Source	Global Scope	Subdivision Available				Common File Format Available		0	Commercial	From Gov.	Clear Source	Regularly
		ADM0	ADM1	ADM2	ADM3	Shapefile	GeoJSON	Open License	Use	Source	Lineage	Updated
geoBoundaries	•	•	•	•	•	•	•	•	•	•	•	•
GADM	•	•	•	•	•	•	•	0	0	0	0	0
OpenStreetMap	•	•	•	•	•	0	0	•	•	0	0	•
Natural Earth	•	•	•	•	0	•	0	•	•	0	0	0
OCHA COD	0	•	•	•	•	•	0	•	•	•	0	•
UN SALB	0	0*	0*	•	0	•	0	0	0	•	•	•
World Bank	•	•	0	0	0	•	•	•	•	0	0	0
US State Department (LSIB)	•	•	0	0	0	•	0	0	0	•	0	•
Who's on First	•	•	•	•	•	0	•	•	•	•	•	•
ESRI Living Atlas	•	•	•	•	•	•	•	0	•	0	•	•
OpenDataSoft	•	•	0	0	0	•	•	•	•	0	•	0
thematicmapping	•	•	0	0	0	•	•	•	•	0	•	0
IPUMS International	•	•	•	•	•	•	0	0	0	•	0	0
Cshapes	•	•	0	0	0	•	•	0	0	0	•	•

Yes

O No

• Mixed

\*derivable

# **geoBoundaries**

## **Contact**

Advantages: Open license, clear source lineage, regularly updated, global scope, high level ADMs available

Limitations: Only partially available from government sources

The main advantage of using the geoBoundaries dataset is that it is entirely available in open licenses and for commercial use. The dataset is able to retain this aspect for spatial data at a global scope and relatively high administrative levels for most of the data, and the data is able to be easily downloaded from the geoBoundaries website. The main challenge for use of this dataset is that its data is not completely acquired from government sources, which leads to questions of data accuracy.

# GADM Contact

Advantages: Global scope, high level ADMs available

Limitations: Not open license, no clear source linear, not regularly updated

The Global Administrative Areas (GADM) database provides boundaries at a global level and for high administrative levels for a majority of countries. This data is available through a website with a relatively easy to use interface. Although it has easily accessible and high level data, the dataset does not provide a clear source lineage for its data, which brings questions of data accuracy, and the data is not open license or available for commercial use.

### **OpenStreetMap**

#### Help resources

Advantages: Global scope, relatively high ADMs available, open license, regularly updated

Limitations: Not available for download in shapefile or geoJSON format, no clear source lineage,

OpenStreetMap provides a global scope of spatial data, including administrative boundaries, which is regularly updated. The main challenge of use is that the data is available for download of an XML file, but not of a shapefile or geoJSON unless using a third party interface. The data is also not originated from a government source, and there is also not a clear source lineage, so questions of data accuracy arise.

#### **Natural Earth**

### **Contact**

Advantages: Global scope, open license

Limitations: No high level ADMs available for most countries, not regularly updated, no clear source lineage

The Natural Earth dataset provides a single file of global country boundaries and each country's first level of administrative divisions, which is open licensed and available for commercial use. Its main challenge for use is that individual country files are not available for download and there is no data available for administrative divisions higher than level 1 except for the United States. The dataset also holds questions of accuracy as it was created by digitization of volunteers in 2012.

## **OCHA COD**

Contact: fis-ocha@un.org

Advantages: Partially from government sources, some high level ADMs available

Limitations: Partially open license, no clear source lineage

OCHA Common Operational Datasets provide administrative boundaries and in some cases have high administrative levels available. Some of the data is sourced from a government source, so some data has a higher potential for accurate boundaries than others, and some, but not all, data is also released under open licenses. Data is available for download from <u>HDX</u>.

