

# Package ‘norgeo’

February 1, 2022

**Title** Track Geo Code Changes in all Regional Granularity in Norway

**Version** 2.1.0

**Description** Regional granularity levels in Norway which are depicted by different codes, have undergone several changes over the years. Identifying when codes have changed and how many changes have taken place can be troublesome. This package will help to identify these changes and when the changes have taken place. One of the limitation of this package is that it is heavily depending on the codes available from SSB website <<https://data.ssb.no/api/klass/v1/api-guide.html>>.

**License** MIT + file LICENSE

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.1.2

**Imports** data.table (>= 1.14.0), odbc, DBI, magrittr, RSQLite, writexl, httr, jsonlite, vcr, progressr

**Suggests** testthat (>= 3.0.0), pkgdown, knitr, rmarkdown

**URL** <https://github.com/helseprofil/norgeo>

**BugReports** <https://github.com/helseprofil/norgeo/issues>

**VignetteBuilder** knitr

**Depends** R (>= 3.5.0)

**Config/testthat/edition** 3

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2022-02-01 16:00:17 UTC

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|          |                                      |
|----------|--------------------------------------|
| cast_geo | <i>Cast geo granularity from API</i> |
|----------|--------------------------------------|

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### Description

Add geo granularity levels to all sides

### Usage

```
cast_geo(year = NULL)
```

### Arguments

year Which year the codes are valid from. If NULL then current year will be selected.

### Value

A dataset of class `data.table` representing the spreading of different geographical levels from lower to higher levels ie. from enumeration area codes to county codes, for the selected year.

### Examples

```
## Not run:
DT <- cast_geo(2020)

## End(Not run)
```

---

|         |   |
|---------|---|
| dataApi | <i>Where downloaded data will be kept</i> |
|---------|---|

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**Description**

Downloaded data will be stored in dataApi to avoid downloading multiple time for the same selected data

**Usage**

```
dataApi
```

**Format**

An object of class environment of length 0.

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|                 |                                 |
|-----------------|---------------------------------|
| find_correspond | <i>Find existing correspond</i> |
|-----------------|---------------------------------|

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**Description**

Unlike [get\\_correspond\(\)](#) functions, this function will find existing correspond if the specified year has no correspond codes. Correspond codes can be empty if nothing has changed in that specific year and need to get from previous year or even year before previous year etc..etc.. This function is needed when running [cast\\_geo\(\)](#).

**Usage**

```
find_correspond(type, correspond, from)
```

**Arguments**

|            |  |
|------------|--|
| type       | Higher granularity from specified correspond arg.                        |
| correspond | Lower granularity from the specified type arg.                           |
| from       | Specify the starting year for range period. Current year is the default. |

**Value**

A dataset of class `data.table` representing the lower geographical level codes and their corresponding higher geographical levels. For example for codes on enumeration areas and their corresponding codes for municipalities or town.

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|          |                       |
|----------|-----------------------|
| geo_save | <i>Save geo codes</i> |
|----------|-----------------------|

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### Description

Geo codes can be saved either in a database management system (DBMS) or as an Excel or text file.

### Usage

```
geo_save(
  tblname = NULL,
  obj = NULL,
  des.path = FALSE,
  file.type = c("Access", "SQLite", "Excel", "Text"),
  db.name = NULL
)
```

### Arguments

|           |   |
|-----------|---|
| tblname   | Name of the table to be saved as                    |
| obj       | Object name to be saved                             |
| des.path  | Destination folder where the file to be saved       |
| file.type | Choose file type as Access, SQLite, Excel or Text   |
| db.name   | When choosing a DBMS then specify the database name |

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|            |                                      |
|------------|--------------------------------------|
| get_change | <i>Get geo code changes with API</i> |
|------------|--------------------------------------|

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### Description

This function will download all geographical code changes from SSB via API except enumeration areas (*grunnkrets*) between 1980 to 2001. The code change can be found in the dataset *GrunnkretsBefore2002*.

Basically the downloaded data are those you can see directly [here](#), for example if you looking for code change in municipality (*kommune*). The advantage of using `get_change` or **KLASS** is that you can get all code changes for several years at once.

**Usage**

```
get_change(
  type = c("fylke", "kommune", "bydel", "grunnkrets"),
  from = NULL,
  to = NULL,
  code = TRUE,
  quiet = FALSE,
  date = FALSE
)
```

**Arguments**

|       |   |
|-------|---|
| type  | Type of regional granularity ie. fylke, kommune etc.  |
| from  | Specify the starting year for range period. Current year is the default.                    |
| to    | Specify the year to end the range period. Current year is used when not specified.          |
| code  | TRUE will only track code changes. Else change name only will also be considered as change. |
| quiet | TRUE will suppress messages when no changes happened for a specific time range              |
| date  | If TRUE then give complete date else year only  |

**Value**

A dataset of class data.table consisting old and new code with the respective year when the codes have changed

**Examples**

```
DT <- get_change("kommune", from = 2018, to = 2020)
```

---

|          |   |
|----------|---|
| get_code | <i>Get the codes of geographical levels</i> |
|----------|---|

---

**Description**

This function will download the codes of selected geographical levels via API.

