

200 YEARS OF LAND USE AND LAND COVER
CHANGES AND THEIR DRIVING FORCES IN
THE CARPATHIAN BASIN IN CENTRAL EUROPE

First year progress report

PI: Volker C. Radeloff

Progress report for the period from
5/1/2011 to 5/1/2012

University of Wisconsin-Madison
Department of Forest and Wildlife Ecology
1630 Linden Drive
Madison, WI 53706

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The project has made excellent progress in the first year, and is off to a very good start. Two Ph.D. graduate students have been hired on the project, we held a very successful project kick-off meeting, and all analyses are proceeding nicely.

The first PhD student is an agricultural economist named Sarah Walker. She was hired in September of 2011, at the beginning of the second year of her graduate studies. Her advisor is Jen Alix-Garcia, an economist with strong expertise in land use modeling and development studies, and we feel fortunate to have her be part of our team.

The second PhD student is a forestry student named Catalina Munteanu. She was hired in January of 2012, at the start of her PhD program. Her advisor is the PI of the project, V. Radeloff. Catalina grew up in the Romanian Carpathians, and conducted her earlier MS research on land use change in the border area of Romania and Ukraine. Her familiarity with the region, and her outstanding research background are a major asset for our team.

Sarah and Catalina conducted 10 days of field work together in the study area in early 2012, prior to the project kick-off meeting. The meeting itself was held in Sopron, Hungary, at the University of our Hungarian project partners. The meeting was a great success and included twenty participants from Hungary (5), Poland (4), Slovakia (3), Germany (3), Switzerland (1), and the United States (4). The first part of the meeting provided an opportunity for all participants to share their relevant prior research experience. The second part allowed us to agree upon a plan of action for the first year, and to form several subgroups to address specific tasks. Since the kick-off meeting, the team has discussed progress and made decision in monthly Skype conference calls.

The research is progressing very nicely along several major lines of inquiry:

- First, the remote sensing analyses have reached a stage where we have complete Landsat image composites the entire study area, for multiple dates, and can start now to classify land use change;
- Second, we established a database of 46 prior case studies on land use change in the study area, collected GIS data for all of them, and are now conducting a meta-analysis that will be presented at a conference in June;
- Third, we have collected about two-thirds of the socioeconomic data that we will need for our analysis of drivers of land use change, including substantial amounts that we entered from statistical yearbooks of the Hapsburg Empire; and
- Fourth, we collected, scanned, and rectified the historic topographic maps for most of the study area already, covering now a much larger area than initially hoped, and having this data much earlier in hand than expected. What is missing are only minor parts of the study area, and maps sheets for these areas have been requested from the archives in Vienna.

In summary, the project had a great first year. We found two excellent students, the team is working well together, and we are poised to continue our work as planned. No changes to the proposal plan are necessary.