



## Data Release Statement

### GRID3 DRC Schools - Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami Provinces, Version 01

June 2022

#### Abstract

This document outlines the methodology used for constructing the GRID3 DRC Schools - Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami Provinces Version 01 dataset. The dataset consists of school points with name, location, health zone, and health area attributes in the aforementioned provinces in the Democratic Republic of the Congo (DRC). Limitations and use constraints are also provided.

#### Dataset citation

Center for International Earth Science Information Network (CIESIN), Columbia University and Ministère de la Santé Publique, Hygiène et Prévention, Democratic Republic of Congo, 2022. GRID3 DRC Schools - Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami Provinces- Version 01. Palisades NY: Geo-Referenced Infrastructure and Demographic Data for Development (GRID3). <https://doi.org/10.7916/a3d6-m921>. Accessed <DAY MONTH YEAR>

#### 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](mailto:data.queries@grid3.org)



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## I. Introduction

The GRID3 DRC Schools - Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami Provinces Version 01 dataset consists of school points with names and health catchment area attributes in the provinces of Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami in the Democratic Republic of the Congo (DRC). This dataset is one of five (5) datasets (along with the Settlements, Health Facilities, Health Catchment Area Boundaries, and Religious Centres datasets) included in this Version 01 release.

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 of 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 the collection of data in the field from January to July 2021.

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 in DRC 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

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-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami from January to July 2021. This mapping process occurred at the level of the health zone (an operational unit made up of approximately 15-20 health areas).

Mappers were deployed to health zones in teams of two for approximately nine (9) days at a time<sup>1</sup>. They started their work in the health zone by training the head nurses of each health area on data collection using the [Geospatial Tracking System \(GTS\)](#), an Open Data Kit (ODK)-based smartphone application. While the head nurses were collecting data in the health areas they regularly work in, the mappers worked with the health zone management team to validate and modify data from the field. After all data were collected, cleaned, and integrated into final geospatial layers, validation was conducted on preliminary data by the head doctor of the health zone before the mappers left the health zone.

## Details

### ***Phase 1: Field data collection***

In each health area, there is a head nurse who is responsible for much of its management. These professionals work routinely in their respective areas and have a good understanding of the health facilities, settlements, and points of interest (POIs, such as schools and religious centres) present. The head nurses were trained by the mappers to collect these data using the GTS. These head nurses were then deployed to their health areas for 3 days after the training to collect data.

### ***Phase 2: Cleaning and consolidation***

Names and types went through basic cleaning. Duplicate data were removed and the attribute data were checked for consistency.

## **III. Dataset Description(s)**

The *GRID3 DRC Schools - Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami Provinces Version 01* dataset consists of one layer: schools point data and a table with the field descriptions for the layer. The data are available for download in Esri file geodatabase format packaged in zip files.

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<sup>1</sup>The duration of the fieldwork was adjusted based on the size and accessibility of the health zones. In some smaller, urban areas, the data collection could be slightly reduced, while the fieldwork in hard-to-reach health areas was extended up to 15 days to maximise accuracy.



**File name:** GRID3\_DRC\_schools\_V01.gdb

The following layers are included in the gdb:

*codebook\_schools*

*GRID3\_DRC\_schools\_5\_prov\_V01*

**Extent:** Democratic Republic of the Congo: Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami provinces.

***DRC provincial extents:***

*Haut Katanga Extent*

West 25.413033 East 29.810980  
North -7.611716 South -13.455997

*Kasai Extent*

West 19.676606 East 22.317255  
North -2.309603 South -7.286028

*Kasai-Oriental Extent*

West 22.944402 East 24.061856  
North -5.667474 South -6.773613

*Kinshasa Extent*

West 15.161557 East 16.538300  
North -3.927611 South -5.050161

*Lomami Extent*

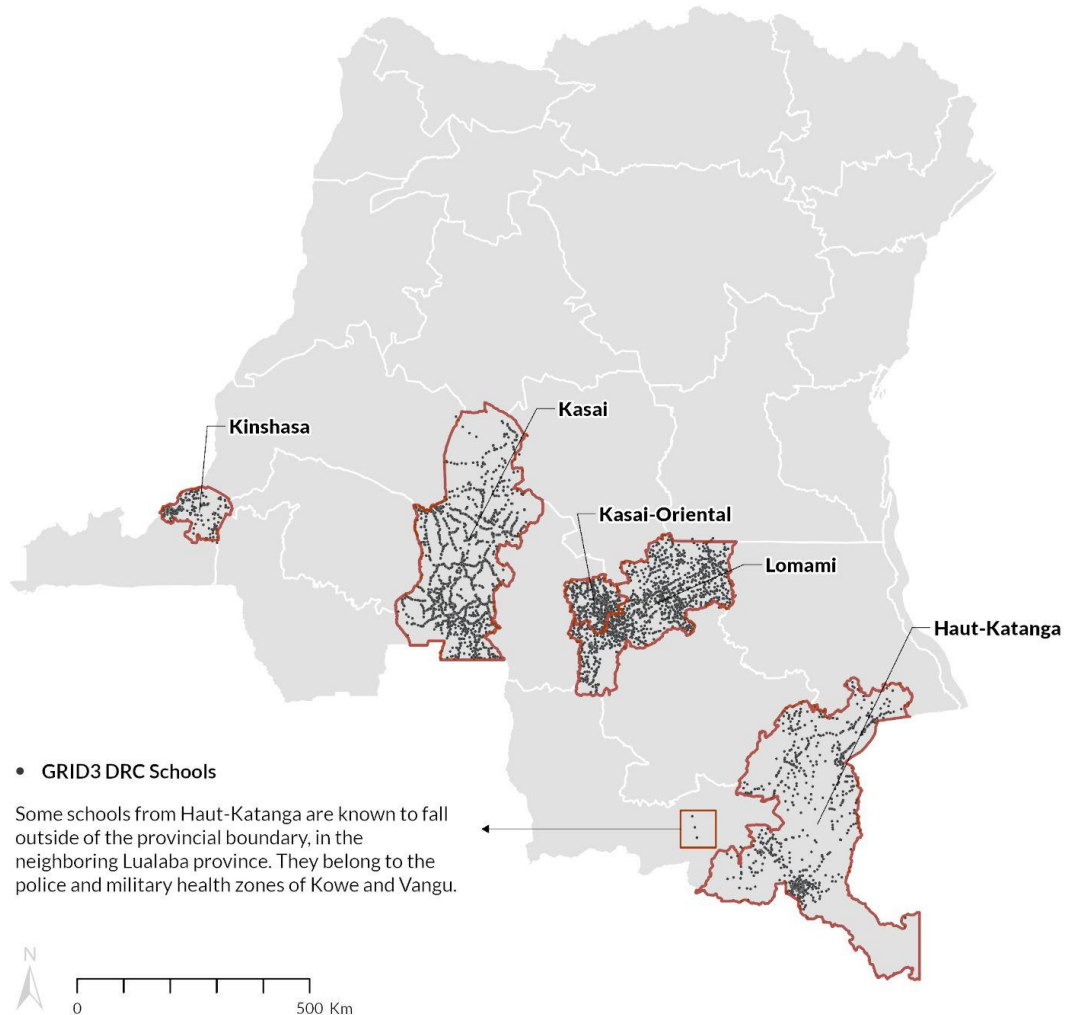
West 23.009694 East 26.280757  
North -4.865162 South -8.091451

**Coordinate system:** GCS WGS 1984



# GRID<sup>3</sup>

GEO-REFERENCED INFRASTRUCTURE AND  
DEMOGRAPHIC DATA FOR DEVELOPMENT



The map above shows school points collected in Kinshasa, Kasai, Kasai-Oriental, Lomami, and Haut Katanga provinces. Some schools from Haut-Katanga are known to fall outside of the provincial boundary, in the neighbouring Lualaba province. They belong to the police and military health zones of Kowe and Vangu.



# GRID<sup>3</sup>

GEO-REFERENCED INFRASTRUCTURE AND  
DEMOGRAPHIC DATA FOR DEVELOPMENT

## Codebook

Field Name	Field Description
OBJECTID	Automatic field number
Shape	Shape geometry of the layer
pays	Name of the country
province	Name of the province
antenne	Name of the antenna
zonesante	Name of the health zone
airesante	Name of the health area
village	Name of the locality
ecoletype	Type of school
ecole	Name of the school
date	Date of last edit
source	Data provenance
notes	Comments
lat	Latitude in decimal degrees
lon	Longitude in decimal degrees
altitude	Altitude in metres
precision	Accuracy (GPS)

## IV. Known Data Limitations

The spatial accuracy of the schools 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 collected data. The cleaning and validation of this dataset was not comprehensive.

### Known issues

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

## V. 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](mailto: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.

## VI. Acknowledgments

GRID3 thanks the following institutions that provided input data and/or assistance with data production:

Acasus, Switzerland  
 Agence Nationale d'Ingénierie Clinique, de l'Information et de l'Informatique de Santé (ANICiS), DRC  
 Bill & Melinda Gates Foundation, USA  
 Bluesquare, Belgium  
 Bureau Central du Recensement (BCR), DRC  
 Caritas, USA  
 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-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami, DRC  
 Ecole de Santé Publique de Kinshasa (ESPK), DRC  
 Gavi, the Vaccine Alliance, Switzerland  
 Geospatial Evaluation and Observation Lab (geoLab), College of William & Mary, USA  
 Global Affairs Canada (GAC), Canada  
 Global Good, USA  
 Initiative Régionale de Documentation et d'Accompagnement Communautaire au Développement (IDRAC Sarl), DRC  
 International Federation of Red Cross and Red Crescent Societies (IFRC), Switzerland  
 Médecins Sans Frontières (MSF), Switzerland  
 Ministère de l'Environnement et Développement Durable (MEDD), DRC  
 Ministère de la Santé publique, Hygiène et Prévention, DRC  
 Ministère du Genre, Famille et Enfant, DRC  
 Novel-T, Switzerland





Open Street Map (OSM), DRC  
PATH, USA  
Programme Elargi de Vaccination (PEV), DRC  
Programme National de Lutte contre le Paludisme (PNLP), DRC  
Référentiel Géographique Commun (RGC), DRC  
Soins de Santé Primaires en Milieu Rural (SANRU), DRC  
The International Organization for Migration (IOM), DRC  
UCLA-DRC Health Research and Training Program, DRC  
United Nations Children Fund (UNICEF), USA  
United Nations Development Programme (UNDP), USA  
United Nations Office for Project Services (UNOPS), Denmark  
United Nations Office for the Coordination of Humanitarian Affairs (OCHA), USA  
United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUCSO), DRC  
University of California, Los Angeles (UCLA) DRC Health Research and Training Program, USA  
VillageReach, USA  
World Health Organization (WHO), Switzerland  
World Resources Institute (WRI), USA

Funding for the development and dissemination of this dataset was provided by Gavi, the Vaccine Alliance.