

Package: quantarcticR (via r-universe)

September 4, 2024

Title Access to Quantarctica Data Sets

Version 0.1.3

Description Quantarctica is a collection of Antarctic geographical datasets which works with the free, cross-platform, open-source software QGIS. It includes community-contributed, peer-reviewed data from ten different scientific themes and a professionally-designed basemap. This package provides access to Quantarctica data sets.

Depends R (>= 3.3.0)

Imports assertthat, bowerbird (>= 0.8.2), fs, httr, rappdirs, raster, tibble, xml2

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Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.1

Suggests sf, testthat, knitr, rmarkdown, ggplot2, covr

Remotes ropensci/bowerbird

VignetteBuilder knitr

Repository <https://scar.r-universe.dev>

RemoteUrl <https://github.com/SCAR/quantarcticR>

RemoteRef HEAD

RemoteSha e953021724c4ec87482359b9a9fe01c948f7be13

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|--------------|---|
| qa_cache_dir | <i>Get or set the directory used to cache Quantarctica data</i> |
|--------------|---|

Description

The cache directory is used to store data locally, so that they can be used offline later. If called with no arguments (i.e. `qa_cache_dir()`), this function returns the current cache directory. By default, this is a per-session temporary directory. Calling with a path argument will set the cache directory to that path.

Usage

```
qa_cache_dir(path, verbose = FALSE)
```

Arguments

| | |
|---------|--|
| path | string: (optional) Values can be "session" (a per-session temporary directory will be used, default), "persistent" (the directory returned by <code>rappdirs::user_cache_dir</code> will be used), or a string giving the path to the directory to use. An attempt will be made to create the cache directory if it does not exist |
| verbose | logical: show progress messages? |

Value

The path to the cache directory

See Also

[qa_get](#)

Examples

```
## return the current cache directory
qa_cache_dir()

## set the cache directory to a location that persists across
## user sessions
qa_cache_dir("persistent")

## switch to a per-session cache
qa_cache_dir("session")
```

| | |
|------------|--|
| qa_dataset | <i>Retrieve details of a Quantarctica data set</i> |
|------------|--|

Description

Retrieve details of a Quantarctica data set

Usage

```
qa_dataset(  
  name,  
  cache_directory = qa_cache_dir(),  
  refresh_cache = 0,  
  verbose = FALSE  
)
```

Arguments

| | |
|-----------------|--|
| name | string: the name of the data set |
| cache_directory | string: the cache directory to use. As for the path parameter to the qa_cache_dir function |
| refresh_cache | numeric: 0 = do not overwrite existing files, 1 = overwrite if the remote file is newer than the local copy, 2 = always overwrite existing files |
| verbose | logical: show progress messages? |

Value

A tibble

Examples

```
## Not run:  
  dsx <- qa_dataset("ALBMAP Bed/bathymetry elevation (5km)")  
  
## End(Not run)
```

qa_datasets *Available Quantarctica data sets*

Description

Available Quantarctica data sets

Usage

```
qa_datasets(  
  cache_directory = qa_cache_dir(),  
  refresh_cache = 0,  
  verbose = FALSE  
)
```

Arguments

| | |
|-----------------|--|
| cache_directory | string: the cache directory to use. As for the path parameter to the qa_cache_dir function |
| refresh_cache | numeric: as for qa_get |
| verbose | logical: show progress messages? |

Value

A tibble with columns `layername`, `main_file`, `type`, `cached`, and `download_size`

See Also

[qa_get](#)

Examples

```
## Not run:  
  qa_datasets()  
  
## End(Not run)
```

| | |
|--------|--------------------------------------|
| qa_get | <i>Fetch a Quantarctica data set</i> |
|--------|--------------------------------------|

Description

Fetch a Quantarctica data set

Usage

```
qa_get(
  dataset,
  cache_directory = qa_cache_dir(),
  refresh_cache = 0,
  verbose = FALSE,
  shapefile_reader,
  raster_reader
)
```

Arguments

| | |
|------------------|--|
| dataset | string or qa_dataset: the name of the data set or a data set object as returned by qa_dataset |
| cache_directory | string: the cache directory to use. As for the path parameter to the qa_cache_dir function |
| refresh_cache | numeric: 0 = do not overwrite existing files, 1 = overwrite if the remote file is newer than the local copy, 2 = always overwrite existing files |
| verbose | logical: show progress messages? |
| shapefile_reader | function: function to use to read shapefiles. By default this is raster::shapefile |
| raster_reader | function: function to use to read raster files (TIFF, JP2, VRT). By default this is raster::raster |

Value

By default, an object of class SpatialPolygonsDataFrame (for shapefile layers) or RasterLayer (for raster layers). Objects of other classes may be returned if non-default shapefile_reader or raster_reader functions are used

| | |
|--------------|--|
| qa_is_cached | <i>Has a dataset been downloaded to the local cache?</i> |
|--------------|--|

Description

Has a dataset been downloaded to the local cache?

Usage

```
qa_is_cached(dataset, cache_directory = qa_cache_dir(), verbose = FALSE)
```

Arguments

| | |
|-----------------|--|
| dataset | string or qa_dataset: the dataset object, or name of the dataset |
| cache_directory | string: the cache directory to check. As for the path parameter to the qa_cache_dir function |
| verbose | logical: show progress messages? |

Value

Logical

See Also

[qa_dataset](#), [qa_cache_dir](#)

Examples

```
## Not run:  
ds <- qa_dataset("ADD Simple basemap")  
qa_is_cached(ds) ## FALSE  
x <- qa_get(ds)  
qa_is_cached(ds) ## TRUE  
  
## End(Not run)
```

| | |
|-----------|--|
| qa_mirror | <i>Get or set the Quantarctica download mirror site to use</i> |
|-----------|--|

Description

Get or set the Quantarctica download mirror site to use

Usage

```
qa_mirror(mirror)
```

Arguments

mirror string: the URL of the mirror to use

Value

If called with no arguments, the current mirror URL will be returned as a string. If called with a mirror argument, the mirror will be set to that and then the mirror URL returned.

See Also

[qa_mirrors](#)

Examples

```
## current mirror
qa_mirror()

## all available mirrors
qa_mirrors()

## set to first mirror in that list
qa_mirror(qa_mirrors()$url[1])

## or equivalently
qa_mirror(qa_mirrors()[1, ])
```

`qa_mirrors`*A list of Quantarctic mirror sites*

Description

Choose the mirror closest to you for the fastest and most reliable download.

Usage

```
qa_mirrors()
```

Value

A tibble with columns `country`, `protocol`, and `url`

References

<http://quantarctica.npolar.no/downloads/>

Examples

```
qa_mirrors()
```

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