UN-GGIM Paper - Authoritative Data in an Evolving Geospatial Landscape: An Exploration of Policy and Legal Challenges

Working Group on Policy and Legal Frameworks for Geospatial Information Management

United Nations Committee of Experts on Global Geospatial Information Management

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Agenda

- *Introduction*

- *Part 1:* An Overview of "Authoritative" Data

- *Part 2:* Domain Applications of Authoritative Data

- *Part 3:* Governing Authoritative Data- Discussion & Analysis

- *Part 4:* The Path Forward – Policy and Legal Considerations

- *Conclusions*

Introduction

- This paper on authoritative data, authority and custodianship explores the different ways in which authoritativeness is understood and used in different domains.

- Traditionally, many jurisdictions have recognized national mapping, cadastral and land registration authorities as official sources of legal and administrative geospatial information.

- Over the years, the concept of authoritativeness has been adopted in many other geospatial domains and contexts and has been interpreted differently by different expert groups.

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Introduction (2)

- Today, there are a growing number of producers and providers of geospatial data, products and services from the public, private, and civil society sectors entering the market to serve different purposes and to address a variety of needs.

- Across domains and/or national contexts, "authoritativeness" and "authoritative data" may be defined differently or carry different connotations.

- This paper responds to an identified need for a clearer understanding of what is meant by 'authoritative'.

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A Note about Authoritative Data Governance Across National and Domain Contexts

- In some domains and/or national contexts, authoritative data governance is tightly regulated, with definitions of authoritativeness and authority enshrined in legislation.

  - Policies, procedures and mandates may be established in laws conferring legal status to authoritative systems and products.

- There are other domains and/or national contexts with less formalized understandings of authoritative data that may involve less traditional (i.e., non-public) actors and regulatory instruments.

  - In these cases, authoritative data is not always associated with a public authority or an authority with a legally binding mandate to provide and sustain it.

- The range of interpretations of authoritativeness uncovered in the results of this paper's literature review and during the global consultation process suggest that domains should continue to define the concept in accordance with accepted traditions and expert-informed understandings.

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Part 1: An Overview of "Authoritative" Data

▪ *Part 1* provides an overview of how various organizations understand and apply the 'authoritative' data designation, drawing from the results of a cross-domain literature review.

▪ The section identifies areas of shared understanding and divergence, governance considerations for data designated as authoritative, and explores how authoritative data is understood across geospatial domains and national contexts.

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Part 2: Domain Applications of Authoritative Data

- *Part 2 includes the following domain perspectives on authoritative data applications:*

  - Geodesy

  - Geographical names

  - Marine

  - Land administration

- Each subsection is authored by domain experts and discusses the authoritative data designation practices and use within each discipline.

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Part 3: Governing Authoritative Data- Discussion & Analysis

Part 3 offers discussion and analysis of the literature review summarized in Part 1, including the following key insights:

▪ It is difficult to establish a universal definition of authoritativeness as understandings and definitions differ across domains/fields, countries and producers/providers (public, private, civil society, academic).

▪ Domains with well established geospatial information management systems are able to offer clearer guidance about the meaning and application of authoritativeness.

  ▪ In these domains, definitions of authoritativeness are entrenched in law, and notions of authority and/or custodianship of data are tightly regulated.

