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Item 15 of the provisional agenda*

**Toponymic data files and gazetteers (data processing and tools,
database management, data dissemination: products and services)
(Working Group on Toponymic Data Files and Gazetteers)**

Report of the Working Group on Toponymic Data Files and Gazetteers

Submitted by the Working Group on Toponymic Data Files and Gazetteers**

Summary:

The report provides a summary of the activities of the Working Group on Toponymic Data Files and Gazetteers of the United Nations Group of Experts on Geographical Names during the intersessional period. According to the agreed actions for the period 2017–2019, the Working Group has, among other things, assisted the Bureau of the United Nations Group of Experts on Geographical Names in cooperating with the Committee of Experts on Global Geospatial Information Management to emphasize, promote and support the tasks and activities of the Group of Experts.

The Working Group has monitored activities and deliverables of Technical Committee 211 of the International Organization for Standardization; the Open Geospatial Consortium; and the Unicode Consortium.

The Working Group has continued to provide consultancy and technical advice concerning the content and structure for data files and gazetteers, among others, through toponymic training courses in the Philippines (2018).

In addition to maintaining the online discussion forum, several Working Group members have contributed articles about national databases and gazetteers to bulletins of the Group of Experts and have participated in national and international events related to Working Group issues.

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Scope of Work

To respond to UN resolutions and UN data needs, this Working Group on Toponymic Data Files and Gazetteers addresses various issues of toponymic data processing, including the creation, maintenance and outputs of toponymic data files (including gazetteer production) and aspects of toponymic 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 toponymic 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. The issue of appropriate definitions for gazetteers and data types and of general feature types/categories relates to the agenda of the Working Group.

Work plan

The Working Group focuses on the following objectives:

- maintain liaison 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 toponymic information and to web (gazetteer) services for the provision of toponymic information through the Internet;
- provide consultancy and technical advice to the UN-GGIM activities related to the fundamental data theme ‘Geographical Names’ as well as to the support of gazetteers to the UN Agenda 2030, the Sustainable Development Goals (SDG) monitoring;
- promote and support the geographical names database of the United Nations Group of Experts on Geographical Names (UNGEGN database);
- promote, complement and support the “UNECA¹ Africa GeoNyms database/gazetteer initiative”;
- promote and provide consultancy and technical advice to national standardization programs and to toponymic training courses including the development of multipurpose toponymic database solutions in the context of spatial data infrastructures. This comprises issues like the discussion of appropriate definitions for gazetteers and data types and of general feature types/categories for a global use;
- organize workshops in conjunction with UNGEGN Sessions or other UN Conferences, focusing on topics like data collection, categorization and modeling, database applications or lessons learned through national and international geographical names programs or projects, and, as required, provide presentations on such topics at the UNGEGN Sessions;
- recommend content and structure of nationally produced authoritative gazetteers and toponymic data files in particular making use of the Internet;
- examine processes and recommend best practice for the exploitation and validation of volunteered geographic information and crowd sourced data as part of national toponymic standardization work.

Progress against the Work Plan since the 30th Session of UNGEGN:

The following points summarize activities occurring during 2017-today:

Objective 1 - liaison with international standardization bodies (ISO, OGC, Unicode)

¹ United Nations Economic Commission for Africa (UNECA)

The Working Group convenor has been provided with all ballot event notifications and new standard publications of the International Organization for Standardization's Technical Committee 211 Geographic information/Geomatics (ISO/TC 211)². Most documents of ISO/TC 211 were addressed to general geographic information issues. The update of ISO/CD 19112:2017(E) - Geographic information – Spatial referencing by geographic identifiers can be particularly referred to. This standardization process has not yet been accomplished and will be further monitored by the WG TDFG. Generally the WG TDFG 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 WG TDFG informs the Consortium of any additional characters required for geographical names in the Unicode standard. The latest UNICODE version 11.0.0 was published on 5 June 2018. This version supersedes all previous versions of the Unicode Standard. UNICODE 11.0 adds 684 characters, for a total of 137.374 characters. These additions include 7 new scripts, for a total of 146 scripts, as well as 66 new emoji characters. The new scripts and characters in Version 11.0 add support for lesser-used languages and unique written requirements worldwide. Funds from the Adopt-a-Character program provided support for some of these additions

- Weblink: <https://www.unicode.org/versions/Unicode11.0.0/UnicodeStandard-11.0.pdf>

Objective 2 - provide consultancy and technical advice to the UN-GGIM activities

In a broader UN context the Working Group recognized the importance of co-operating with the UN initiative on Global Geospatial Information Management (GGIM) being promoted by the UN Statistics Division since 2011. UN-GGIM is about bringing together the integration of geospatial and statistical information for better decision making and to address key global challenges. The Convenor has been very much involved in activities of UN-GGIM from 2014- today.

