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English

**United Nations Group of Experts on
Geographical Names**

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Item 14 of the provisional agenda *

Geographical names data management

**Linked open data developments within the United
Nations Group of Experts on Geographical Names**

Submitted by Australia**

Summary:

The Working Group on Geographical Names Data Management and the Working Group on Publicity and Funding jointly organized a webinar on the theme “Linked open data developments: – What’s in it for the United Nations Group of Experts on Geographical Names and its Experts?” on 30 September 2022. It was the second in the webinar series of the Group of Experts focusing on topics relevant to implementation of United Nations Group of Experts on Geographical Names strategic plan and programme of work 2021–2029 and provided an overview on the challenges and advantages of linked open data and some implementation examples.

The Group of Experts views linked open data as another stage in the evolution of data management methodologies that it needs to consider in order to facilitate the widespread use of standardized geographical names.

The webinar was attended by a global audience of over 100 persons, primarily from national names authorities, national mapping agencies and universities.

In addition to providing an introduction to linked open data from a historical perspective, the webinar provided an overview of fundamental requirements, challenges and advantages. It also featured examples of linked open data implementation at the national level, demonstrating the benefits, methodology, architecture and software of such implementation, as well as the challenges experienced and solutions adopted.

The Group of Experts is encouraged to identify and connect experts in linked open data with geographical names experts nationally and regionally. Specific

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** The full report was prepared by Susan Birtles (Australia) and Pier-Giorgio Zaccheddu (Germany) on behalf of the Working Group on Geographical Names Data Management.

technical expertise in linked open data is not a common skillset within national names authorities, yet geographical names data are so often fundamental to building useful linked data ecosystems. Equally, the nuanced nature of geographical names and the various ways in which names data are structured may be challenging to linked open data practitioners wishing to use linked open data. National names authorities, geospatial data management authorities, linked open data practitioners and research institutions must work together on the technical and semantic cross-domain challenges. Therefore, national names authorities are encouraged to connect with relevant national and regional colleagues to further discussions and developments related to linked open data at the local level.

Documentation and a recording of the webinar are available at <https://unstats.un.org/unsd/ungegn/>.

Linked open data developments within the United Nations Group of Experts on Geographical Names

Background

Standardized geographical names which are easily findable and accessible for national and international use has been a constant goal in UNGEGN's vision over many years, and the ways in which names can be made accessible continually evolves. The potential for standardising geographical names utilizing the internet was first recognised in resolution VII/9 of the Seventh Conference in 1998, along with a recommendation that data on toponymic websites be provided free of charge in the interests of international standardization. That positive trend continues and is also fully compliant with, and recognizes, Res VIII/6 of the Eighth Conference 2002, which recommends integrating geographical names better into national, regional and international spatial data infrastructures (SDIs). Those recommendations have been widely adopted; integration of geographical names into other data structures, and accessing data across the internet has been imperative to the dissemination of geographical names data and information for some time.

Linked data is a set of design principles for sharing machine-readable, interlinked data on the Internet, and open data is a concept whereby data can be freely used, reused and redistributed with no or minimal restrictions. Together, linked open data approaches to geographical names data management are of interest to UNGEGN because of their potential to further the Group's aims by making gazetteers and related information findable, accessible, interoperable, and reusable.

Developments within UNGEGN

At the first session in 2019 some member states reported early developments with Linked Open Data (LOD), and a side event workshop on [Linked data developments and provision](#) was held as an introduction and initial exploration of the most relevant challenges and opportunities. Three representatives from United Nations administration units shared knowledge and examples with member state representatives, followed by an open discussion amongst attendees. This led to general agreement that there was more to understand about geographical names data and linked data, and that this work should be led by the Working Group on Geographical Names Data Management¹ (the Working Group). The Group of Experts decided (1/2019/13) that the Working Group would, as part of its mandate, consider methods such as Linked Data for the provision of geographical names data.

¹ at that time known as Working Group on Toponymic Data Files and Gazetteers.

At the second session in 2021 Working Group members collaborated on a paper [Linked data considerations for geographical names standardisation](#). It contained explanations introducing the concept of linked open data, and accounts of some national and regional developments. The group of experts in Decision 2/2021/13,

- noted that Linked Data is another stage in the evolution of data management methodologies that the Group of Experts and Member States need to consider to facilitate widespread use of standardized geographical names, and
- requested the Working Group facilitate collaborations and workshops on Linked Data between national names authorities and Linked Data practitioners in order to provide practical guidance on organizational and technical issues and processes, to continue to share information and case studies, to demonstrate the combined benefits of standardized geographical names management and Linked Data development, and to enable intercommunication of Linked Data, amongst others, providing an overview of ontologies;

On 30 September 2022 the Working Group, in partnership with the Working Group on Publicity and Funding, organized a webinar on the theme “[Linked open data developments: – What’s in it for the UNGEGN and its Experts?](#)” Through presenters from different countries, the webinar introduced linked open data from a historical perspective, gave an overview of fundamental requirements, challenges and advantages, presented examples of national level implementations demonstrating the benefits, methodology, architecture and software of such implementations, as well as the challenges experienced and solutions adopted. It was attended by a live audience of over 100 attendees from national names authorities, national mapping agencies and universities, with others watching the recording afterwards. A report on the webinar was also included in [UNGEEN Bulletin No 64 Making Geographical Names Data Accessible](#), published November 2022.

Next steps

The Group of Experts has acknowledged that linked open data as another stage in the evolution of data management methodologies that needs to be considered in order to facilitate the widespread use of standardized geographical names. It has been noted that technical expertise in linked open data is not a common skillset within national names authorities, and the nuanced nature of geographical names and related data may present challenges to linked open data practitioners wishing to reuse geographical names data. Therefore, national names authorities, geospatial data management authorities, linked open data practitioners and research institutions must work together on the technical and semantic cross-domain challenges to further discussions and developments related to linked open data at the local level.

Having coordinated a side event, collaborative educational paper, and webinar to address the 2021 decision, and in line with the theme of this third session "Strengthening relationships, links and connections in geographical names standardization and for sustainable development and pandemic recovery" the Working Group's desire now is to see experts facilitating connections between national names authorities and LOD practitioners at national and regional levels, and to have member states and divisions continue submitting papers that discuss and demonstrate benefits and solutions of considering LOD in relation to geographical names data management.

Points for discussion

The Group of Experts is invited to:

- (a) take note of the efforts made by the Working Group on Geographical Names Data geographical names data management.
- (b) recommit to resolution VII/9(4) that access to data included on toponymic web sites be provided free of charge in the interests of international standardisation.

- (c) Adopt a decision that national names authorities consider linked open data in their approaches to geographical names standardisation.