**Usage**

```
get_code(
  type = c("fylke", "kommune", "bydel", "grunnkrets"),
  from = NULL,
  to = NULL,
  date = FALSE
)
```

**Arguments**

|      |  |
|------|--|
| type | Type of regional granularity ie. fylke, kommune etc.                               |
| from | Specify the starting year for range period. Current year is the default.           |
| to   | Specify the year to end the range period. Current year is used when not specified. |
| date | If TRUE then give complete date else year only                                     |

**Value**

A dataset of class `data.table` consisting codes of selected geographical level and the duration the codes are valid ie. from and to.

**Examples**

```
## Not run:
mydata <- get_code("kommune", from = 2017, to = 2020)

## End(Not run)
```

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|                |                            |
|----------------|----------------------------|
| get_correspond | <i>Get geo corresponds</i> |
|----------------|----------------------------|

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**Description**

This function will get the corresponding geo code of specific granularity via API from SSB whenever available.

**Usage**

```
get_correspond(
  type = c("fylke", "kommune", "bydel", "grunnkrets"),
  correspond = c("fylke", "kommune", "bydel", "grunnkrets"),
  from = NULL,
  to = NULL,
  dt = TRUE
)
```

**Arguments**

|            |  |
|------------|--|
| type       | Higher granularity from specified correspond arg.                                  |
| correspond | Lower granularity from the specified type arg.                                     |
| from       | Specify the starting year for range period. Current year is the default.           |
| to         | Specify the year to end the range period. Current year is used when not specified. |
| dt         | Output as <code>data.table</code>  |

**Value**

A dataset of class data.table representing the lower geographical level codes and their corresponding higher geographical levels. For example for codes on enumeration areas and their corresponding codes for municipalities or town.

**Examples**

```
## Not run:  
df <- get_correspond("kommune", "grunnkrets", 2020)  
  
## End(Not run)
```

---

GrunnkretsBefore2002    *Grunnkrets Change Before 2002*

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**Description**

Grunnkrets codes change before 2002 are not available via API. This is a dataset received directly from SSB.

**Usage**

```
GrunnkretsBefore2002
```

**Format**

A data of data.table class consisting 3 variables:

**oldCode** Code before change

**newCode** Code after change

**changeOccurred** The year when the change happened

**Source**

<https://www.ssb.no/klass/klassifikasjoner/1/endringer>

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|     |                                    |
|-----|------------------------------------|
| raw | <i>Where raw data will be kept</i> |
|-----|------------------------------------|

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**Description**

Created object when running `norgeo::read_csv()`

**Usage**

raw

**Format**

An object of class environment of length 0.

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|              |   |
|--------------|---|
| track_change | <i>Track all changes for codes from API</i> |
|--------------|---|

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**Description**

Track all code changes until current year or the year specified in to argument. The column oldCode could have several codes if it has changed many times until it becomes the code in newCode. When no code change has taken place, NA will be used.

**Usage**

```
track_change(
  type = c("fylke", "kommune", "bydel", "grunnkrets"),
  from = NULL,
  to = NULL
)
```

**Arguments**

|      |  |
|------|--|
| type | Type of regional granularity ie. fylke, kommune etc.                               |
| from | Specify the starting year for range period. Current year is the default.           |
| to   | Specify the year to end the range period. Current year is used when not specified. |

**Value**

A dataset of class `data.table` consisting all older codes from previous years until the selected year in to argument and what these older codes were changed into. If the codes have not changed then the value of old code will be NA.



**Examples**

```
## Not run:  
mydata <- track_change("kommune", from = 2017, to = 2020)  
  
## End(Not run)
```

---

|             |   |
|-------------|---|
| track_merge | <i>Get geo code that are merged after code change</i> |
|-------------|---|

---

**Description**

Get geo code that are merged after code change

**Usage**

```
track_merge(  
  type = c("fylke", "kommune", "bydel", "grunnkrets"),  
  from = NULL,  
  to = NULL  
)
```

**Arguments**

|      |  |
|------|--|
| type | Type of regional granularity ie. fylke, kommune etc.                               |
| from | Specify the starting year for range period. Current year is the default.           |
| to   | Specify the year to end the range period. Current year is used when not specified. |

**Value**

Dataset of class data.table with column merge showing the number of time the codes have been merged into

**Examples**

```
dt <- track_merge("kommune", 2018, 2020)
```

---

`track_split`*Get geo code that are split after code change*

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**Description**

Get geo code that are split after code change

**Usage**

```
track_split(  
  type = c("fylke", "kommune", "bydel", "grunnkrets"),  
  from = NULL,  
  to = NULL  
)
```

**Arguments**

|                   |  |
|-------------------|--|
| <code>type</code> | Type of regional granularity ie. fylke, kommune etc.                               |
| <code>from</code> | Specify the starting year for range period. Current year is the default.           |
| <code>to</code>   | Specify the year to end the range period. Current year is used when not specified. |

**Value**

Dataset of class `data.table` with column `split` showing the number of time the codes have been split to

**Examples**

```
dt <- track_split("kommune", 2018, 2020)
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