Within the UNGEGN Symposium on 10-13 October 2018 in Brussel, Belgium, Session 4: International standardization the WG TDFG representatives gave a presentation with title "Support of geographical names data files and gazetteers to UN-GGIM activities and 2030 Agenda". In that presentation the collaborative activities, UNGEGN's areas of work and the way forward concerning future opportunities for collaboration with UN-GGIM were touched on.

- Weblink: http://ggim.un.org/meetings/GGIM-committee/8th-Session/documents/E-C20-2018-17-Add_1Strengthening-Collaboration-UNGEgn-27July2018.pdf

European UNGEGN experts provided their expertise in 2017/2018 by commenting and discussing a draft recommendation for content of the theme 'Geographical Names' elaborated by the Work Group on Core Data of the regional committee UN-GGIM: Europe. It proposes core recommendations and good practices in addition to the (technical) INSPIRE Data Specification on Geographical Names – i.e. to recommend solutions/approaches for issues which have not been solved within the INSPIRE Data Spec GN. UNGEGN's input largely focused on conveying the importance of geographical names as an indication of cultural heritage and history, and also demonstrating geographical names' uniqueness, which does not appear in imagery, however they are of vital importance in crisis situations.

The activity is still ongoing and the recommendation has not yet been adopted by UN-GGIM: Europe. The following documents have been referenced:

² The Convenor is the liaison member of the ISO/TC 211

- Weblink to INSPIRE Data Specification on Geographical Names – Technical Guidelines 3.1: <http://inspire.ec.europa.eu/id/document/tg/gn>
- Weblink to European Location Framework (ELF) Data Specification (chapter 5.3.6): http://elfproject.eu/sites/default/files/ELF_DataSpecification_v0.12_20160328.pdf

The WG TDFG agreed that UNGEGN shall further contribute to UN-GGIM's Working Group on Fundamental Data Themes. Currently, two questions are posed by WG TDFG in its discussion forum page at <https://wiki.gdi-de.org/display/wgtfdg/Forum+4+-+UNGEEN-UNGGIM+relationship>:

- F4-Q1: How can we generally make better linkages between UNGEGN's work and UN-GGIM's activities? <https://wiki.gdi-de.org/pages/viewpage.action?pageId=366379043>
- F4-Q2: How can we better promote and make aware of non-technical issues like language, romanization, cultural heritage etc. to UN-GGIM' activities? <https://wiki.gdi-de.org/pages/viewpage.action?pageId=366379043>

WG TDFG members have provided comments to these forum questions.

Objective 3 - promote and support the UNGEGN database

The Working Group reviews UNGEGN's World Geographical Names Database regularly and contributes to requests for updates and reviews for the UNGEGN website. No requests have been addressed to the WG TDFG from 2017 to today.

- Weblink: <http://unstats.un.org/unsd/geoinfo/UNGEEN>

Objective 4 - promote/support the UNECA "Africa GeoNyms database/gazetteer" initiative

A letter to UNECA signed by the UNGEGN chair, the Task Team for Africa chair and the WG TDFG chair was sent in January 2018. A positive response by UNECA was received in February 2018. UNECA stressed the importance of continued cooperation between UNGEGN and UNECA. Furthermore, UNECA is planning to re-design and develop the application, organize ad hoc workshops to present the application within geo-related events as well as to carry out advisory missions to African countries.

Objective 5 - promote and provide consultancy and technical advice

Through the toponymic training course in Manila, Philippines, in March 2018 the Working Group facilitated consultancy and gave technical advice for the establishment of multipurpose toponymic database solutions in the context of spatial data infrastructures.

EuroGeographics, the European Association, continues the developments of serving European users by geographical names and other spatial data from National Mapping and Cadastral Authorities from single access point. The work started in EuroGeoNames (EGN) service 2006-2009 and has been significantly improved designing a GeoLocator service during the European Location Framework project 2013-2016 and it continued further with the objective to arrange the operation of European Location Services until today. The background information has been compiled in a conference paper submitted to the 11th UN Conference on the Standardization of Geographical Names³. All the EuroGeographics projects aimed at preparing an up-to-date data base for a regional / European Gazetteer with a full coverage. The rationale for this initiative has been a "survey on pan-European gazetteer services" in March 2017 organized by

³ https://unstats.un.org/unsd/geoinfo/UNGEEN/docs/11th-uncsgn-docs/E_Conf.105_39_en.pdf

EuroGeographics and the Joint Research Center (JRC) of the European Commission. The results of the survey emphasized the request for a “gazetteer service for Europe providing authoritative names”. Results have been made available in September 2017.

- Weblink: https://ec.europa.eu/isa2/actions/elise_en

The current EuroGeographics initiative focuses on the evolution and publication of a Regional Gazetteer under the umbrella of the Open European Location Services (Open ELS) project 2017-2019. To add exonyms and variant names to the Open ELS Regional Gazetteer, an UNGEGN expert for geographical names will regularly update and enhance the data base.

