Package 'resourcecodedata'

September 1, 2025

Title Resourcecode Database Configuration Data

Version 1.0.0

Description Includes Resourcecode hindcast database (see <https://resourcecode.ifremer.fr>) configuration data: nodes locations for both the sea-state parameters and the spectra data; examples of time series of 1D and 2D surface elevation variance spectral density.

License GPL (>= 3)

URL https://github.com/Resourcecode-project/r-resourcecodedata/, https://resourcecode-project.r-universe.dev/resourcecodedata/, https://resourcecode-project.github.io/r-resourcecodedata/

BugReports https://github.com/Resourcecode-project/r-resourcecodedata/issues

Depends R (>= 3.5)

Encoding UTF-8

Language en-GB

LazyData true

LazyDataCompression xz

NeedsCompilation no

RoxygenNote 7.3.2

Author Nicolas Raillard [aut, cre] (ORCID: <https://orcid.org/0000-0003-3385-5104>)

Maintainer Nicolas Raillard <nicolas.raillard@ifremer.fr>

Repository CRAN

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Contents

`rscd_1d_spectra` *Resourcecode 1D directional wave spectra*

Description

This data contains the time series of 1D wave spectral data at the 'Pierre noires (6200069) wave buoy from 01-01-1994 to 31-01-1994.

Usage

```
rscd_1d_spectra
```

Format

A list with 12 elements:

longitude Longitude

latitude Latitude

frequency1 Lower frequency

frequency2 Upper frequency

ef Surface elevation variance spectral density

th1m Mean direction from first spectral moment

th2m Mean direction from second spectral moment

sth1m Mean directional spreading from first spectral moment

sth2m Mean directional spreading from second spectral moment

freq Central frequency

forcings A data.frame with 14 variables:

- **time** Time
- **dpt** Depth, positive downward
- **wnd** Wind intensity, at 10m above sea level
- **wnddir** Wind direction, comes from
- **cur** Current intensity, at the surface

curdir Current direction, going to

hs Significant wave height

fp Peak wave frequency

f02 Mean wave frequency

f0m1 Mean wave frequency at spectral moment minus one

th1p Mean wave direction at spectral peak

sth1p Directional spreading at spectral peak

dir Mean wave direction

spr Mean directional spreading

station Station name

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

`rscd_2d_spectra` *Resourcecode 2D directional wave spectra*

Description

This data contains the time series of 2D wave spectral data at the 'Pierre noires (6200069) wave buoy from 01-01-1994 to 31-01-1994.

Usage

```
rscd_2d_spectra
```

Format

A list with 9 elements:

longitude Longitude

latitude Latitude

frequency1 Lower frequency

frequency2 Upper frequency

ef Surface elevation variance spectral density

th1m Mean direction from first spectral moment

th2m Mean direction from second spectral moment

sth1m Mean directional spreading from first spectral moment

sth2m Mean directional spreading from second spectral moment

freq Central frequency

dir Directional bins

forcings A data.frame with 6 variables:

- **time** Time
- **dpt** Depth, positive downward
- **wnd** Wind intensity, at 10m above sea level
- **wnddir** Wind direction, comes from
- **cur** Current intensity, at the surface
- **curdir** Current direction, going to

station Station name

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

`rscd_coastline` *Resourcecode coastline*

Description

This data contains the coastline used to run the RESOURCECODE hindcast. This will be mainly used for plotting purpose.

Usage

```
rscd_coastline
```

Format

A data frame with 24403 rows and 3 columns:

longitude,latitude coordinates of the border line

depth depth of the border.

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_dir *Resourcecode directional bins*

Description

(equivalent to a directional resolution of 10°;

Usage

```
rscd_dir
```

Format

A vector of length 36 with the directional bins

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_field *Resourcecode FIELD grid*

Description

This data contains the location and characteristics of the 328,030 nodes where the RESOURCECODE hindcast data is available

Usage

```
rscd_field
```

Format

A data frame with 328,030 rows and 5 columns:

node node number

longitude, latitude coordinates of the nodes

depth depth of the node

d50 Bottom sediment types

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_freq *Resourcecode central frequency vector of 1D and 2D spectra*

Description

The wave spectrum discretization considers 36 frequencies, starting from 0.0339 Hz up to 0.9526 Hz with a frequency increment factor of 1.1

Usage

```
rscd_freq
```

Format

A vector 36 elements with the frequencies values

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_frequency1 *Resourcecode lower frequency vector of 1D and 2D spectra*

Description

The wave spectrum discretization considers 36 frequencies, starting from 0.0339 Hz up to 0.9526 Hz with a frequency increment factor of 1.1

Usage

```
rscd_frequency1
```

Format

A vector 36 elements with the frequencies values

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_frequency2 *Resourcecode higher frequency vector of 1D and 2D spectra*

Description

The wave spectrum discretization considers 36 frequencies, starting from 0.0339 Hz up to 0.9526 Hz with a frequency increment factor of 1.1

Usage

```
rscd_frequency2
```

Format

A vector 36 elements with the frequencies values

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_islands *Resourcecode islands coastline*

Description

This data contains the coastline of the islands used to run the RESOURCECODE hindcast, as data separated from the mainland. This will be mainly used for plotting purpose.

Usage

```
rscd_islands
```

Format

A data frame with 24403 rows and 3 columns:

longitude,latitude coordinates of the border line

depth depth of the border

ID Unique number used to identify the island

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_spectral *Resourcecode SPEC grid*

Description

This data contains the location and characteristics of the 24,276 nodes where the full 2D spectral data is available in the RESOURCECODE data.

Usage

```
rscd_spectral
```

Format

A data frame with 24,276 rows and 5 columns:

longitude, latitude coordinates of the nodes

name Name of the spectral output point

depth depth of the node

d50 Bottom sediment types

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

rscd_triangles *Resourcecode triangles*

Description

This data contains the triangles of the unstructured computational mesh. This will be mainly used for plotting purpose.

Usage

```
rscd_triangles
```

Format

A matrix with 3 rows and 566506 columns:

rows verticies of the triangles

columns node number of each vertices

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

`rscd_variables` *Resourcecode variable list*

Description

This data contains the variables available in the FIELD database.

Usage

```
rscd_variables
```

Format

A data frame with 88 rows and 3 columns:

name short name of the variable

longname Full name

unit Unit

Source

User Manual of the RESOURCECODE database https://archimer.ifremer.fr/doc/00751/86306/

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