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Part 3: Governing Authoritative Data- Discussion & Analysis (2)
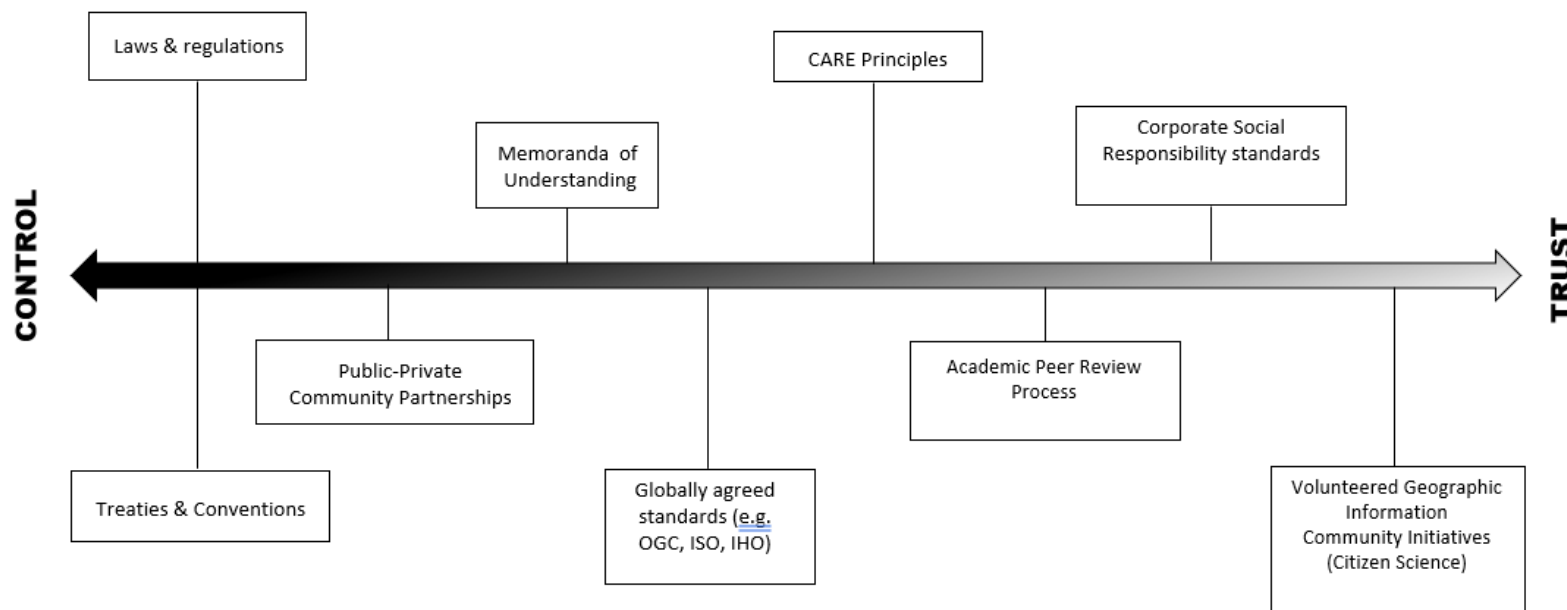
- The paper suggests a "fit for purpose" frame for domains seeking guidance.

  - **In order for any data asset, process or organization to be considered as *authoritative*, it must be fit for its intended, predefined purpose(s).**

- Domains in national contexts that adhere to precise, legally entrenched definitions of authoritative data and authoritativeness may find that the fit for purpose framing adds little value to their shared understanding or fails to align with their use of the designation.

  - In these cases, domains may find they have no need to adopt the fit for purpose frame.

- Domains or national contexts with less well-defined understandings of authoritative data may find the fit for purpose criterion sheds light on potential ambiguities and may choose to use it as a springboard for developing a national authoritative data governance model.

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Part 4: The Path Forward – Policy and Legal Considerations

The Continuum of "Control vs. Trust"

Oversight of authoritative geospatial data exists along a continuum, with instruments positioned between endpoints of "control" and "trust". The figure below illustrates this pattern, including selected examples of governance instruments that provide oversight of authoritative data across a variety of domains.

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Part 4: The Path Forward – Policy and Legal Considerations (2)

- *Part 4* presents a path forward for domains and national contexts seeking guidance in their governance of authoritative data production, use, and distribution.

- For decision makers seeking guidance, it outlines considerations for developing a robust authoritative governance framework that can be used to strengthen existing approaches or to design an innovative authoritative data governance system.

  - Domains should continue to define the concept in accordance with accepted traditions and expert-informed understandings.

Conclusions

- This paper exploring authoritative data, authoritativeness and custodianship aimed to shine a light on the diverse understandings of these topics held across domains and national contexts.

- Parts 1 and 2 of the paper provided an overview and some examples of common understandings, uses and domain applications of authoritative data. While the use of the authoritative data designation has become ubiquitous among geospatial practitioners, definitions often differ across domains and between sectors.

- The governance of authoritative data and practices for codifying the authoritative data designation are influenced by the legal systems, traditions and customs of nation states who employ them.

  - The paper does not attempt to advance a universal definition of authoritative data. Instead, Part 3 proposes a "fit for purpose" frame for decision makers seeking guidance in their use of the authoritative data designation, which is supported by suggested guidelines for effective authoritative data governance presented in Part 4.

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