Agenda Item 3

World Geographical Names Database

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Statistics Division / Department of Economic and Social Affairs
Overall vision of UNGEGN World Geographic Names (WGN) Database

Why are we doing this?

- UNGEGN is mandated by the Economic and Social Council as one of its nine Subsidiary Bodies – this is implementing UNGEGN Decision 2/2019/2
- Position UNGEGN as the ‘go to’ for authoritative, comparable, and high-quality geographic names/toponyms – aligned with its Strategic Plan
- Provide a dramatically improved platform for managing toponymic data
- Enhance visibility and use of toponymic data, irrespective of language, from across the UN system and globally
- Focus on data to support evidence-based action
- Increase visibility of UNGEGN, its intergovernmental role and its work
### Basic Data Model / Geographic Extent

Authoritative, multi-lingual information on:
- All Countries
- All cities with a population of 100k or higher

<table>
<thead>
<tr>
<th>Data Header</th>
<th>Arabic</th>
<th>Chinese</th>
<th>English</th>
<th>French</th>
<th>Russian</th>
<th>Spanish</th>
<th>Endonyms</th>
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<td>East Africa</td>
<td>Afrique de l'Est</td>
<td>Восточная Африка</td>
<td>África Oriental</td>
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<td>塔那纳利佛</td>
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</table>
Technical Development

Previous Application
- WGN 2009-2019
  - Unknown
  - Ad-hoc
  - Adobe Flash
  - Data not frequently updated
  - Unfriendly user experience

Prototyping
- WGN 2020-2021
  - Surplus
  - 3 x P3, 1 P4

Current Development
- WGN 2021-2023
  - RTPC
  - 2 x P3, 1 P4

Continuous Development
- WGN 2023-2027

Into the Future?
- None Currently Allocated

• Surplus funding from COMTRADE
• Restoring and recovering WGN Database, including all historical contributions made by UNGEGN
• Development of a prototype application

Public Access API – Open Data
• Administration Panel
• Data Explorer / Dashboard

• Cloud-based hosting
• Data Integration
• Security Updates
• Ongoing Compliance
WGN System Components

Position the UNGEGN as a global leader in authoritative geographical names

1. WGN Dashboard - Publicly Accessible Dashboard
2. WGN API - Publicly Accessible, read-only geoJSON, API
3. WGN Administration System – User Interface for UNGEGN Secretariat
Previous World Geographic Names Database vs the modernized WGN

**WGN 2009**
Web 1.0 Technology

**Flash-based Dashboard**
**SQL Queries for Data Updates**
**PDF/HTML Access to Data**

**WGN 2023**
Automated processes and high capacity

**Modern Map-led Dashboard**
**Admin Interface for Updates**
**Open Geospatially-enabled API**

**UN System**
**UNGE GN WGN**
**Names Agencies**
**Partner**

**UNSD**
**DYB**
**RC**

**OICT**

**UN Data**
The Basemap is provided by OICT from their “UN Clear Map” product. Provided for UNGEGN the basemap is provided without labels. In showing UNGEGN’s Authoritative labels the map remains in compliance with ST/AI/189.
Search for Toponyms, regardless of language

Interactive Map Labels

Data Available in 100+ Languages, including non-romanised languages … Interface available in six UN languages
Toponyms captured for all countries and capital cities in the six UN official languages

City data provided by Member States and other authoritative sources covering 100+ Languages, including non-romanised languages
The WGN API:

1. **An open access, RESTful API**, provides read-only access to the WGN database, through several API endpoints (Cities – via WGN Unique City ID, Countries – via M49 code, Languages, Romanisation Systems, and other endpoints)

2. **Documented via Swagger’s Interface Description Language**

3. **Provides Standardised GeoJSON.** Can be downloaded as a standalone file or be consumed into Excel or other GIS applications

4. **Meets the highest requirements of the SG’s Data Strategy**, as data is available as Open Access, publicly, without restriction in machine readable formats.
# WGN Administration System

## Cities

<table>
<thead>
<tr>
<th>Country Name</th>
<th>City Name (Normalized Name)</th>
<th>Is Capital?</th>
<th>Coordinates Source</th>
<th>Actions</th>
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</tbody>
</table>
WGN Administration System

Search Across all relevant data

Pagination across all data
WGN Administration System

To greater zoom levels

Ability to capture historical name changes

Toponyms provided by National Name Authorities

Data in Six Official UN Languages provided by Authoritative Sources
WGN Implementation: A Future Roadmap of three parts

1. **WGN Database Launch:**
   Finalise UN mandated technical compliance procedures, following the third session

