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English

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

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Item 5 (b) of the provisional agenda *

Technical expertise: Geographical names data management

**Report of the Working Group on Geographical Names Data
Management for 2023-2024**

Submitted by the Working Group on Geographical Names Data Management

Summary **

The Working Group on Geographical Names Data Management, in response to United Nations data needs, addresses issues relating to the processing of geographical names data, including the creation, maintenance and dissemination of geographical names data files and gazetteers, as well as aspects of geographical names data exchange formats and standards. The Working Group is guided by the Group of Experts strategic plan and programme of work 2021-2029.

Experts of the Working Group have collaborated to prepare the present report, which covers the activities conducted in 2023 and 2024.

The report provides an overview of the tasks being performed to implement strategy 1 (technical expertise) and is focused on the first findings, the challenges faced and the obstacles encountered. It includes: (a) the delivery of technical expertise and advice to national authorities regarding geographical names standardization (including romanization); (b) the activities carried out to promote efficient and effective geographical names data and gazetteer management; and (c) interoperability requirements within each of the key elements (e.g., data, applications/services, infrastructure, security, standards and performance).

Technical developments, the sharing of good data management practices, the identification of trends in developments and future direction for geographical names data management are also addressed.

The report concludes with an outlook and proposals for forthcoming activities in the period from 2025 to 2027.

* GEGN.2/2025/1.

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

0. Content

The report has been structured according to the action items associated with Strategy 1 and includes the following chapters:

1. Scope of Work
2. Progress against the action items of Strategy 1 – ‘Technical expertise’ from 2023 – today
3. Interlinkages with and contributions to other action items from strategies 2 to 5 of the Programme of Work
4. Meetings of the Working Group since 2023
5. Further actions for 2023 – 2025 (proposals)
6. Points for discussion

1. Scope of Work

To respond to UN resolutions and UN data needs, this Working Group on Geographical Names Data Management (WG GNDM) addresses various issues of geographical names data processing, including the creation, maintenance and outputs of geographical names databases (including gazetteer production) and aspects of data exchange formats and standards. Issues of providing geographical names information within national and international spatial data infrastructures (SDIs) through web (gazetteer) services and multipurpose geographical names database solutions in the context of SDIs as well as the utilization of volunteered geographic information and crowd sourced data are becoming more and more important and are reflected by the Working Group.

A description of the scope of work of the Working Group is integrated in UNGEGN’s website:

https://unstats.un.org/unsd/ungegn/working_groups/wg2.cshhtml

According to the Strategic Plan and the Programme of Work of UNGEGN particularly ‘Strategy 1: Technical Expertise’ is supported by the Working Group and coordinated by its Convenor:

Strategy 1: Technical Expertise

- i. Deliver technical expertise and advice to interested parties in Member States for geographical names standardization, including romanization and quality geographical names data and gazetteer management as well as interoperability;
- ii. Develop, extend and share good data management practices of Member States; and
- iii. Identify trends on developments and future direction for geographical names data management and encourage the use of innovative methods, integrated approaches and technological advances to further the aims of UNGEGN.

The Working Group used a Wiki in order to discuss, start and monitor the actions. Each action item is supported by so-called ‘caring colleagues’ who coordinate the actions jointly with the Convenor. And, each action item is specifically supported by several nominated WG members grouped as ‘Task Team’. Registered experts (as the Working Group members) are allowed to access the progress of all action items through the Wiki pages. If Member State representatives are interested to contribute and to be informed about action items for Strategy 1, they are invited to contact Mr. Pier-Giorgio Zaccheddu, Convenor of the Working Group in order to get access details.

Weblink: <https://wiki.gdi-de.org/display/wgtdfg/Work+Program> (for registered members only, the domain URL might change in 2025! The content will be migrated to the new domain)

2. Progress against the action items of Strategy 1 – ‘Technical expertise’ from 2023 – today

The following points summarize the progress of activities occurred during 2023 till today according to the Programme of Work for Strategy 1 – ‘Technical expertise’:

Action item 1-i-1: Provide consultancy to the developments related to the UNGEGN database, UNECA “UNECA Africa GeoNyms database/gazetteer initiative”, the INSPIRE initiative, the UN and European gazetteer projects, the GIS web-based World Geonames Application and other projects of developing countries

As a general statement, the Working Group identified that this action item can be interpreted as a mixture of “program-specific tasks” and “project-specific tasks” (e.g. due to the UNGEGN database activity).

Concerning the “UNECA Africa GeoNyms database/gazetteer initiative” UNECA has been approached several times by the Secretariat and the Convenor. The “UNECA Africa GeoNyms database/gazetteer initiative” seems not to be continued. It is proposed to set the status to "pending".

Concerning the activity “UN Maps” UNGEGN believes that strengthening collaboration across the UN System, and through the Member States, will provide opportunities to promote the importance of the collection and standardization of geographical names and making national geographical names data available. UNGEGN will ensure that collaboration continues, and to support UN agencies and field missions with the use of standard geographical names. This will be facilitated with the forthcoming relaunch of the World Geographical Names Database, as this gives access to UNGEGN recommended names in a publicly available API.

