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# United Nations Group of Experts on Geographical Names

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Technical expertise: Geographical names data management

## Concept of globally unique identifier for cities

Submitted by Germany

Summary \*\*

The Working Group on Geographical Names Data Management of the United Nations Group of Experts on Geographical Names has drafted a position paper on the concept of a globally unique identifier for cities.

In the position paper, it is noted that, although there are several unique identifier systems for countries (including the Standard Country or Area Codes for Statistical Use and International Organization for Standardization (ISO) 3166 standards), there is presently no agreed unique identifier system for cities. Thus, by examining good practices in data management, the principles of linked data, and other relevant concepts through the lens of geographical names, factors related to developing a unique identifier for cities are discussed and proposals are made for the establishment of such an identifier, under the oversight and operationalization of the Statistics Division.

Guided by recommendation 2 and decision 3/2023/17 of the 2023 session of the Group of Experts, the Working Group has exchanged views on a globally unique identifier for cities with the Expert Group on the Integration of Statistical and Geospatial Information, as the group mandated for the overall coordination of the integration of statistical and geospatial information reporting to both the Statistical Commission and the Committee of Experts on Global Geospatial Information Management. Following deliberations with the Working Group, the Expert Group welcomed the paper and approved the proposal to pilot the development of a unique identifier based on the Uniform Resource Identifier or the Universally Unique Identifier approach, in alignment with the mandates from the Statistical Commission and the Committee of Experts.

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<sup>\*</sup> GEGN.2/2025/1.

<sup>\*\*</sup> Prepared by Pier-Giorgio Zaccheddu, Germany on the behalf of the Working Group on Geographical Names Data Management.

The concept of a globally unique identifier for cities was shared with the Committee of Experts on Global Geospatial Information Management at its fourteenth session, in August 2024, and received positive feedback. The Expert Group intends to share the concept and report on the progress of this collaboration to the Statistical Commission at its fifty-seventh session, in 2026. In that respect, the development of a unique identifier for cities will further support the harmonisation of diverse datasets across geographies, supporting national and international comparability of geospatially integrated statistics, including those relevant to the Sustainable Development Goals and their indicators.

The report provides an outline of how the development of a globally unique identifier for cities will strengthen localization efforts of the Sustainable Development Goals, which will enhance the ability of producers of geospatially integrated statistical data to disaggregate statistics by geography and, in turn, support policymakers in, inter alia, targeting interventions more effectively, addressing inequities and monitoring progress at a more granular and local level

The Group of Experts is invited to adopt the concept of the unique identifiers for cities and to support the request for the Statistics Division to pilot the development of a unique identifier within the World Geographical Names Database. The database will provide a reliable and extendable technical platform through which authoritative toponymic data can be managed and integrated across the United Nations.

## Concept of a globally unique identifier for cities

#### 1. Background information

Guided by UNGEGN Recommendation 2 and Decision 3/2023/17, the Working Group Geographical Names Data Management, developed the draft position paper for a global unique identifier for cities entitled "The development of a globally unique identifier for Cities". This paper is provided to the Group of Experts as a background paper to this present report. By exploring best practices in data management, principles of Linked Data, and other relevant concepts through the perspective of geographical names, the position paper addresses the factors involved in developing a unique identifier for cities. It proposes the creation of such an identifier under the supervision and implementation of the United Nations Statistics Division.

As a means of seeking broad consultation with the statistical and geospatial communities as a key user and stakeholder, the Working Group Geographical Names Data Management has liaised with the United Nations Expert Group on the Integration of Statistical and Geospatial Information to review the position paper.

As part of supporting broader consultation, the Expert Group shared the unique identifier concept with the Committee of Experts on Global Geospatial Information Management (UN-GGIM) at its fourteenth session in August 2024 as a background document to the report of the Expert Group.

Further, the Expert Group at its eighth meeting in Nairobi, Kenya in September 2024, welcomed the position paper and the suggestion of the UNGEGN Working Group on Geographical Names Data Management, for the United Nations Statistics Division to pilot a unique identifier in alignment with Recommendation 2 and Decision 3/2023/17 of the 2023 UNGEGN session. Moreover, the Expert Group has shared this concept and reported on its progress on this collaborative exercise to the Statistical Commission at its 56th session within the (virtual) side event "Solving Data Disaggregation for SDG Localisation and Beyond", in February 2025.

