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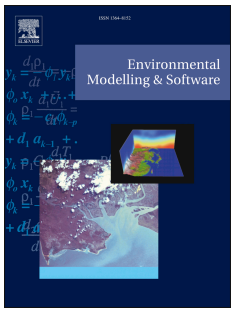

How good is my map? A tool for semi-automated thematic mapping and spatially explicit confidence assessment

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How good is my map? A tool for semi-automated thematic mapping and spatially explicit confidence assessment

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Highlights

- A tool for thematic mapping adopting recommended practices to assess accuracy is presented
- Key to this method is the generation of spatially explicit confidence maps
- Two case studies are presented to display the benefit of this approach
- Understanding the sources of error was improved through confidence maps

Abstract

Thematic maps are important for a range of disciplines including spatial planning and ecosystem status assessments. Despite an increasing focus on accuracy assessment methods to ensure maps are fit for purpose, the adoption of these recommendations has not been widespread. We present a methodology which utilises bootstrap aggregation and adheres to recommended practices for accuracy assessments. Furthermore, additional information is extracted from the model outputs to produce spatial maps of confidence also supporting map interpretation.

The methodology has been applied to two study sites using both pixel-based and object-based units of analyses. Accuracy assessments for both study sites identified the classes that were responsible for most of the map error. In addition, spatially explicit confidence maps supported our understanding of the sources of error. This paper provides a useful methodology to improve accuracy assessment and reporting and is well suited to studies where groundtruth data are limited.

Key words: Accuracy, bagging, confidence, image object, pixel, remote sensing.