

# Package ‘fude’

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**Type** Package

**Title** Utilities for Fude Polygon

**Version** 0.3.5

**Description** Provides utilities to facilitate handling of Fude Polygon data downloadable from the Ministry of Agriculture, Forestry and Fisheries website <<https://open.fude.maff.go.jp>>.

**License** MIT + file LICENSE

**URL** <https://github.com/takeshinishimura/fude>,  
<https://takeshinishimura.github.io/fude/>

**BugReports** <https://github.com/takeshinishimura/fude/issues>

**Encoding** UTF-8

**LazyData** true

**Depends** R (>= 3.3.0)

**Imports** sf, dplyr, tidyr, purrr, rlang, magrittr, forcats, stringi,  
glue

**Suggests** testthat (>= 3.0.0)

**RoxygenNote** 7.2.3

**Config/testthat/edition** 3

**NeedsCompilation** no

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bind_fude	<i>Bind multiple Fude Polygon data</i>
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### Description

bind\_fude() binds a list of polygon data. It also binds a list of data combined by [combine\\_fude\(\)](#).

### Usage

```
bind_fude(...)
```

### Arguments

... Database lists to be combined. They should all have the same named elements.

### Value

A list of [sf::sf\(\)](#) object(s).

### See Also

[read\\_fude\(\)](#), [combine\\_fude\(\)](#).

### Examples

```
path <- system.file("extdata", "castle.zip", package = "fude")
d1 <- read_fude(path, stringsAsFactors = FALSE, quiet = TRUE)
d2 <- read_fude(path, stringsAsFactors = FALSE, quiet = TRUE)
bind_fude(d1, d2)
```

---

combine_fude	<i>Combine the Fude Polygon data with the agricultural community boundary data</i>
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### Description

combine\_fude() uses the agricultural community boundary data to reduce the Fude Polygon data to the community units.

### Usage

```
combine_fude(  
  data,  
  boundary,  
  city,  
  old_village = "",  
  community = "",  
  year = NULL  
)
```

### Arguments

data	List of <code>sf::sf()</code> objects.
boundary	List of one or more agricultural community boundary data provided by the MAFF.
city	A local government name in Japanese to be extracted. In the case of overlapping local government names, this must contain the prefecture name in Japanese and the prefecture code in romaji (e.g., "Fuchu-shi, 13", "fuchu 13", "34 fuchu-shi", "34, FUCHU-CHO"). Alternatively, it could be a 6-digit local government code.
old_village	String by regular expression. One or more old village name in Japanese to be extracted.
community	String by regular expression. One or more agricultural community name in Japanese to be extracted.
year	Year in the column name of the data. If there is more than one applicable local government code, it is required.

### Value

A list of `sf::sf()` objects.

### See Also

[read\\_fude\(\)](#).

**Examples**

```
path <- system.file("extdata", "castle.zip", package = "fude")
d <- read_fude(path, stringsAsFactors = FALSE)
b <- get_boundary(d)
db <- combine_fude(d, b, "\u677e\u5c71\u5e02", "\u57ce\u6771", year = 2022)
```

---

 extract\_fude

*Extract specified Fude Polygon data*


---

**Description**

extract\_fude() extracts the specified data from the list returned by [read\\_fude\(\)](#).

**Usage**

```
extract_fude(data, year = NULL, city = NULL, list = TRUE)
```

**Arguments**

data	List of <a href="#">sf::sf()</a> objects.
year	Years to be extracted.
city	Local government names or codes to be extracted.
list	logical. If FALSE, the object to be extracted is no longer a list.

**Value**

A list of [sf::sf\(\)](#) object(s).

**See Also**

[read\\_fude\(\)](#).

**Examples**

```
path <- system.file("extdata", "castle.zip", package = "fude")
d <- read_fude(path, stringsAsFactors = FALSE, quiet = TRUE)
d2 <- extract_fude(d, year = 2022)
```

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get_boundary	<i>Get the agricultural community boundary data</i>
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**Description**

get\_boundary() downloads and reads one or more agricultural community boundary data provided by the MAFF.