2. **Data Integration**
   Ensuring full geographic completeness of all countries and cities

3. **Data Governance, Feature Improvement and Future Development**
   *What do we do next?*
https://tinyurl.com/un-wgn

The Secretariat will inform UNGEGN when a permanent URL is available
Data Integration

2

UNTERM (DAG UN Library)

SALB / UN Gazetteer (OICT)

UNLOCODE (UNECE)

UNEGGN (Member States)

UNEGGN WGN Platform

Demographic YearBook (UNSD)

API

Open Data

UN Data

Other UN Applications
Data Integration

- **UNGEGN Platform** (Member States)
- **UNGEGN WGN**
- **SALB / UN Gazetteer** (OICT)
- **UNLOCODE** (UNECE)
- **UNTERM** (DAG UN Library)
- **Demographic YearBook** (UNSD)

**API**

**Open Data**
- **UN Data**
- **Other UN Applications**
Data Integration

- UNGEGN
- WGN
- Platform
- UNTERM (DAG UN Library)
- SALB / UN Gazetteer (OICT)
- UNLOCODE (UNECE)
- Demographic YearBook (UNSD)
- UNGEGN (Member States)

API

Open Data

UN Data

Other UN Applications
UNGEKN Data Integration Flow

Defining engagement with Member States to collect/update geographical names – what are the potential process(es)?

1. Member States
   i. Request review of existing geographic names held within the WGN database
   ii. Request input (in defined format) of new geographical names
   iii. Interlinkages with national geographical names authorities and identify national focal point(s)
   iv. ...

2. Authoritative Data from the UN System
   Short Term
   i. UN Demographic Yearbook – Authoritative Member State provided statistical data
   ii. UNTERM
   Long Term
   iii. UN Gazeteer
Data Governance

Today:

- The Secretariat has the means to input into the revived WGN Database all cities provided to it by UNGEGN in its previous iteration, integrating this data with the complement of data from the UN Demographic Yearbook – in both cases this data is provided by a Member State national authority/institution to the United Nations. This will add 2,735 cities to the WGN Database – 6,097 cities globally will be managed within the database.

- The Secretariat will work towards endonymic ‘completeness’ of this data across the six official UN languages (Arabic, Chinese, English, French, Russian, and Spanish), integrating authoritative linguistic data from the Demographic Yearbook and the UNTERM database. The positional accuracy of geographic coordinates will be assessed in cooperation with the UN Geospatial Information Section of the UN Office of Information and Communications Technology (OICT).

- The Working Group on Geographical Names Data Management (see report GEGN.2/2023/73/CRP.73), as part of its work plan 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” notes that the WGN Database will now be monitored by the Working Group.
Some questions to guide future discussion of the WGN Database:

• How should UNGEGN promote the WGN Database to collect and manage data outside the six official UN languages?

• How should the WGN Database be promoted and communicated to the broader geographical names, geospatial, and linguistic communities?

• What is the quality of the current data within the WGN Database?

• What are the future opportunities that can explore other geographies – Building on Country and City data to include data on Indigenous and Cultural Heritage... and beyond.

The WGN Database is a tool for managing toponymic data for cities and countries. It can be extended to manage toponymic data pertaining to culture, heritage and identity, including indigenous, minority and regional languages – but requires the ownership of relevant bodies to define appropriate data workflows and other cartographic concerns.
Potential Future Feature Improvement and Development

Feature Improvement
1. A unique identifier for cities
2. Improved cartography
3. Other features to be defined (resources permitting)

Data Development
1. Addition of unique identifiers Geographic Features to enable Linked Data and other forms of integration – potentially with other gazetteers
2. Potential collaboration with other institutions providing authoritative geographical names
3. Collaboration with the UN Library, SALB and other sources of geographic data where geographic names are important
4. Discussion(s) on how to develop the application further – whether by open-source development or through direct provision of resources by UNGEGN, Secretariat or other means etc.
5. Audio files for pronunciation of toponyms
6. ...
Points for Discussion

38. The Group of Experts is invited to:

(a) Take note of the present report and express its views on the redevelopment and future direction of the World Geographic Names Database;

(b) Welcome and invite Member States and their National Names Authorities to submit and update toponymic data to the secretariat;

(c) Consider and provide further guidance regarding:

   i. The development of a unique identifier for cities;

   ii. An appropriate governance mechanism for the World Geographic Names Database, inclusive of guidance on the Database’s promotion and communication;

(d) Express its views on how Linked Data and the semantic web can be integrated into the World Geographic Names Database
The Secretariat will inform UNGEGN when a permanent URL is available

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