Documentation

Administrative Areas 1 : 1 000 000

VG1000

valid from the product as of 31.12.2022

Contents

1 Overview of the dataset

Product:	VG1000
Content:	The dataset includes the administrative units of the hierarchical administrative levels from the country (state) down to the “Kreise” (districts) with: ▪ administrative boundaries, ▪ key-numbers, ▪ names as well as ▪ designations. The data are structured according to levels (country/state, Länder (federal states), Regierungsbezirke (administrative districts), Kreise (districts/counties) In addition, the dataset includes: ▪ names of national minorities or names in regional languages ▪ overview of the administrative units. The borders are also included as line geometry. The lines are of the type “SingleLine”. The areas are of the type “MultiPolygone“ (also “Multipart“). Each area can comprise several single areas, such as regular area with exclaves or inset areas, each of these MultiPolygones corresponding to a dataset in the attribute table.
Area:	Bundesrepublik Deutschland (Federal Republic of Germany)
Spatial structure:	Complete data set without spatial breakdown
Spatial reference*:	▪ Geographic coordinates in decimal degrees, Ellipsoid GRS80, Datum ETRS89 ▪ Gauß-Krüger projection in the 3rd, 4th or 5th meridional strip Bessel Ellipsoid, Potsdam Datum, (central point Rauenberg) ▪ UTM projection in zone 32 or 33 Ellipsoid GRS80, Datum ETRS89
Position accuracy:	The geometry of the boundaries is with respect to accuracy and resolution designed to the DLM1000 (Digital Landscape Model 1000).

Currentness:	1-year revision cycle with the statuses 31.12. of each year As of 31st December is it possible to georeference the German federal statistics.
Data formats:	▪ Shape ▪ Geopackage
Data supply*:	▪ Dataset via Download ▪ Web Map Service (WMS) ▪ Web Feature Service (WFS)
Modification against last Dataset:	none
Historical data:	available from 1997
Data volume:	▪ SHAPE: 9 MB ▪ Geopackage: 10 MB
Data source:	Municipal directories and originals of acquisition on the basis of the Land Offices of Statistics, the Federal Statistical Office as well as the Land Survey Offices

* Please note that not all forms of delivery can be provided with each georeferencing and data format. If you have any questions, feel free contact the Service Centre (DLZ).

2 General information

The dataset includes the administrative units of the Federal Republic of Germany from the national down to the district level.

With the exception of the administrative district level, the administrative levels have been created on a nationwide basis. On the national and Land levels also the area of the respective territorial sea (12 nautical-mile-zone) is included.

The boundaries are also available as line geometry.

Delimitation of boundaries in Lake Constance is of a technical nature (see **Annex C.1.2**).

The hierarchical structure of the administrative levels is represented by the Amtliche Regionalschlüssel (ARS) (territorial code). In addition, the Amtliche Gemeindeschlüssel (AGS) (Official Municipality Key) is kept with the data, which is derived from the ARS through omission of the administrative association.

ARS and AGS constitute the keys of the products of the statistical offices of the Federal Government and of the Länder. Thus, the integration of statistical data and data synchronization, respectively, can easily be performed (cf. also http://www.destatis.de).

The complex administrative structure is shown country-specifically in the PDF file `Verwaltungsgliederung_VG.pdf` dargestellt (see **Annex**).

The lines of the boundaries are of the geometry type “SingleLine“.

The areas are of the type “MultiPolygone“ (also “Multipart“). Each area can comprise several single areas, such as regular area with exclaves or inset areas, each of these MultiPolygones corresponding to a dataset in the attribute table.

Each administrative unit has precisely one record entry with the GF value 4. In addition, an administrative unit may have a record entry with further GF values. For more information, see **item 3.2.3** for the attribute GF.

The data record usually appears with the status 31.12. of each year. As of 31st December is it possible to georeference the German federal statistics. The German federal statistics are as of 31st December of each year.

The appendices mentioned in this document with further information can be found in the file `annex_vg.pdf` (see **Annex**).