Concerning the World Geographical Names Database (WGN DB) the background, establishment as well as new developments have been supported. This task has been linked to Action Item 1-i-5 of the workplan (“Promote and support the establishment of an authoritative international database/gazetteer of geographical names to be disseminated to the public through UNGEGN”). The development of a “unique identifier for cities” was taken on by the Working Group.

Action item 1-i-2: Evaluate and assess exchange standards for geographical names information and for web services (gazetteer, feature and mapping) for the provision of geographical names information (comprising the review of Part II of the UNGEGN Technical Reference Manual)

CRP.99 (submitted to the Session 2023) with title ‘On geographical names data modelling and transfer related standards, manuals, or guidelines’ provides the contemporary status on geospatial information sharing, accessibility, and dissemination related standards. Furthermore, some specific issues related to geographical names data modelling are summarized, comprising the intangible cultural heritage elements that go hand in hand with the physical characteristics relating to location identification for administration, planning, navigation, emergency response, science, resilience, etc. Finally, some evaluation notes on UNGEGN’s Technical Reference Manual for the National Standardization of Geographical Names, ‘Part two, Toponymic data transfer standards and formats’ are introduced. The content has recently been structured and uploaded to the UNGEGN website, section “Resources”: <https://unstats.un.org/unsd/ungegn/>

Action item 1-i-3: Present geographical names data management topics at national and international conferences organized in the fields of geospatial information management

Working Group members have been requested to inform the Convenor about contributions / presentations (providing titles, authors) of relevant conference papers. Social Media shall be used to support this action item by circulating upcoming meetings, presentation (notifying the Working Group on Publicity and Funding). In August 2024 UNGEGN experts (from Indonesia and Germany) participated and presented at the UN-GGIM meeting (main session and a side event on Integrated Geospatial Information Management)

An UNGEGN expert (from Indonesia) presented at an inter-regional meeting on the margins of UN-GGIM (as part of UN-GGIM-14 in Aug 2024). Furthermore, UNGEGN issues were presented at the UN Maps Conferences on 6-10 March 2023 (initial contact) and on 21-23 May 2024 in Valencia, Spain.

The Convenor participated in the UN Statistics Commission side event on 18 February 2025 on SDG localization and presented on the importance of geographic identifiers promoting the concept for unique identifiers for cities (see Action item 1-i-5) .

Action item 1-i-4: Promote, agree and disseminate romanization systems for national and global use

In order to assist and contribute to this action item the Convenor of the Working Group on Romanization Systems liaises with Member States to assist in developing and putting forward scientific romanization systems for adoption. This Working Group on Romanization Systems will continue to promote and disseminate adopted romanization systems to all UNGEGN Member States. This sub-task is assessed annually.

Action item 1-i-5: Promote and support the establishment of an authoritative international database/gazetteer of geographical names to be disseminated to the public through UNGEGN

The action item ‘re-develop UNGEGN World Geographical Names Database (as an output of 5-ii-3 ‘UNEGN Website development and maintenance’) has been identified to be more suitable to be included in action item 1-i-5 when considering its nature and scope. In a nutshell, the work about the UNGEGN World Geographical Names Database (WGN DB) will be moved to action item 1-i-5 and monitored by the Working Group. It is worth noting that the work affiliated to the database stays as cross-domain task/development in the responsibility of the Expanded Bureau, but will now be coordinated through Strategy 1. As a contribution to the WGN DB implementation the concept for unique identifiers for cities has been developed. It shall be adopted/endorsed with a dedicated decision at the next UNGEGN session in 2025.

Action item 1-ii-6: Examine processes and recommend good practice (1) on how single and multi-jurisdictional Member States record, store, disseminate and manage their geographical names on (2) for the reuse and validation of volunteered geographic Information, crowd sourced data and Linked Open Data (LOD) as part of national geographical names standardization work on (3) for the use of standardized geographical names as fundamental data theme in national spatial data infrastructures (SDIs) within the monitoring of the SDG indicator framework in order to analyze and monitor the changes in a country

No actions were possible since 2023. But, the Working Group decided that the task is still relevant.

Action item 1-ii-7: Promote the use of the online discussion forum (Wiki) e.g. (1) on the relationship UNGEGN – UN-GGIM or SDG indicator monitoring on (2) data modelling and database design on (3) general issues in the context of data maintenance (like feature classifications) and on (4) geographical names data production and distribution in the context of national, regional or global Spatial Data Infrastructures (SDIs)

No further action is requested here. The Wiki will be used for the communication and development of the actions supporting the Work Program. The Working Group proposes to delete this subtask from the Programme of Work.

