

Data Release Notes

Name of the dataset	GRID3 COD - Schools v1.0
Name of the file	<i>GRID3_COD_schools_v1.0.gpkg</i>
Date of data release	2024-05-10
File format	OGC Geopackage
Dataset version	1.0
Abstract	<p>This document outlines the methodology and data sources used during the production of the GRID3 COD - Schools v1.0 dataset. The dataset consists of school points with name, location, and attributes for five provinces in the Democratic Republic of the Congo (COD). Limitations and use constraints are provided.</p> <p>This operational dataset has not been fully validated by government officials or ministries.</p>
Dataset citation	Center for International Earth Science Information Network (CIESIN), Columbia University and Ministère de la Santé Publique, Hygiène et Prévention, Democratic Republic of the Congo, 2024. GRID3 COD - Schools v1.0. New York: GRID3. https://doi.org/10.7916/5ngz-fr94 . Accessed <DAY MONTH YEAR>.
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Contacts and data queries	The authors of this dataset appreciate feedback regarding the data, including suggestions, discovery of errors, difficulties in using the data, and format preferences. For dataset-related questions, please send an email to: info@ciesin.columbia.edu

I. Input datasets

The input data and the collection process are detailed below:

From January to July 2021 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. 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 days where they trained the health area head nurses on data collection using the Geospatial Tracking System (GTS), an Open Data Kit (ODK)-based smartphone application¹. The head nurses routinely work in their respective areas and have a good understanding of the health facilities, settlements, and points of interest (POIs, such as schools and religious centers) present.

While the head nurses collected data in their health areas, 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, the health zone head doctor validated the preliminary data. From July 2021 through October 2022, the mappers and provincial coordinators worked with CIESIN staff to consolidate the data (spelling, gaps and overlaps, topology, etc). This data was used to produce basemaps at the health area-level and shared back with every health zone and province for the second round of validation.

From November through January 2022, the in-country GIS team worked with CIESIN staff to integrate these corrections into a final geodatabase.

This work was done with the participation and supervision of the Direction du Système National d'Information Sanitaire (DSNIS). The Agence Nationale d'Ingénierie Clinique, de l'Information et de l'Informatique de Santé (ANICiS) also played an important role in the area of data governance.

II. Methodology

Data processing, integration, and harmonization scripts have been developed and updated by CIESIN as new data becomes available. A data schema prioritizing information preservation was developed. Common generalized values were created for all fields and the original values in each dataset were mapped to these.

III. Dataset Description

The *GRID3 COD - Schools v1.0* dataset consists of school spatial data points with names and attributes in the following provinces of the Democratic Republic of the Congo (COD): Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami. The data are available for download in OGC geopackage format packaged in a zip file.

This data release supersedes the dataset "[GRID3 COD - Schools : five provinces v1.0](#)".

The codebook for schools is shown below.

Table 2: Codebook for Schools

Variable Names	Values example	Type	Definition
OBJECTID	1	numeric	Software-generated unique code
pays	République démocratique du Congo	text	Country name French official UN member state spelling
iso3	COD	text	ISO3 code
province	Lomami	text	DHIS2 province name
prov_uid	F9w3VW1cQmb	text	The identifier of the province in the DHIS2
antenne	Kabinda	text	Antenne name
zonestante	Kabinda	text	DHIS2 health zone name
zs_uid	NR5cDy2jhiJ	text	The identifier of the health zone in the DHIS2
airesante	Kemayi	text	Health area name
as_uid	BuOpOXDJJpy	text	The identifier of the health area in the DHIS2
localite	Mutengu	text	Settlement name
ecole	Lyambala	text	Name of the school
ecoletype	Ecole Primaire	text	Type of school
source	GRID3	text	Institution or project providing point data for this dataset
date	2022	text	Year of data collection or last edit/modification
lat	-6.216226668	numeric	Latitude in decimal degrees
lon	24.017475	numeric	Longitude in decimal degrees
altitude	1233.9	numeric	Altitude in meters
precision	7.6	numeric	Precision of GPS coordinates indicating the tolerance in meters.
grid3id	ec_F6FD8B8CFD	numeric	Internal GRID3 ID number

IV. Known Data Limitations and Disclaimer

The spatial accuracy of the school 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. In general, it was assumed that the field collected data were more accurate

than the previously compiled point data. Temporal mismatches exist among the point datasets and the satellite imagery used to perform quality checks. Spelling mistakes and/or mismatches may have occurred due to colloquial variations on how data points are referred to in the field.

The scope of the GRID3 Mapping For Health project included fieldwork and validation for Haut-Katanga, Kasai, Kasai-Oriental, Kinshasa, and Lomami provinces and 115 health zones.

This operational dataset has not been fully validated by government officials or ministries.

CIESIN, Columbia University, and its co-authors 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 CIESIN, info@ciesin.columbia.edu.

CIESIN, Columbia University, its co-authors, and their sponsors do not guarantee the accuracy, reliability, or completeness of any data provided. We provide these 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.

V. Acknowledgments

CIESIN and its co-authors thank the following institutions that provided input data and/or assistance with data production:

Acasus, Switzerland
Agence Nationale d'Ingénierie Clinique et du Numérique de la Santé (ANICNS) , 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) de Kinshasa, Kwilu, Kasai, Kasai-Oriental, Lomami, Haut-Lomami, Tanganyika, Haut-Katanga, and Ituri
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
IMA World Health, DRC
Initiative Régionale de Documentation et d'Accompagnement Communautaire au Développement (IDRAC Sarl), DRC
International Federation of Red Cross and Red Crescent Societies (IFRC), Switzerland
International Medical Corps (IMC), USA
Médecins Sans Frontières (MSF), Switzerland

Ministère de l'Environnement et Développement Durable (MEDD), DRC
Ministère de la Santé publique, Hygiène et Prévention, 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
United Nations Children Fund (UNICEF), USA
United Nations Development Programme (UNDP), USA
United Nations Office for Project Services (UNOPS), Denmark and DRC CO
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 (HQ), Brazzaville (AFRO), Kinshasa (CO)
World Resources Institute (WRI), USA

Funding for the development and dissemination of this dataset was provided by GRID3 Inc, the Bill & Melinda Gates Foundation, and Gavi, the Vaccine Alliance.