

Package ‘searoundus’

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Title Sea Around Us API Wrapper

Description Access Sea Around Us (<<http://www.searoundus.org/>>) fish catch data, including tools for visualizing the data.

Version 1.2.0

Depends R (>= 3.2.2)

License Apache License 2.0

LazyData true

Imports crul (>= 0.4.0), jsonlite, ggplot2, grid, scales, sp, rgdal, maps, wicket (>= 0.4.0)

Suggests roxygen2 (>= 6.0.1), testthat

RoxygenNote 6.0.1

NeedsCompilation no

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searoundus-package *R library for Sea Around Us*

Description

: Access Sea Around Us catch data and view it as data frames or stacked area charts.

Catch reconstruction documentation

<http://www.searoundus.org/catch-reconstruction-and-allocation-methods/> <https://s3-us-west-2.amazonaws.com/sau-methods-docs/reconstruction-allocation/Methods-Catch-tab-Apr-29-2018.pdf>

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catchdata

Get catch data for a region as a dataframe or stacked area chart

Description

Get catch data for a region as a dataframe or stacked area chart

Usage

```
catchdata(region, id, measure = "tonnage", dimension = "taxon",
           limit = 10, chart = FALSE, ...)
```

Arguments

region	(character) region type. one of: eez, lme, rfmo, highseas, fao, eez-bordering, fishing-entity, taxon, or global
id	(character/integer/numeric) region id. depends on what region is specified. See regions for details
measure	(character) the data measurement. one of "tonnage" or "value" (for "landed value"). Default: "tonnage"
dimension	(character) dimension data is bucketed on. one of "taxon", "commercialgroup", "functionalgroup", "country", "sector", "catchtype", "reporting-status", "layer" (for "data layer"). Default: "taxon"
limit	(numeric/integer) number of buckets of data plus one for "others". Default: 10
chart	(boolean) to return a chart versus a data frame Default: FALSE
...	curl options passed on to crul::HttpClient()

Value

data frame (or ggplot2 chart) with catch data for the requested region over time

Examples

```
catchdata("eez", 76)
head(catchdata("eez", 76, measure="value", dimension="reporting-status"))
catchdata("eez", 76, measure="value", dimension="sector")
catchdata("eez", 76, measure="value", dimension="taxon")
## Not run:
catchdata(region = "eez", id = 76, chart = TRUE)

## End(Not run)
```

eezsvshighseas	<i>Get data for percent of High Seas vs. EEZ catches as a data frame or chart</i>
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Description

Get data for percent of High Seas vs. EEZ catches as a data frame or chart

Usage

```
eezsvshighseas(chart = FALSE, ...)
```

Arguments

chart	(boolean) return a chart (TRUE) versus a data frame (FALSE) Default: FALSE
...	curl options passed on to crul::HttpClient()

Value

data frame (or chart) with High Seas vs. EEZ data for the requested region over time

Examples

```
eezsvshighseas()
## Not run:
eezsvshighseas(chart=TRUE)

## End(Not run)
```

getcelldata	<i>Get a dataframe with catch data for a given list of cells and year</i>
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Description

Get a dataframe with catch data for a given list of cells and year

Usage

```
getcelldata(year = 2010, cells, ...)
```

Arguments

year	(integer/numeric) year of data. Default: 2010
cells	(vector/list) list of cell IDs
...	curl options passed on to crul::HttpClient

Value

data frame with catch data for the requested cells and year

Examples

```
getcelldata(2004, cells = 89568)
getcelldata(2008, cells = c(89568, 89569))
getcelldata(2011, cells = c(89568, 90288, 89569))
```

getcells	<i>Get list of cells in a given shape</i>
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Description

Get list of cells in a given shape

Usage

```
getcells(shape, check_wkt = FALSE, ...)
```

Arguments

shape	(character) WKT representation of SRID 4326 polygon/multipolygon
check_wkt	(logical) validate WKT or not. Default: FALSE
...	curl options passed on to crul::HttpClient

Value

list of cell ids

Examples

```
getcells("POLYGON ((-48.177685950413291 15.842380165289299,
-48.177685950413291 15.842380165289299,
-54.964876033057919 28.964280991735578,
-35.960743801652967 27.606842975206646,
-48.177685950413291 15.842380165289299))")

wkt <- "POLYGON((2.37 43.56,13.18 43.56,13.18 35.66,2.37 35.66,2.37 43.56))"
getcells(wkt)

wkt <-
"MULTIPOLYGON(((15 5,5 10,10 20,40 10,15 5)),((30 20,10 40,45 40,30 20)))"
getcells(wkt)
```

listregions

List available regions for a region type

Description

List available regions for a region type

Usage

```
listregions(region, ...)
```

Arguments

region (character) region type
... curl options passed on to [crul::HttpClient\(\)](#)

Value

a data frame with columns:

- region title
- region ID

Examples

```
listregions(region = "eez")
```

marinetrophicindex *Get MTI as a data frame or chart*

Description

Get MTI as a data frame or chart

Usage

```
marinetrophicindex(region, id, chart = FALSE, type = "mean_trophic_level",  
  transferefficiency = 0.1, ...)
```

Arguments

region	(character) region type. one of: eez, lme, rfmo, highseas, fao, eez-bordering, fishing-entity, taxon, or global
id	(character/integer/numeric) region id. depends on what region is specified. See regions for details
chart	boolean to return a chart versus a data frame Default: FALSE
type	MTI data set ("mean_trophic_level", "fib_index", or "rmti") Default: "mean_trophic_level"
transferefficiency	float used for FiB index input Default: 0.1
...	curl options passed on to crul::HttpClient

Value

data frame (or chart) with MTI data

Examples

```
marinetrophicindex(region = "eez", id = 76)  
marinetrophicindex("eez", 76, type="fib_index")  
marinetrophicindex("eez", 76, type="fib_index", transferefficiency=0.25)  
## Not run:  
marinetrophicindex("eez", 76, chart=TRUE)  
  
## End(Not run)
```

regions

Regions details

Description

Regions details

Details

Region options

- eez
- lme
- rfmo
- highseas
- fao
- eez-bordering
- fishing-entity
- taxon
- global

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