

Did You Miss Anything in Your Map? Introducing MapCheck: A Checklist-Based Evaluation Tool

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Abstract:

The rapid development of cartography and online mapping applications has led to an unprecedented increase in the availability and diversity of maps. While numerous design principles, technological standards, and best practices have been formulated in the literature over the past decades, their practical application remains inconsistent. Map creators – from professional cartographers to university students – often lack a structured and accessible tool for the systematic evaluation of their map outputs.

This presentation introduces MapCheck – a checklist-based evaluation tool designed to support the systematic assessment of maps. While the long-term goal is to develop a universal and flexible platform applicable to any type of map, the beta version presented at EuroCarto for the first time focuses on web maps. The tool is based on a synthesis of established principles of (web) cartography, including cartographic rules and standards, conventions, best practices, and recommendations. It aims to provide comprehensive feedback covering not only cartographic aspects, but also technological, user-oriented, graphical, and web design principles.

MapCheck is an online tool built on a checklist-driven approach that translates complex cartographic principles into a structured and user-friendly set of evaluation criteria. These criteria are organized into thematic categories (aspects) that enable a systematic evaluation of designed maps. The tool provides guided feedback, with each criterion classified as mandatory, recommended, or optional. Users can assess a selected map through an interactive checklist interface, resulting in both qualitative feedback and a quantitative evaluation score. A final report – inspired by Lighthouse, webdesign evaluation tool number one – is automatically generated, summarizing the results and highlighting strengths, weaknesses, and potential areas for improvement.

The platform is designed as open and adaptable, allowing users to modify existing criteria, define new ones, and customize the evaluation structure to specific domains or individual requirements. The development process involved compiling an initial set of criteria based on a literature review and analysis of existing cartographic guidelines, followed by the implementation of a web-based prototype. The beta version is based on a set of evaluation criteria derived from cartographic principles and design rules as taught at the Department of Geoinformatics, Palacký University Olomouc, Czechia.

MapCheck will contribute to the broader effort to standardize map evaluation while maintaining adaptability on specific “cartographic schools”. By bridging theoretical knowledge and practical application, the tool offers a scalable solution for supporting quality assessment in cartography. In educational contexts, it can serve as a didactic instrument for teaching and checking of map design principles. And finally, it will increase the minimum level of quality assurance of map outputs.

So, did you miss anything in your map? Let’s check it with MapCheck.