

# Package ‘mapSenegal’

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**Type** Package

**Title** Administrative Boundaries of Senegal

**Version** 0.1.1

**Description** The administrative boundaries of Senegal are provided at several levels, including regions, departments, arrondissements and communes. The Global Administrative Areas database, or ‘GADM’ <<https://gadm.org/>>, is the primary source for these layers. The dataset is complemented by the incorporation of additional geographic layers, such as localities, universities, roads, or health facility locations.

**Depends** R (>= 3.5.0), sf

**URL** <https://github.com/mapSenegal/mapSenegal>

**BugReports** <https://github.com/mapSenegal/mapSenegal/issues>

**Suggests** mapsf

**License** GPL-3

**Encoding** UTF-8

**RoxygenNote** 7.3.3

**NeedsCompilation** no

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sn_arrondissements	<i>Arrondissements</i>
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## Description

Arrondissements of Senegal.

- `GID_1`: identifier for regions
- `GID_2`: identifier for departments
- `GID_3`: unique identifier for arrondissements
- `NAME`: name of the arrondissement
- `CC_3`: unknown code

## Usage

```
sn_arrondissements()
```

## Value

An sf object is returned.

## Source

Codes and geometries have been extracted from the GADM database v4.1 (<https://gadm.org/>). Geometries precision has been fixed to 1 meter.

## Examples

```
ardt <- sn_arrondissements()
plot(ar dt)
if (require("mapsf")) {
  mf_map(ar dt)
  mf_title("Arrondissements of Senegal")
}
```

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sn_communes	<i>Communes</i>
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## Description

Communes of Senegal.

- GID\_1: identifier for regions
- GID\_2: identifier for departments
- GID\_3: identifier for arrondissements
- GID\_4: identifier for communes
- NAME: name of the arrondissement
- CC\_4: unknown code

## Usage

```
sn_communes()
```

## Value

An sf object is returned.

## Source

Codes and geometries have been extracted from the GADM database v4.1 (<https://gadm.org/>). Geometries precision has been fixed to 1 meter.

## Examples

```
com <- sn_communes()
plot(com)
if (require("mapsf")) {
  mf_map(com)
  mf_title("Communes of Senegal")
}
```

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sn_country	<i>Country</i>
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### Description

Senegal, level-0 entity.

- `GID_0`: unique identifier for countries
- `NAME`: name of the country

### Usage

```
sn_country()
```

### Value

An sf object is returned.

### Source

Codes and geometries have been extracted from the GADM database v4.1 (<https://gadm.org/>). Geometries precision has been fixed to 1 meter.

### Examples

```
senegal <- sn_country()
plot(senegal)
if (require("mapsf")) {
  mf_map(senegal)
  mf_title("Senegal")
}
```

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sn_departments	<i>Departments</i>
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### Description

Departments of Senegal, level-2 entities.

- `GID_1`: identifier for regions
- `GID_2`: unique identifier for departments
- `NAME`: name of the department
- `CC_2`: unknown code
- `HASC_2`: hierarchical administrative subdivision codes for level-2 entities
- `POP_RGPH5`: 2023 population
- `POP_2024`: 2024 population

**Usage**

```
sn_departments()
```

**Value**

An sf object is returned.

**Source**

Codes and geometries have been extracted from the GADM database v4.1 (<https://gadm.org/>). Geometries precision has been fixed to 1 meter.

**Examples**

```
dep <- sn_departments()
plot(dep)
if (require("mapsf")) {
  mf_map(dep)
  mf_title("Departments of Senegal")
}
```

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sn\_health\_facilities *Health facilities*

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**Description**

Health facilities of Senegal

- NAME: health facility name
- CC\_1: unkown code
- CC\_2: unkown code
- TYPE: health facility category

**Usage**

```
sn_health_facilities()
```

**Value**

An sf object is returned.

**Source**

Direction des Travaux geographiques et de la cartographie, Senegal.

## Examples

```
hf <- sn_health_facilities()
plot(hf)
if (require("mapsf")) {
  mf_map(hf, var = "TYPE", type = "symb", cex = 1, pal = "Dark 3", add = FALSE)
  mf_title("Health Facilities of Senegal")
}
```

---

sn\_localities

*Localities*

---

## Description

Localities of Senegal.

- NAME: locality name
- CC\_1: unknown code
- CC\_2: unknown code

## Usage

```
sn_localities()
```

## Value

An sf object is returned.

## Source

Direction des Travaux géographiques et de la cartographie, Senegal.

## Examples

```
loc <- sn_localities()
plot(loc)
if (require("mapsf")) {
  mf_map(loc)
  mf_title("Localities of Senegal")
}
```

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sn_neighbors	<i>Neighboring countries</i>
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**Description**

Neighboring countries of Senegal, level-0 entities.

- **GID\_0**: unique identifier for countries
- **NAME**: name of the country

**Usage**

```
sn_neighbors()
```

**Value**

An sf object is returned.

**Source**

Codes and geometries have been extracted from the GADM database v4.1 (<https://gadm.org/>). Geometries precision has been fixed to 1 meter. Countries were cropped using a 100 km buffer around the Senegal bounding box.

**Examples**

```
neighbors <- sn_neighbors()
plot(neighbors)
if (require("mapsf")) {
  mf_map(neighbors)
  mf_label(neighbors, "NAME", halo = TRUE)
  mf_title("Senegal and Neighboring Countries")
}
```

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sn_regions	<i>Regions</i>
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**Description**

Regions of Senegal, level-1 entities.

- **GID\_1**: unique identifier for regions
- **NAME**: name of the region
- **CC\_1**: unknown identifier
- **HASC\_1**: hierarchical administrative subdivision codes for level-1 entities
- **ISO**: ISO codes for level-1 entities (ISO-3166-2)
- **POP\_RGPH4**: 20xx population
- **POP\_RGPH5**: 2023 population

**Usage**

```
sn_regions()
```

**Value**

An sf object is returned.

**Source**

Codes and geometries have been extracted from the GADM database v4.1 (<https://gadm.org/>). Geometries precision has been fixed to 1 meter.

**Examples**

```
reg <- sn_regions()
plot(reg)
if (require("mapsf")) {
  mf_map(reg)
  mf_title("Regions of Senegal")
}
```

---

sn\_roads

*Roads*

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**Description**

Roads of Senegal.

- TYPE: road type. 1 for motorways, 2 for national roads, 3 for regional roads, 4 for departmental roads, 5 for other roads.
- NAME: road name

**Usage**

```
sn_roads()
```

**Value**

An sf object is returned.

**Source**

Direction des Travaux géographiques et de la cartographie, Senegal.

**Examples**

```
roads <- sn_roads()
plot(roads)
if (require("mapsf")) {
  mf_map(roads, var = "TYPE", type = "typo", lwd = 2)
  mf_title("Roads of Senegal")
}
```

---

sn_universities	<i>Universities</i>
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**Description**

Universities of Senegal.

- NAME: university name
- NB\_FACULTIES: number of faculties
- NB\_STUDENTS: number of students

**Usage**

```
sn_universities()
```

**Value**

An sf object is returned.

**Source**

Dataset gathered by Labaly Toure.

**Examples**

```
univ <- sn_universities()
plot(univ)
if (require("mapsf")) {
  mf_map(univ, var = "NB_STUDENTS", type = "prop", add = FALSE)
  mf_title("Universities of Senegal")
}
```

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