In light of this broad consultation beyond and within UNGEGN, the concept paper is now provided to Group of Experts as a background document for adoption. Moreover, as part of the concept's implementation, the Working Group suggests that UNGEGN requests the United Nations Statistics Division to pilot a unique

identifier within the redevelopment of the UNGEGN World Geographical Names Database (WGND) thereby supporting a reliable and extendable technical platform that can be integrated with other authoritative UN sources (like UN TERM or UN DATA).

#### 2. Introduction

The UNGEGN World Geographical Names Database (WGND) is one important source for authoritative, comparable, and high-quality geographical names on a global level. It provides consistent geographical name data across six languages and scripts.

The primary objective of the WGND is to serve as a mechanism for managing geographical name data for cities and countries with the aim of providing UNGEGN experts, governments, and the public, access to an authoritative global repository of standardised geographical names of countries, capitals and cities (with populations over 100,000). Data from Member States' National Names Authorities and from the United Nations' (e.g. UN DATA, Demographic Yearbook) are to be integrated. (See: <a href="https://ungegn.un.org">https://ungegn.un.org</a> for the WGND). Potential benefits of a globally sustainable and consistent UUID for cities are:

- Facilitates better integration of data on cities of all sizes, functions and types across geographies, countries and languages;
- Supports better management of geographical names across languages and linguistic scripts;
- Enables more consistent, integration, and interoperability of locally produced city indicators, in turn strengthening national monitoring (through data aggregation) and reporting (through disaggregation of statistics by geography);
- Supports the production of city-level and localized SDG indicators (and other indicators aligned with the 2030 Agenda for Sustainable Development and national priorities);
- Facilitates globally consistent systematic disaggregation of information at the city level along key SDGs indicators and other indicators of national priority;
- Enhances the regional and territorial perspective on the monitoring and reporting of the SDGs.

The UNGEGN Working Group on Geographical Names Management proposes that the Group of Experts adopts the concept of unique identifier for cities; considering that at the national level, various statistical classifications, such as M49 or ISO3, facilitate data integration and interoperability. At the sub-national level, there are several globally recognized geographical frameworks, including Second Administrative Level Boundaries (SALB, see <a href="https://salb.un.org/en">https://salb.un.org/en</a>), Degree of Urbanisation (DEGURBA, see <a href="https://unhabitat.org/applying-the-degree-of-urbanisation-a-methodological-manual-to-define-cities-towns-and-rural-areas">https://unhabitat.org/applying-the-degree-of-urbanisation-a-methodological-manual-to-define-cities-towns-and-rural-areas</a>), and statistical grids for disseminating statistical data (see Figure 1 as an example).

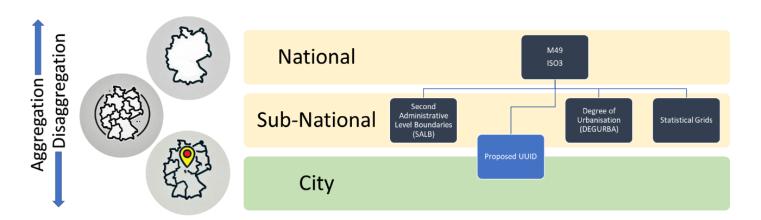


Figure 1 Levels of Geographical Data

Within the monitoring and reporting frameworks for global agendas such as the 2030 Agenda for Sustainable Development and its 17 SDGs and the New Urban Agenda, these frameworks are deeply entrenched in the need for data, with at least seven indicators under SDG 11 "Sustainable Cities and Communities" requiring some form of geospatial data collection and analysis at local/urban level. Despite this, there is no globally sustainable and consistent identifier for cities.

Thus, to support sustainable and consistent data integration and interoperability across a variety of use cases, including SDG localization and fostering better aggregation and disaggregation of data (not just SDG indicators) the UNGEGN Working Group on Geographical Names Management has developed a unique identifier for the 'city', aligned with prevailing definitions (from UN-Habitat and country provided data).