2.1 Territorial code

The territorial code (TC/ARS) is broken down as follows:

1st	– 2nd	digit	=	identification number of the Land
	3rd	digit	=	identification number of the administrative district
4th	– 5th	digit	=	identification number of the district (county)
6th	– 9th	digit	=	identification number of the administrative association
10th	– 12th	digit	=	community identification number

2.1.1 Key number of the administrative association

In this VG-product there are no Verwaltungsgemeinschaften (administrative associations) contained, therefore this point is meaningless for the product described.

2.2 Official municipality key

The official municipality key is analogously to the territorial code subdivided as follows:

1st	– 2nd	digit	=	identification number of the Land
	3rd	digit	=	identification number of the administrative district
4th	– 5th	digit	=	identification number of the district (county)
6th	– 8th	digit	=	community identification number

Through omission of the administrative association key the official municipality key can be formed from the territorial code.

2.3 Specifics in the administrative structure

Specifics in the administrative structure result in the following exceptions.

2.3.1 Unincorporated areas in Schleswig-Holstein

In this VG-product there are no gemeindefreie Gebiete (unincorporated areas) contained, therefore this point is meaningless for the product described.

2.3.2 Inter-district association of administrations (Schleswig-Holstein)

In this VG-product there are no Verwaltungsgemeinschaften (administrative associations) contained, therefore this point is meaningless for the product described.

2.3.3 Unincorporated areas in Bayern (Bavaria)

In this VG-product there are no gemeindefreie Gebiete (unincorporated areas) contained, therefore this point is meaningless for the product described.

2.3.4 Former Regierungsbezirke (administrative districts)

In Niedersachsen, Rheinland-Pfalz and Sachsen the 3rd digit of the ARS (TC) and the AGS (OMK) (administrative district), respectively, serves only to clearly identify the district level. In these Länder (states) administratively there are no more administrative districts existant. The attribute FK_S3 characterizes these cases by the value K.

2.3.5 Common German-Luxembourgish territory

For reasons of generalization the common territory is not available in the dataset. This concerns the German-Luxembourgish boundary line in the rivers Our, Sauer and Moselle. Within the area of the Luxembourgish city of Vianden the otherwise jointly managed territory is interrupted. A list of the parts of the joint territory is given in **Annex D**.

2.4 Undetermined boundary sections

Not mutually agreed sections of national and state (Länder) boundary sections are labelled at the line geometry by the attribute value RDG 2 (legally not defined boundary). The relevant boundary sections constitute a technical delimitation and are illustrated in **Annex C**.

2.5 Communalized waters

Administrative units whose territory also extends over the North Sea or the Baltic Sea or Lake Constance are separated along the coast. A distinction between the two parts of the management units concerned is possible via the attribute GF (geofactor). The partial area on the waters referred to above has the GF value 2. On the other hand, the land areas have the GF value 4. (Description GF see **point 3.2.3**)

3 Description of the dataset

3.1 Specification

The dataset is divided into the different administrative levels of Germany:

- Staat (country) VG1000_STA
- Länder (states) VG1000_LAN
- Administrative districts VG1000_RBZ
- Districts VG1000_KRS

Each of these levels forms an object class containing the area geometry of the administrative units. Except for the administrative district level, all other levels constitute in each case a nationwide dataset, in which the areas contained directly carry the attributive information.

Also, in the dataset are comprised:

- Boundary lines VG1000_LI

  In each case the respective highest level is included.

More information is contained in additional tables:

- Overview of the administrative units VGTB_ATT
- regional language names of the administrative units VGTB_RGS

  The tables are linked to the respective geometry via the ARS attribute.

  The regional language names also include the names of the minorities.

A simple overview of the data model with the attributes and the values is contained in the following 3 tables:

- Attributes and their meaning VG_DATEN
- Designations of the administrative units and IBZ VG_IBZ
- Values of the attributes and their meaning VG_WERTE

3.2 Attributes

3.2.1 General Object Attributes

The general object attributes are based on the AFIS-ALKIS-ATKIS basic schema of the AdV (Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany). The basic traits are defined in the main document of the GeoInfoDok (documentation for modeling the geoinformation of the official surveying system) of the AdV.

