Quality Assurance for Spatial Research Data

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***Abstract*—For spatial data sources in Earth System Science (ESS), the authors (M. Wagner and C. Henzen) propose a revised maturity matrix including FAIR (Findable, Accessible, Interoperable and Reusable) criteria and a spatial data quality matrix where maturity levels are related to quality metrics. Both metrics are then mapped to phases within the research data lifecycle to produce a QA workflow, which the authors have implemented in the interactive questionnaire tool RDMO (Research Data Management Organiser).**

***Index Terms*—quality assurance; data maturity; maturity matrix; spatial data quality; FAIR**

I. Introduction

The authors of [1] recognised the level of quality of spatial data as an indication of the relevance of the extracted results of scientific work in the field. They suggest that there is a vacuum for tools to assess the quality of spatial data sources. In addition, despite the high quality of scientific data creation and manipulation workflows, the authors identified the monitoring and reporting of adequate information as a challenge in research data management (RDM). This leads to information being output only at the end or after the end of the data lifecycle.

Both identified challenges are addressed in [1]. A framework for quantifying the quality of data sources is proposed, where sources can be rated from 1 to 5 stars. A QA workflow that includes monitoring and reporting during the data lifecycle is also presented.

II. Propositions

A. Assertion Framework

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B. Quality Assurance Workflow

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III. Proof Of Concept

Complete all content and organizational editing before formatting. Please note sections II-A-**??** below for more information on proofreading, spelling and grammar.

Identify applicable funding agency here. If none, delete this.

References

[1] M. Wagner and C. Henzen, "Quality assurance for spatial research data," *ISPRS International Journal of Geo-Information*, vol. 11, no. 6, p. 334, 2022.

[2] S. SCImago (n.d.), "Isprs international journal of geo-information," 2023. [Online]. Available: https://www.scimagojr.com/journalsearch.php?q=21100427639&tip=sid&clean=0

Appendix

[3] Infographic of the proposed Assertion Framework and the QA Workflow