

Chapter 3

Citizen Science for Assessing Landscape Change

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OBJECTIVES

Citizen science is increasingly recognized as a powerful tool for addressing ecological problems across large areas. Although not a new phenomenon, certain types of citizen science rely on advanced web-based technology not previously available. “Crowdsourcing” refers to a type of citizen science in which large data-collection tasks are allocated to volunteers using the Internet. Such tasks may require minimal time or effort on the part of the volunteer but—when combined with the efforts of many others—can produce enormous datasets that are extremely useful in research and monitoring. By encouraging public participation from people who may not be experts in a given scientific subject, crowdsourcing citizen science aims to gather and collate useful scientific information from a larger number of individuals than would otherwise be feasible. In this lab, you will participate in a crowdsourcing project and explore some of the basic components of citizen science as it can be applied to landscape ecology. This lab is designed to enable students to:

1. Learn about citizen science and its application in landscape ecology;
2. Explore the use of cloud-based forms and spreadsheets for tracking and summarizing results from hundreds of citizen scientists;
3. Become familiar with using Google Earth for scientific purposes; and
4. Gain experience interpreting existing land-cover classifications and aerial photography in order to contrast historic and current land use/land cover.

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Working independently, you will assess land-use/land-cover (LU/LC) change over the past 50 years in the Montérégie region of Quebec, Canada. In Part 1, you will familiarize yourself with the region by exploring aerial photos and land-cover classifications from previous decades using Google Earth. In Part 2, for a set of randomly selected points within the study area, you will compare land use and land cover at those points. As you work, your individual efforts will be pooled with the work of your classmates today and from earlier lab sessions at other institutions around the world. You'll need a web browser and the Google Earth software, along with an Internet connection, to complete the lab. Because the web interface associated with this lab will be continually updated and adapted over time, please continue with the lab online, starting here:

<http://goo.gl/FQdwXk>