#### 3. Position Paper (Concept) on the development of a global unique identifier for cities

The position paper "The development of a globally unique identifier for Cities" outlines concepts for the creation of a unique identifier for cities and identifies Uniform Resource Identifiers (URIs) and/or Universal Unique Identifiers (UUIDs) as suitable mechanisms for their creation. The considerations for "Universal and Unique Identifier management" have been:

- Using Uniform Resource Identifiers "URIs" as global resource identifiers
- Using Universal Unique Identifiers "UUIDs"
- Assumptions for the globally unique identifiers (either URIs or UUIDs) of the WGND

The position paper recognizes the following uses of unique identifiers:

- Identifiers (or 'geocodes') serve as a fundamental infrastructure component, facilitating the linkage of data across various domains and communities for collaborative, cross-disciplinary work.
- Identifiers must adhere to several key principles: They should be unique, ensuring that no two objects share the same identifier and that each object possesses only one identifier. They also need to be universal, meaning every object should have an identifier.
- Universal Unique Identifiers (UUID) should be immutable, retaining their original value throughout the object's lifecycle. These UUIDs are crucial to the database management. Once issued, an identifier should never be re-assigned to another object, even if the original object is decommissioned.

In its contributions to the Economic and Social Council (ECOSOC), UNGEGN has repeatedly welcomed the collaboration with the Statistical Commission and UN-GGIM (as ECOSOC subsidiary bodies) as a means of avoiding and reducing duplication by promoting better coordination and coherence. To support this aim, the position paper was circulated to the United Nations Expert Group on the Integration of Statistical and Geospatial Information, (a technical body established by the Statistical Commission by decision 44/101) and endorsed by the Committee of Expert's decision 3/107.

UNGEGN's Working Group on Geographical Names Data Management is presently working with the UN Statistics Division to start a pilot implementation of UUIDs for the WGND, in support of UNDATA, the One UN Geospatial Situation Room, and other global initiatives.

#### 4. Prospective Timeline and Milestones

In seeking the adoption of the concept of unique identifiers for cities, the Working Group is proposing the following timeline to support its implementation and operationalization::

#### UNGEGN - 2025/ Session in May 2025

- Side event to raise awareness and promote the UUID
- Promote the concept paper. Seek adoption
- Request the UNSD to maintain City UUIDs

### **UN-GGIM - Fifteenth Session in August 2025**

 As a background document to UNGEGN's report, promote the concept paper and seek endorsement of UN-GGIM

#### Statistical Commission - 57th Session in March 2026

- Collaboration with relevant bodies, including DEGURBA, UN-Habitat and other relevant parties
- Promote the concept paper. Seek endorsement

### **UNSD - Ongoing**

- Establish collaboration agreement with UN-Habitat to enhance and synchronize cities at the global scale
- Liaise with UNTERM and Library to integrate Linked Open Data (LOD) of the WGN Database into the UN Data Ecosystem (and UNDATA)
- Liaise with the One UN Geospatial Situation Room to incorporate the API as a data stream (and fulfil the need of the Global Fundamental Geospatial Data Theme "Geographical Names" in the United Nations

#### 5. Conclusion

In conclusion, the Group of Experts is invited to adopt the concept of the unique identifiers for cities and to request the support of the United Nations Statistics Division to pilot the development of the unique identifier within the World Geographical Names Database.

#### 6. Points for discussion

The Group of Experts is invited to:

- a. Provide its views on the progress of the Working Group on the concept of unique identifiers for cities; and provide its views on the prospective timeline and milestones
- b. Adopt the concept and implementation of the concept as stated in the paper "The development of a globally unique identifier for Cities";
- c. Acknowledge the support provided by the Expert Group on the Integration of Statistics and Geospatial Information
- d. Request the Expert Group on the Integration of Statistics and Geospatial Information to table the concept of the global unique identifier for cities at the Statistical Commission in 2026;
- e. Request the United Nations Statistics Division to implement the UUID within the WGND as a consistent and reliable unique identifier for cities.