OBJID unique object identifier

BEGINN beginning of lifetime interval

Date at which this object was inserted or changed in the data set.

3.2.2 Lines

AGZ Type of boundary

Survey of values

1 = National border
2 = Federal State boundary
3 = Boundary of an administrative district
4 = Boundary of a Kreis (district/county)
9 = Coastline

In each case the respective highest level is meant of the administrative unit limited by the boundary section.

This means: For example for the illustration of all district boundaries all higher boundaries are needed as well. (AGZ values 1, 2, 3 and 4)

The coast line (value 9) comprises the separation of land and water areas within an administrative unit and has no meaning as a dividing line between different administrative units, nor with regard to the foreign shores of Lake Constance and the non-German national border running through this lake.

RDG Legal definition of the boundary section

Survey of values

1 = defined
2 = not defined
9 = coast line

For the purpose of this attribute “defined“ means that the relevant boundary section has been precisely defined in a legal act, or taken from a representation serving cartographic needs.

GM5 Boundary feature of the AGZ 5

The attribute GM5 describes the function of the boundaries of administrative associations (AGZ 5). This attribute carries the value 0 in general, since the boundary layer 5 is not present in this VG-product.

GMK Coast/sea boundary feature

Survey of values

7 = at sea (unusual representation)
8 = in addition at sea (usual representation)
9 = on coast
0 = without any particular feature

The attribute GMK describes the function of the boundary geometry on the coast or on the sea. The value 9 denotes the boundaries which in the dataset run on the on the coast of North Sea, Baltic Sea and Lake Constance.

With the value 8, additional boundary lines in the North Sea, Baltic Sea and Lake Constance are shown in the data set, which have been officially established and whose graphic representation is common. The remaining boundary lines on the waters, the graphical representation is not common are marked with the value 7.

DLM_ID DLM object identifier

Object Identifier of the DLM1000

3.2.3 Areas

ADE Administrative level

Survey of values

1 = Country
2 = State
3 = Administrative district
4 = District

GF Geofactor

Survey of values

1 = Waters without structures
2 = Waters with structures
3 = Land without structure
4 = Land with structure

The areas for which below the Land (state) level there exist no further levels are assigned the designation “without structure“. The indication “waters” refers to the North and Baltic Seas as well as to Lake Constance.

Administrative units whose territory also extends over the North Sea or the Baltic Sea or Lake Constance are separated along the coast. A distinction between the two parts of the administrative units concerned is possible with the attribute GF (Geofactor). The partial area on the mentioned waters has the GF value 2. On the other hand, the land areas have the GF value 4.

For the exclusive representation without the areas on the North Sea, Baltic Sea or Lake Constance filter on GF = 4. The coastal form is thus retained.

Basically:

Each administrative unit has precisely one record entry with the GF value 4.

In addition, an administrative unit may have a record entry with the GF value of 2.

BSG Particular areas

Survey of values

1 = Germany
9 = Lake Constance (Bodensee)

ARS Territorial Code (TC)

This key is the statistical key. It is structured hierarchically and reflects the different administrative levels as existing in the Federal Republic of Germany.

The territorial code (ARS) is broken down as follows:

1st	– 2st	digit	=	identification number of the Land
	3rd	digit	=	identification number of the administrative district
4th	– 5th	digit	=	identification number of the district (county)
6th	– 9th	digit	=	identification number of the administrative association
10th	– 12th	digit	=	community identification number

The ARS is also used to link to the other information tables.

AGS Official municipality key

The key is structured hierarchically and is derived from the ARS shortened by the key number of the administrative association.