Action item 1-iii-8: Monitor the availability of free and easily-accessible authorized digital geographical names data as it is seen as a key driver in encouraging the use of nationally-standardized geographical names

The Working Group has provided UNGEGN and all member states with an overview of all free and easily-accessible authorized digital geographical name data (as reported to the Working Group). The plan still is to update the respective UNGEGN sub-website which contains links to geographical names databases for as many countries as possible: <https://unstats.un.org/unsd/geoinfo/ungegn/geonames.html>

Besides the aforementioned collection, Google and ESRI shared their experiences at the 2023 session. A document is being prepared to be published on UNGEGN's website.

Action item 1-iii-9: Organize workshops and on innovative, research and/or technical issues/topics like e.g. volunteered geographic information, crowd sourced data, Linked Open Data or speech technology

Information on the webinars conducted can be accessed through '2020-2023 Events' compiled on UNGEGN's website: <https://unstats.un.org/unsd/ungegn/events/>

Between 2023 and today no further webinars have been conducted. The following new ideas were raised for follow-up workshops:

- Linked Data implementation "best practices"
- Different ontologies
- Different data bases (types, formats)

The Convenor of the Working Group on Training gathered an overview of the training needs through a survey. He has collated information about online training needs. This can filter into this action item, too.

Action item 1-iii-10: Evaluate and assess innovative methods to be used for Romanization, e.g. machine transliteration

The Working Group on Romanization Systems has solicited input and is collecting information on innovative and new romanization processing methods. The Working Group continues both to work on this topic and to encourage Member States' to share their experiences.

3. Interlinkages with and contributions to other action items from strategies 2 to 5 of the Programme of Work

The following action items have been selected by the Working Group to have the highest importance and relevance for the issues related to geographical names data management.

Action item 2-i-2: Interaction with UN-GGIM to be continuously reviewed and evaluated for upgrading the activity level in relation to over-arching activities, such as addressing the SDGs

This action is taken care by the Expanded Bureau.

Action item 2-i-3: Work with UNECA to establish stronger and more permanent ties aimed to: (1) Increase national geographical names standardization in Africa (2) Re-activate the Gaborone Action Plan (GAP) initiated with UNECA, (3) Re-activate Africa GeoNyms project to provide free database/gazetteer software to countries in Africa

See reference to action item 1-i-1.

Action item 2-ii-6: Continue to communicate and liaise with existing groups and explore further effective ways of cooperation with: ICA, ICOS, IGU, IHO, ISO, OGC, PAIGH, SCAR (SCAGI), Unicode Consortium and ICANN

It is obvious and recommendable that the Working Group has to maintain liaisons on a technical level with international standardization bodies like the Unicode Consortium regarding digital text encoding in the context of geographical names, the International Organization for Standardization (ISO) and the Open Geospatial Consortium (OGC) with reference to the development of exchange standards for geographical names information management.

Since the last UNGEGN Session 2023 the Working Group convenor has been provided with ballot event notifications and new standard publications of the International Organization for Standardization's Technical Committee 211 Geographic information/Geomatics (ISO/TC 211). The Convenor is the liaison member of the ISO/TC 211. Most documents of ISO/TC 211 were addressed to general issues. The WG GNDM members have been encouraged to get in touch with national representatives in ISO, OGC to make aware of GN issues and in order to be informed about draft standards.

Regarding the Open Geospatial Consortium no activity related to geographical names can be reported.

Regarding Unicode the Working Group reviews character encodings published by the Unicode Consortium. The Working Group informs the Consortium of any additional characters required for geographical names in the Unicode standard. Since the past UNGEGN Session, Unicode has published Version 16.0.0. of the Standard in September 2024, adding over 5,000 characters, including seven new scripts (including for modern-use scripts in west Africa, north-east India and Nepal), for a total of 154,998 characters.

Action item 3-ii-2: Review the current versions of UNGEGN publications, establish a plan to revise or add to them, and implement it

See reference to action item 1-i-2.

Action item 4-ii-9: Cooperate with academia, so that geographical name datasets collected (by academics, for example, historical or linguistic variants) are geo-referenced and linked to standardized datasets

See reference to action item 1-i-2.

4. Meetings of the Working Group since 2023

Since the last UNGEGN session Working Group meetings were held virtually in June and November 2024.

Within the formal UNGEGN website the section for the Working Group has recently been updated.

Weblink: https://unstats.un.org/unsd/ungegn/working_groups/wg2.cshtml

5. Further actions for 2025 – 2027 (proposals)

Particularly, further ideas for Workshops (virtual ones) shall be collected and events conducted.

6. Points for discussion

The Group of Experts is invited to:

- (a) Take note of the report and progress made by the Working Group on Geographical Names Data Management with regard to the action items for Strategy 1 – ‘Technical Expertise’;
- (b) Express its views on the way forward concerning the Working Group’s work plan and the action items for Strategy 1 – ‘Technical Expertise’.
- (c) Adopt the proposal of the Working Group to delete subtask 1-ii-7: “Promote the use of the online discussion forum (Wiki) [...]” from the Programme of Work.