**Usage**

```
get_boundary(data, year = 2020, quiet = FALSE, path = NULL, to_wgs84 = TRUE)
```

**Arguments**

data	List of <code>sf::sf()</code> objects.
year	Year in which the agricultural community boundary data was created.
quiet	logical. Suppress information about the data to be read.
path	Path to the ZIP file containing the agricultural community boundary data; use a local ZIP file instead of going looking for a ZIP file. Specify a directory containing one or more ZIP files, not the ZIP file itself.
to_wgs84	logical. Convert JGD2000 to WGS 84.

**Value**

A list of `sf::sf()` objects.

**Examples**

```
path <- system.file("extdata", "castle.zip", package = "fude")
d <- read_fude(path)
b <- get_boundary(d)
```

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lg_code_table	<i>Local government code/name correspondence table</i>
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**Description**

A dataset containing codes/names of local governments in Japan.

**Usage**

```
lg_code_table
```

**Format**

A data frame with 1,992 rows and 6 variables:

**lg\_code** Local government codes

**pref\_kanji** Prefecture names written in kanji

**city\_kanji** Local government names written in kanji

**pref\_kana** Prefecture names written in katakana

**city\_kana** Local government names written in katakana

**romaji** Local government names written in romaji

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ls\_fude

*Itemize the structure of Fude Polygon data*

---

**Description**

ls\_fude() lists the year and the local government names (or codes) in order to understand what is included in the list returned by [read\\_fude\(\)](#).

**Usage**

```
ls_fude(data)
```

**Arguments**

data            List of [sf::sf\(\)](#) objects.

**Value**

A data.frame.

**See Also**

[read\\_fude\(\)](#).

**Examples**

```
path <- system.file("extdata", "castle.zip", package = "fude")
d <- read_fude(path, stringsAsFactors = FALSE, quiet = TRUE)
ls_fude(d)
```

---

pref_table	<i>Prefecture code/name correspondence table</i>
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**Description**

A dataset containing codes/names of prefectures in Japan.

**Usage**

```
pref_table
```

**Format**

A data frame with 47 rows and 2 variables:

**pref\_code** Prefecture codes

**pref\_kanji** Prefecture names written in kanji

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read_fude	<i>Read a Fude Polygon ZIP file</i>
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**Description**

`read_fude()` reads Fude Polygon data as a list. The data can be downloaded from the MAFF website as a ZIP file, which contains one or more GeoJSON format files. The function should also work with the ZIP file you created, as long as you do not change the filenames of the original GeoJSON files.

**Usage**

```
read_fude(path, stringsAsFactors = TRUE, quiet = FALSE)
```

**Arguments**

`path` Path to the ZIP file containing one or more GeoJSON format files.

`stringsAsFactors`

logical. should character vectors be converted to factors?

`quiet`

logical. Suppress information about the data to be read.

**Value**

A list of `sf::sf()` objects.

**Examples**

```
path <- system.file("extdata", "castle.zip", package = "fude")
d <- read_fude(path, stringsAsFactors = FALSE)
```

---

rename_fude	<i>Rename the Fude Polygon data</i>
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### Description

rename\_fude() renames the 6-digit local government code of the list returned by read\_fude() to the corresponding Japanese name in order to make the data human-friendly.

### Usage

```
rename_fude(data, suffix = TRUE, romaji = NULL, quiet = FALSE)
```

### Arguments

data	List of <code>sf::sf()</code> objects.
suffix	logical. If FALSE, suffixes such as "SHI" and "KU" in local government names are removed.
romaji	If not NULL, rename the local government name in romaji instead of Japanese. Romanji format is upper case unless specified. <ul style="list-style-type: none"><li>• "title": Title case.</li><li>• "lower": Lower case.</li><li>• "upper": Upper case.</li></ul>
quiet	logical. Suppress information about the data to be read.

### Value

A list of `sf::sf()` objects.

### See Also

[read\\_fude\(\)](#).

### Examples

```
path <- system.file("extdata", "castle.zip", package = "fude")
d <- read_fude(path, stringsAsFactors = FALSE, quiet = TRUE)
d2 <- rename_fude(d)
d2 <- rename_fude(d, suffix = FALSE)
d2 <- d |> rename_fude(romaji = "upper")
```



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