The AGS is broken down as follows:

1st	– 2st	digit	=	identification number of the Land
	3rd	digit	=	identification number of the administrative district
4th	– 5th	digit	=	identification number of the district (county)
6th	– 8th	digit	=	community identification number

SDV_ARS Seat of the administration (territorial code)

ARS of the municipality representing the seat of the municipality

GEN Geographical name

BEZ Designation of the administrative unit

(see also IBZ).

IBZ Identificator

The identificator is a product-specific identification number for the BEZ attribute.

BEM Note

The note constitutes a differential description for the BEZ attribute.

NBD Generation of names

Survey of values

ja = designation is part of the name
nein = designation is not part of the name

The attribute indicates whether the BEZ attribute should be used for the full name formation.

IBZ	BEZ	GEN	NBD	full name	*not*
42	Kreis	Oberbergischer Kreis	nein	Oberbergischer Kreis	*Kreis Oberbergischer Kreis*
43	Landkreis	Salzlandkreis	nein	Salzlandkreis	*Landkreis Salzlandkreis*
42	Kreis	Dithmarschen	ja	Kreis Dithmarschen	
43	Landkreis	Prignitz	ja	Landkreis Prignitz	

NUTS European statistics key

for further details, see **Annex E**

Prepared NUTS regions are found in the NUTS250 and NUTS5000 products.
(see www.geodatenzentrum.de → Open Data → Administrative areas (VG) or Verwaltungsgebiete).

ARS_0 filled territorial code

basically 12-digit ARS (filled in with zeros on the right side)

AGS_0 filled Official Municipality Key

basically 8-digit AGS (filled in with zeros on the right side)

WSK Effectiveness

The attribute describes the legally relevant date for the effectiveness of the change. This date is not communicated by all sources, so that there is no entitlement to completeness.

Further attributes include structural key number fractions of the keys ARS and AGS:

SN_L = Land (state)
SN_R = administrative district
SN_K = district
SN_V1 = administrative association – front part
SN_V2 = administrative association – rear part
SN_G = municipality

FK_S3 Function of the 3rd key digit

R = administrative district
K = district

In the case of Länder (states) with administrative districts the attribute is assigned the value R. Länder without an administrative district or 3-digit district key are also assigned the value R, and the 3rd key digit the value 0, respectively. In the case of the Länder with a 3-digit district key number the third key digit only serves to unambiguously mark the Kreis (district) level, and the attribute is assigned the value K. In these Länder there exist no longer any administrative districts.

DLM_ID DLM object identificator

By means of this key the administrative units can be linked with the data stock of the DLM1000 (Digital Landscape Model 1000).

3.2.4 Points

Point data does not exist in this data set. In the VG data, point data is only generated for municipalities.

3.2.5 Tables

In addition to the attributes of the areas (see **item 3.2.3**), further information tables contain further attributes. The tables are linked to the respective geometry via the ARS attribute.

RGS Regional Language

Regional language contains the names of the administrative units in a regional language or in the languages of the national minorities.
The respective language is listed under SPR.

SPR Language

Survey of values

dan = Danish
dsb = Lower Sorbian
frr = Northern Frisian
hsb = Upper Sorbian
nds = Low German
stq = Saterland Frisian

The language refers to RGS (Regional Language) and indicates the language used.

LGS Length of the key

Number of the digits counted from the left of the territorial code not filled with zeros to 12 digits, which identifies the units.

4 Description of the data formats

4.1 SHAPE format

The SHAPE data format constitutes as a de facto industry standard a very widespread and suitable data exchange format for the exchange of geodata.

Each dataset consists of the following files in UTF-8 character coding (Unicode).

