

Data Release Statement

GRID3 DRC Haut-Lomami and Tanganyika Health Catchment Area Boundaries, Version 01

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Abstract

This document outlines the methodology and data sources used for constructing the *GRID3 DRC Haut-Lomami and Tanganyika Health Catchment Area Boundaries, Version 01* dataset. The dataset consists of health catchment area boundaries with names in the aforementioned provinces in the Democratic Republic of the Congo (DRC). Limitations and use constraints are also provided.

Dataset citation

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Data Use Constraints

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Contacts and Data Queries

GRID3 appreciates feedback regarding this dataset, including suggestions, discovery of errors, difficulties in using the data, and format preferences.

Please contact: Geo-Referenced Infrastructure and Demographic Data for Development (GRID3), data.queries@grid3.org



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I. Introduction

The *GRID3 DRC Haut-Lomami and Tanganyika Health Catchment Area Boundaries Version 01* dataset consists of health catchment area boundaries with names in the provinces of Haut-Lomami and Tanganyika in the Democratic Republic of the Congo (DRC). This dataset is one of three datasets (along with the Health Facilities and Health Catchment Area Boundaries datasets) released together.

To conduct this work, the Center for International Earth Science Information Network (CIESIN) at Columbia University engaged with the mandated authorities in the DRC's Ministry of Health who support data collection and development for vaccination planning. Local healthcare workers were also directly involved in the mapping of the health catchment area boundaries at participatory events coordinated with in-country provincial coordinators and mappers, and in field data collection from July to September 2019. The dataset was then updated by GRID3 between 2019 and 2021 following its reception by the DRC National Malaria Elimination Program (PNLP).

This work is part of the GRID3 Mapping for Health in the DRC project. Supported by Gavi through its INFUSE initiative, GRID3 Mapping for Health is a Ministry of Health initiative, delivered in partnership with Flowminder and CIESIN, and in collaboration with WorldPop at the University of Southampton, Kinshasa School of Public Health, UNFPA, UNOPS, and Novel-T. GRID3 Mapping for Health is a continuation of previous work conducted and/or supported in the DRC by the Geo-Referenced Infrastructure and Demographic Data for Development (GRID3) programme.

II. Methodological Approach

Summary

The *GRID3 DRC Haut-Lomami and Tanganyika Health Catchment Area Boundaries Version 01* dataset was originally created through an extensive fieldwork exercise from July to September 2019. This version includes additional data from the PNL, which greatly added to the number of settlement points available and facilitated a more precise delineation of health catchment area boundaries.

Details

Phase 1: 2019 Field data collection

With the support of provincial and national health authorities, local healthcare workers (“head nurses”, “health zone management staff”, and “head doctors of the health zones”) and GRID3 GIS specialists (“mappers” and “provincial coordinators”) engaged in a participatory mapping process in Haut-Lomami and Tanganyika from July to September 2019. This mapping process occurred at the health zone level (an operational unit made up of approximately 15-20 health areas).

Mappers were deployed to the health zones, where they organised participatory mapping meetings with local healthcare workers. They also trained head nurses to collect data on settlements, health facilities, and other points of interest in their respective health areas using an ODK-based smartphone application. Mappers then used this information to delineate health area boundaries, using previously existing data to guide this effort. This data was then sent back to CIESIN for additional quality checks. The sources used to delineate the boundaries are indicated in the data and described in the table below.

Source	Description
ESP-UCLA	Public health school (École de Santé Publique) of the University of California, Los Angeles. This data was received prior to fieldwork.
OSM RDC/CartONG	OpenStreetMap DRC and CartONG. This data was received prior to fieldwork.
MSP/CIESIN	DRC’s Ministry of Public Health (Ministère de Santé Publique) and the Center for International Earth Science Information Systems)

Phase 2: Integration of data from the PNLP

In October 2021, GRID3 received access to a large settlement point dataset collected during a bednet distribution campaign by IMA World Health and owned by PNLP. This dataset was combined and consolidated with previous GRID3 settlement data for Haut-Lomami and Tanganyika. In total, the PNLP data added more than 3,500 new points to the settlement data. The health zone and health area boundaries were then refined based on the health area and health zone attributes of the PNLP point clusters, locations of the points, and the GRID3 friction surface layer.

III. Dataset Description(s)

The *GRID3 DRC Haut-Lomami and Tanganyika Health Catchment Area Boundaries Version 01* dataset consists of one layer: health catchment area polygon data and a table with the field descriptions for the layers. The data are available for download as Esri geodatabase (gdb) files packaged within zip folders.

