

Cross check of Data Quality Chapters of S-1xx Product Specifications

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Geospatial data may vary in quality in accuracy, precision, completeness, and consistency in space, time, and theme. Geospatial data quality allows producers to evaluate and report how well a dataset meets the criteria set forth in the product specification and users to assess fitness for use for a particular application. Working with data quality includes understanding the data quality concepts, defining data quality conformance levels in data product specifications based on product requirements, specifying quality aspects in application schemas, evaluating, and reporting. The IHO Data Quality Working Group (DQWG) provides guidance on data quality aspects to hydrographic offices to ensure harmonized implementation. In 2021 DQWG Meeting, a sub-WG was formed and tasked to perform a cross-check of the existing S-1xx Product Specifications and their respective data-quality chapters to the data quality aspects described in IHO S-97 (*IHO Guidelines for Creating S-100 Product Specifications*). In this work we present the results of the comparison that identified various discrepancies between the S-1xx Product Specifications and IHO S-97, as well as inconsistencies among them. Accordingly, we discuss the development of a template that aims to ensure harmonization across product specifications, and a cross-check of data quality evaluation methods.

Recommendations	S-101	S-102	S-111	S-121	S-122	S-123	S-127	S-129
1.Completeness	N	Y	Y	Y	N	N	Y	N
2.Conceptual consistency	N	Y	N	N	N	N	Y	N
3. Domain consistency	N	Y	N	Y	N	N	Y	N
4. Format consistency	N	Y	N	Y	N	N	Y	N
5. Topological consistency	N	N/A	N/A	Y	N	N	Y	N
6. Positional Accuracy	N	Y	Y	Y	N	N	Y	N
7. Thematic Accuracy	N	Y	Y	Y	N	N	Y	N
8. Temporal Quality	N	Y	N	Y	N	N	Y	N
9. Aggregation	N	N	Y	N	N	N	Y	N
10. Introduction to DQ	Y	N	N	Y	N	N	Y	N

Table: Preliminary results of the cross-check of DQ elements