4.1.1 Overview of the SHAPE data

area level Staat (country)	VG1000_STA.SHP
area level Land (federal state)	VG1000_LAN.SHP
area level Regierungsbezirk (administrative district)	VG1000_RBZ.SHP
area level Kreis (district)	VG1000_KRS.SHP
boundary lines	VG1000_LI.SHP
table regional language names (also minorities) (administrative units)	VGTB_RGS_VG.DBF
table overview of the administrative units	VGTB_ATT_VG.DBF

Tables with a simple overview of the data model with the attributes and the values:

table attributes and their meaning	VG_DATEN.DBF
table designations of the administrative units and IBZ	VG_IBZ.DBF
table values of the attributes and their meaning	VG_WERTE.DBF

4.1.1 File structure of the SHAPE format

The shape files have the following file structure:

*.SHP	Geometry
*.SHX	Geometry index
*.PRJ	Projection
*.DBF	Attributes
*.CPG	Character set

The pure tables consist only of the DBF and CPG files.

4.2 Geopackage format

The Geopackage Data Format (GPKG) is an open source format from the Open Geospatial Consortium (OGC) for storing, managing and exchanging geospatial data. The GeoPackage is based on an SQLite database.

The GPKG databases provided are based on the profile for the geopackage of the AdV (Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany).

4.2.1 Geopackage data overview

The data correspond to those of the Shape format.

vg1000_sta	area level Staat (country)
vg1000_lan	area level Land (federal state)
vg1000_rbz	area level Regierungsbezirk (administrative district)
vg1000_krs	area level Kreis (district)
vg1000_li	boundary lines
vgtb_rgs	table regional language names (also minorities) (administrative units)

Note: The overview of the administrative units is only contained in the geopackage as view v_vgtb_att.

Tables with a simple overview of the data model with the attributes and the values:

vg_daten	table attributes and their meaning
vg_ibz	table designations of the administrative units and IBZ
vg_werte	table values of the attributes and their meaning

4.2.2 Overview of the views in the geopackage

The views are a special view of the data with integrated value tables for itemized value information and resolved attribute labels.

v_vg1000_krs	View to the Kreis (district)
v_vg1000_rbz	View to the Regierungsbezirk (administrative district)
v_vg1000_lan	View to the Land (federal state)
v_vg1000_sta	View to the Staat (country)
v_vg1000_f	View of the base areas (lowest level in each case)
v_vg1000_li	View to the boundary lines
v_vgtb_att	View overview of the administrative units
v_vgtb_rgs	View to the regional language names (also minorities) (administrative units)
v_vg_ibz	View overview of designations of the administrative units (IBZ)
v_vg_sn_zahl	View key ARS/AGS as number

Note:

With the view v_vg_sn_zahl, the ARS/AGS keys formatted as text are also output as numbers. The SQL function Cast used for this purpose is not supported by all GIS programs.

In the view v_vg1000_sta, the SQL function Case is used for the value resolution of the attribute FK_S3. This is not supported by all GIS systems. In this case, FK_S3 is not broken down into the long form under the name Funk_Schlüsselstelle3. At the State level, this attribute has no meaning.

The various views v_werte_xxx and v_at_vg only serve as a basis for the other views.

5 Annexes

Further information can be found in the above-mentioned enclosed appendix for documentation, which can be found in the attached file `annex_vg.pdf`.

There is also a country-by-country representation of the complex administrative structure in the file `verwaltungsgliederung_vg.pdf` (administrative structure). At the end of the file there is also a brief overview of the data model of the VG data.

They can be found on our homepage www.bkg.bund.deunder the heading „Products & Services“ → „Digitale Geodaten“.

6 Data acquisition

The database can be obtained free of charge on our website www.bkg.bund.de under the heading „Products and Services“ → „Open Data“. Historical data is also available in our archive.

7 Terms of use

The data are protected by copyright. The data are made available free of charge in accordance with the "Datenlizenz Deutschland Namensnennung 2.0". The use of the dataset for the maintenance and expansion of the data of the OpenStreetMap project is expressly permitted in compliance with the naming information described in the supplementary text. The source note must be observed.

Ergänzung der „Datenlizenz Deutschland – Namensnennung – Version 2.0“ für die Nutzung von Daten der Behörden durch das OpenStreetMap Projekt (PDF, 135 KB)

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Data sources: https://sgx.geodatenzentrum.de/web_public/Datenquellen_vg_nuts.pdf

9 Contact

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