- Weblink: <https://openels.eu/products/>

Objective 6 - organize workshops in conjunction with UNGEGN Sessions or other UN Conferences

According to the Minutes of the meeting of the WG TDFG, Brussels, 12 October 2018, some workshop ideas/proposals were raised and could be further evolved in 2019:

- LinkedData applications in the Member States?
- Toponymic Data Files re-engineering due to SDG requirements?
- Speech technology – a method for the collection and storage of GN?

Objective 7 - recommend content and structure for gazetteers and data files

The discussion forum for several issues related to this WG TDFG has been regularly updated since 2017 and comprises the following topics:



Figure 1 - Screenshot of the menu bar of the online discussion forum

The online discussion forum provides a tool where discussions and exchange of ideas can easily take place, e.g. concerning the relationship UNGEGN – UN-GGIM or the Sustainable Development Goal (SDG) indicators.

- Weblink: <https://wiki.gdi-de.org/display/wgtdfg/Discussion+forum>

Besides the discussion forum the new chapter on gazetteers in the Advanced Training Manual (launched in August 2017) is worth mentioning. Furthermore, several WG TDFG members contributed articles about national efforts for databases and gazetteers to UNGEGN Bulletins.

- Weblink: <https://unstats.un.org/unsd/geoinfo/UNEGN/docs/Training%20Manual.pdf>

Objective 8 - examine processes and recommend best practice for the exploitation and validation of volunteered geographic information and crowd sourced data as part of national toponymic standardization work.

As presented under Objective 7 the online discussion forum shall be utilized to investigate on tasks/issues assigned to the WG TDFG, amongst others, Forum 1 - volunteered geographic information (VGI)/crowd-sourcing.

Apart from this information in the online discussion forum, the WG TDFG has not yet taken any further actions since the last UNGEGN session to examine processes or to recommend best practices.

Decisions by the 11th UNCSGN / 30th UNGEGN relating to the Working Group

Activities relating to the Working Group on Toponymic Data Files and Gazetteers

Task	Report	Responsibility	Status
3. In working paper No. 1, the Working Group on Toponymic Data Files and Gazetteers reported on its activities for 2016 and 2017. [...] General progress against the work plan and future activities of the Working Group were noted.	30th UNGEGN	general	No action needed
32. Special note was made of the world geographical names database of the Group of Experts and experts were encouraged to contribute to the collection of information for the database.	30th UNGEGN	general	Continuous contributions by the Member States

Figure 2 - Decisions by the 11th UNCSGN / 30th UNGEGN relating to the WG TDFG

Meetings & further activities of the Working Group since 2017

The last WG TDFG meeting was held in Brussels, 12 October 2018. The notes of the meeting are available through the Working Group website.

- Weblink: https://wiki.gdi-de.org/pages/viewpage.action?pageId=7569729&preview=/7569729/514130079/2018-10-12_Minutes_UNGEGN-WGTDFG_Brussels_v1.0.pdf

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

- Weblink: <http://unstats.un.org/unsd/geoinfo/UNGEGN/wg2.html>

Members of the WG TDFG participated in the following meetings and conferences (in chronological order):

- UN-GGIM-Europe Plenary Meeting on 6-7 June 2018 in Brussels. The Convenor of the WG TDFG gave a presentation about the importance of geographical names as fundamental data theme
- Workshop “Use of INSPIRE Data: past experiences and scenarios for the future”. Warsaw, Poland, 27-28 November 2018

Upcoming Actions for 2019 – 2021

- The Working Group will assist the UNGEGN Bureau in co-operating with the UN GGIM committee in order to emphasize, promote and support UNGEGN tasks and activities and how these contribute to UN Sustainable Development Goals (SDGs).
- The Working Group will monitor the availability of free, authoritative and easily-accessible authorised digital geographical names data as it is seen as a key driver in encouraging the use of nationally-standardised names.

- The Working Group will consider a review of the 2007 UNGEGN Technical reference manual for the standardization of geographical names co-ordinated with the Working Group on Publicity & Funding.
- The Working Group will continue to support toponymic training courses.
- The Working Group will contribute to and/or participate at international conferences, congresses and meetings.

Points for discussion

The Group of Experts is invited to:

- a) Take note of the report and progress made by the Working Group on Toponymic Data Files and Gazetteers;
- b) Express its views on the way forward concerning the Working Group's work plan and the upcoming actions for 2019-2021
- c) Express its support on the maintenance of the Online Discussion Forum as a useful tool for the exchange of ideas on new and well-known issues
- d) Comment and provide guidance on the work being carried out on the support of the Agenda 2030 and on building a stronger relationship between UNGEGN and UN-GGIM