Datacubes as Enabling Platform for Advanced Decision Support Systems in Land Management

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Abstract

Informed, wise land management is a challenge since long, but has gained extra importance through the need for responding to the climate change effects. The European Green Deal is one example of a concertation effort in a world where data availability, sharing options, and just-in-time exploitation are not entirely solved. The LandSupport service responds to this challenge through a combination of a Spatial Decision Support System on top of a datacube management and analytics engine. In this paper we specifically focus on this datacube engine and how it can contribute to a better decision making through an ordered multi-dimensional data management paired with strictly standards-compliant interfaces. Further, the approach described shows a remedy against the current fragmentation of services: through a location-transparent federation a single common pool of information is established, including distributed fusion allowing an unlimited mix-and-match of data regardless of their location.

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