File name: GRID3_DRC_HLTN_health_catchment_boundaries_V01.gdb

The following layers are included as gdb files:

codebook_as_boundary - field descriptions for the health area boundaries

codebook_zs_boundary - field descriptions for the health zone boundaries

GRID3_DRC_HLTN_health_area_boundaries_V01

GRID3_DRC_HLTN_health_zone_boundaries_V01

Extent: Democratic Republic of the Congo: Haut-Lomami and Tanganyika Provinces

North: -4.97517681106092

West: 23.7154293063175

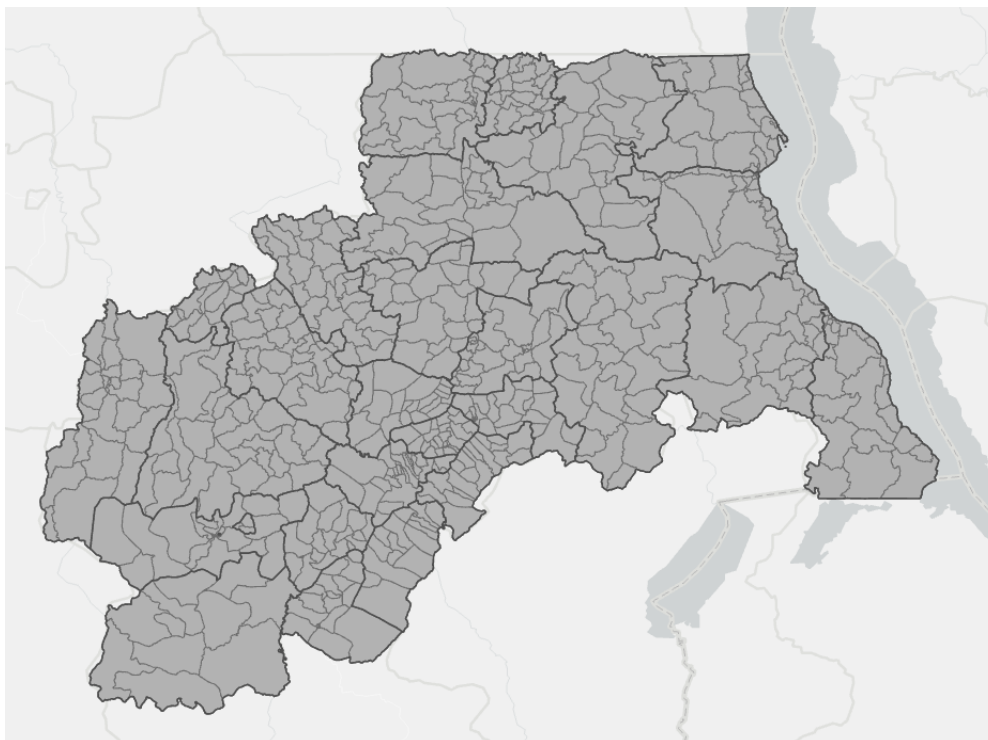
East: 30.5882263186897

South: -9.91798019413062

Coordinate system: GCS WGS 1984



The map above shows health zones in Haut-Lomami and Tanganyika provinces.



The map above shows health areas in Haut-Lomami and Tanganyika provinces.

Codebook

Field Name	Field Description
OBJECTID	Automatic field number
Shape	Shape geometry of the layer
pays	The name of the country
province	Name of the Province
prov_id	The automatic identifier of the province
prov_uid	The province identifier in the DHIS2 pyramid, used by the DSNIS
zone_sante	The name of the health zone retained
zs_id	The automatic identifier of the health zone
zs_uid	The identifier of the health zone in the DHIS2 pyramid, used by the DSNIS
aire_sante	The name of the health area retained
as_id	The automatic identifier of the health area in the DHIS2 pyramid, used by the DSNIS
as_uid	The identifier of the health area in the DHIS2 pyramid
zs_nom	The name of the health zone
as_nom	The name of the health area
source	Origin of the layer
date	Date
notes	Comments
Shape_Length	Geometric shape length
Shape_Area	Surface of the health area
precision	Accuracy (GPS)

IV. Version History

Boundaries were updated based on comprehensive field collected point data containing health area and health zone information.

V. Known Data Limitations

The spatial accuracy of the health catchment area data is dependent on both the accuracy of the point data collected in the field as well as on the correctness of the edits made to the data throughout the validation process. In general, it was assumed that the field-collected data were more accurate than the previously compiled settlement point data. Temporal mismatches exist among the point datasets, the settlement polygons, and the satellite imagery used to perform quality checks.

Known issues

- Spelling mistakes (spelling may vary colloquially and between organisations).

VI. Disclaimer

CIESIN, Columbia University, and the GRID3 programme follow procedures designed to ensure that data disseminated by the project are of reasonable quality. If, despite these procedures, users encounter apparent errors or misstatements in the data, they should contact GRID3 at data.queries@grid3.org.

CIESIN, Columbia University, and their sponsors do not guarantee the accuracy, reliability, or completeness of any data provided. We provide this data without warranty of any kind whatsoever, either expressed or implied, and shall not be liable for incidental, consequential, or special damages arising out of the use of any data provided.

VII. Acknowledgments

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Bluesquare, Belgium
Bureau Central du Recensement (BCR), DRC
Centers for Disease Control and Prevention (CDC), USA
Direction d'Etudes et Planification (DEP), DRC
Direction des Soins de Santé Primaires (DSSP), DRC
Division du Système National d'Informations Sanitaires (DSNIS), DRC

Division Provinciale de la Santé (DPS) du Haut-Lomami and Tanganyika
 Ecole de Santé Publique de Kinshasa (ESPK), DRC
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 Global Good
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 Ministère du Genre, Famille et Enfant, DRC
 Novel-T, Switzerland
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 PATH, DRC
 Programme Elargi de Vaccination (PEV), DRC
 Programme National de Lutte contre le Paludisme (PNLP), DRC
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 SANRU, DRC
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