economies.

3) What happens to biodiversity when land use subsides?
Large areas of farmland were abandoned, creating potentially new habitat for wildlife.

Study Area

Eastern Europe provides a perfect 'natural experiment'. Socialism collapsed, nations diverged, and land use intensity subsided. Rapid changes in an environmentally homogeneous region.

1. How do shocks affect land use?
Our numerous case studies throughout Eastern Europe show generally a decline in land use intensity, and widespread agricultural abandonment, but also increasing illegal logging and poaching.

2. How do broad-scale drivers affect LU?
Broad-scale drivers were very important for land use change after the collapse of socialism. Strong cross-border differences among countries, and provinces.

3. Effects on biodiversity?
Mixed effects on wildlife. Saiga habitat diminished and populations declined, European Bison have a major opportunity to expand their range, bears did expand their range already..

Conclusions

The socioeconomic shock of the collapse of socialism caused generally less intensive land use, but also illegal logging.

Stark cross-border differences. Broad-scale drivers, such as national policies, were major determinants of land use change.

Effects on biodiversity were mixed. More habitat, but some species still declined due to poaching.

Ph.D. Students Trained
2008, Tobias Kuemmerle, Humboldt University, and UW-Madison
2010, Alexander Prishchepov, UW-Madison
2010, Pedro Camilo Alcantara
2010, Maxim Dubinin

Team Members and Collaborators

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Volker Radeloff
Univ. of Wisconsin-Madison
E-mail: radeloff@wisc.edu
http://silvis.forest.wisc.edu