### **UN SALB**

Contact: salb@un.org

Advantages: From government sources, clear source lineage, regularly updated

Limitations: Data not available at global scope, not open license

The United Nations Second Administrative Level Boundaries (UN SALB) provides individual files for the second administrative divisions of select countries. These selected countries are determined by if official country offices are able to provide the boundaries, so although the data is not available at a global scope, this data provides relatively high accuracy. The main challenge for use is not being open licensed or available for commercial use.

#### **World Bank**

Contact: data@worldbank.org

Advantages: Open license, global scope

Limitations: ADMs not available at high level, not regularly updated, no clear source lineage

The World Bank provides a single file of administrative boundaries at the country level at a global scope for download and also lists an API endpoint for use with Esri software. All data is released under an open license and for commercial use, but data is not from a government source and does not have a clear source lineage, so questions of data accuracy arise.

### **US State Department (LSIB)**

#### **Contact**

Advantages: From government source, regularly updated, global scope

Limitations: No open license, no high level ADMs available

The U.S. State Department provides the Large Scale International Boundaries (LSIB) dataset, which is a single file of global boundaries, which is regularly updated and available under an open license and for commercial use. The main challenges for use is that the dataset does not provide administrative divisions higher than the country level, and the data is specifically for boundaries between countries, so complete polygons for countries may not be available if they are bordered by water bodies. Although it is provided by a government source, questions of accuracy still arise.

## **Who's on First**

No contact provided

Advantages: Open license, clear source lineage, global scope, high ADMs available

Limitations: No easy-to-use interface for downloading data

Who's on First provides single GeoJSON files for all administrative boundaries available on their respective country's GitHub repository, and provides <u>documentation</u> for the placetypes available by each country. Although a lot of data is provided, navigating each country's repository for the desired file is not simple and requires knowledge of <u>placetypes</u> and the system that Who's on First uses. The data is available under many different types of <u>open licenses</u> depending on the original source of the data, which is well documented in the data file. Depending on the original data source, questions of data accuracy arise.

## **ESRI Living Atlas**

**Contact** 

Advantages: Global scope, high level ADMs available, regularly updated

Limitations: Not open license, not from government source

Esri's Living Atlas data provides administrative boundaries at a global scope as well as high administrative levels for many countries. A main advantage of using this data is being able to access the data from within Esri software, users need not manually download and import data. Data is available for commercial use but is not open licensed. The data is also not sourced from a government source, which brings questions of data accuracy.

#### **OpenDataSoft**

No contact provided

**Advantages:** Global scope, open license, clear source lineage **Limitations:** No high level ADMs available, not regularly updated

OpenDataSoft provides a global scope of individual country boundaries for download through an easy to use website interface. The dataset does not provide any other level of administrative division besides the country level. The dataset is not regularly updated, as its primary data source has been deprecated, which brings questions of data accuracy.

## **Thematic Mapping**

**Contact** 

Advantages: Global scope, open license, clear source lineage

Limitations: No high level ADMs available, not from government source, not regularly updated

The thematic mapping dataset provides a single file for country boundaries at a global scope, which is available under an open license and available for commercial use. Individual country files are not available, and no boundaries higher than the country level are available. The dataset is not regularly updated and is not sourced from a government source, which brings questions of data accuracy.

## **IPUMS International**

Contact: <u>ipums@umn.edu</u>; <u>Forum</u>

Advantages: Global scope, from government source

Limitations: Not open license, not regularly updated, high ADM levels partially available

IPUMS International provides a single file of global country boundaries in addition to individual country files for many countries at higher administrative levels. The data is sourced from a government source, but questions of accuracy still arise as the main source is the U.S. government. Main challenges for use include the dataset not being open licensed or available for commercial use and it not being regularly updated.

## **Cshapes**

**Contact** 

Advantages: Global scope, regularly updated, clear source lineage

Limitations: Not open license, not from government source, no high level ADMs available

CShapes provides a global scope, single file of country level administrative boundaries from 1886 to 2019 for download. The second version of this dataset has been recently released, but this data is not available under an open license or available for commercial use. Since it does not originate from government sources, questions of boundary accuracy arise.