

# Analysis of Spatial Data

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## SUMMARY

GIS has been widely used in various fields, such as agriculture, disaster management, land administration, public health, marine, etc. GIS is a multidiscipline. In GIS data has been manipulated for spatial analysis. Nowadays, GIS in era data are shareable but there is no assurance about quality. This research propose to obtain dimension and metrics spatial data quality and implementation in GIS.

Quality is about fitness for use or meet specification. Quality dimension consist of positional accuracy i.e. absolute accuracy, relative accuracy, and grided accuracy; completeness i.e. format completeness, object entity completeness, attribute completeness; logical consistency i.e. format consistency, conceptual consistency, topological consistency, domain consistency; thematic accuracy i.e. correctness classification, quantitative attribute accuracy, non quantitative attribute accuracy; time related dimension i.e. currency, volatility, and timeliness. Spatial data quality is need to assesst in GIS environment. This paper contribute in assesment spatial data quality in a system environment. The method of assessment has been implemented in GIS i.e SEOM (Sustainable Energy One Map) and KM-0 Pro Poor (Poorness Control Information System).

In SEOM case study, there are 2 categories of data, visual data and analysis data. Position accuracy is not urgent to be considered in visual data but analysis data. In result, position accuracy is fit for use. Although there is topological inconsistency in protected forest and moratorium forest like sliver, it doesn't matter with the quality because sliver area is very small compared to SEOM coverage area.

In KM-Pro Poor case study, position accuracy is fit for use. In topo-semantic consistency assessment, there are 50 points that outside the administration boundary with 0.95 degree of

topo-semantic consistency.

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