LACO-Wiki: A land cover validation tool and a new, innovative teaching resource for remote sensing and the geosciences

Linda See (1), Christoph Perger (1), Christopher Dresel (1), Martin Hofer (2), Juergen Weichselbaum (2), Thomas Mondel (1), and Fritz Steffen (1)

(1) International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria (see@iiasa.ac.at), (2) GeoVille, Information Systems GmbH, Innsbruck, Austria (hofer@geoville.com)

The validation of land cover products is an important step in the workflow of generating a land cover map from remotely-sensed imagery. Many students of remote sensing will be given exercises on classifying a land cover map followed by the validation process. Many algorithms exist for classification, embedded within proprietary image processing software or increasingly as open source tools. However, there is little standardization for land cover validation, nor a set of open tools available for implementing this process. The LACO-Wiki tool was developed as a way of filling this gap, bringing together standardized land cover validation methods and workflows into a single portal. This includes the storage and management of land cover maps and validation data; step-by-step instructions to guide users through the validation process; sound sampling designs; an easy-to-use environment for validation sample interpretation; and the generation of accuracy reports based on the validation process. The tool was developed for a range of users including producers of land cover maps, researchers, teachers and students. The use of such a tool could be embedded within the curriculum of remote sensing courses at a university level but is simple enough for use by students aged 13-18. A beta version of the tool is available for testing at: http://www.laco-wiki.net.