Package ‘stacomiR’

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Title Fish Migration Monitoring
Description Graphical outputs and treatment for a database of fish pass monitoring. It is a part of the 'STACOMI' open source project developed in France by the French Office for Biodiversity institute to centralize data obtained by fish pass monitoring. This version is available in French and English. See <http://stacomir.r-forge.r-project.org/> for more information on 'STACOMI'.
License GPL (>= 2)
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Collate 'create_generic.R' 'data.R' 'fun_table_per_dis.R'
   'fun_write_monthly.R' 'fungraph.R' 'fungraph_gasseel.R'
   'funschema.R' 'funstat.R' 'funtable.R' 'ref_choice.R'
   'ref_coe.R' 'ref_dc.R' 'ref_df.R' 'ref_env.R' 'ref_horodate.R'
   'ref_list.R' 'ref_par.R' 'ref_parqual.R' 'ref_parquan.R'
   'ref_stage.R' 'ref_taxa.R' 'ref_textbox.R' 'ref_timestep.R'
   'ref_timestep_daily.R' 'ref_year.R' 'report_annual.R'
   'report_dc.R' 'report_df.R' 'utilities.R' 'report_env.R'
   'report_ge_weight.R' 'report_ope.R' 'report_mig.R'
   'report_sample_char.R' 'report_mig_char.R' 'report_mig_mult.R'
   'report_mig_env.R' 'report_mig_interannual.R'
   'report_sea_age.R' 'report_silver_eel.R' 'report_species.R'
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LazyData true
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barplot method for object report_annual-class

Description

barplot method for object report_annual-class

Usage

## S4 method for signature 'report_annual'
barplot(height, legend.text = NULL, ...)

Arguments

height An object of class report_annual

legend.text See barplot help

... additional arguments passed to barplot
Value

No return value, called for side effects

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

report_annual-class for examples

calcule

Generic method for calculations

Description

Generic method for calculations

Usage

calcule(object, ...)

Arguments

object Object
...

Author(s)

cedric.briand

calcule,report_ge_weight-method

Calcule method for report_ge_weight

Description

Calcule method for report_ge_weight

Usage

## S4 method for signature 'report_ge_weight'
calcule(object, silent = FALSE)
Arguments

object  An object of class `report_ge_weight-class`
silent  Boolean, if TRUE, information messages are not displayed, only warnings and errors

Value

An object of class `report_ge_weight-class` with `@calcdata["data"]` (essentially a selection of columns and renaming from `@data`) and `coe` daily coefficients extracted from the database `@calcdata["coe"]` and prepared for graphs

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

calcule, report_mig-method

Transforms migration per period to daily migrations, and performs the conversion from weights to number is data are stored as weights (glass eel).

Description

The calculation must be launched once data are filled by the connect method. Currently the negative argument has no effect.

Usage

```r
## S4 method for signature 'report_mig'
calcule(object, negative = FALSE, silent = FALSE)
```

Arguments

object  An object of class `report_mig-class`
negative  a boolean indicating if a separate sum must be done for positive and negative values, if true, positive and negative counts return different rows
silent  Boolean, if TRUE, information messages are not displayed, only warnings and errors

Value

`report_mig` with `calcdata` slot filled. It is a list with one element per counting device containing

method  In the case of instantaneous periods (video counting) the sum of daily values is done by the `fun_report_mig_mult` method and the value indicated in method is "sum". If any migration monitoring period is longer than a day, then the migration is split using the `fun_report_mig_mult_overlaps` function and the value indicated in the method is "overlaps" as the latter method uses the overlap package to split migration period.
**data**  the calculated data.

**content_poids**  A boolean which indicates, in the case of glass eel, that the function `fun_weight_conversion` has been run to convert the weights to numbers using the weight to number coefficients in the database (see `report_ge_weight`).

**negative**  A parameter indicating if negative migration (downstream in the case of upstream migration devices) have been converted to positive numbers, not developed yet.

**Note**

The class `report_mig` does not handle escapement rates nor 'devenir' i.e. the destination of the fishes.

---

**Description**

Merges the content of the list elements 'parqual' and 'parquan' in the data slot, and creates a single dataframe with one line per qualitative and quantitative pair. This methods allow to cross one quantity (e.g. length) with a qualitative parameter (e.g. sex).

**Usage**

```r
## S4 method for signature 'report_mig_char'
calcule(object, silent = FALSE)
```

**Arguments**

- `object`  An object of class `report_mig_char-class`
- `silent`  Boolean default FALSE, if TRUE information messages not displayed

**Value**

An object of class `report_mig_char-class` with slot `calcdata` filled
Calculations for migration in the class report_mig_env-class

Description

Runs the calcule method in report_mig_mult-class

Usage

```r
## S4 method for signature 'report_mig_env'
calcule(object, silent = FALSE)
```

Arguments

- **object**: An object of class report_mig_env-class
- **silent**: Boolean default FALSE, if TRUE information messages not displayed

Value

report_mig_env-class with data in slot r_mig_env@report_mig_mult@calcdata

calcule,report_mig_interannual-method

calcule method for report_mig_interannual

Description

Performs the calculation of seasonal coefficients for the plot(plot.type="seasonal") method. The numbers are split according to the period chosen, one of "day","week","month","2 weeks". French labels are also accepted as arguments. Once this is done, the seasonality of the migration is displayed using the day when the first fish was seen, then the days (or period) corresponding to 5, 50, 95, and 100 percent of the migration. The duration of 90

Usage

```r
## S4 method for signature 'report_mig_interannual'
calcule(object, silent = FALSE, timesplit = "mois")
```

Arguments

- **object**: An object of class report_mig_interannual-class
- **silent**: Boolean, if TRUE, information messages are not displayed, only warnings and errors
- **timesplit**: One of "day","week","month","2 weeks", "jour","semaine","quinzaine","mois"
calcule,report_mig_mult-method

Value

An object of class report_mig_interannual-class with calcdatum slot filled.

Note

The class report_mig_interannual does not handle escapement rates nor 'devenir' i.e. the destination of the fishes.

Author(s)

Marion Legrand

Description

The calculation must be launched once data are filled by the connect method. Currently the negative argument has no effect.

Usage

```r
## S4 method for signature 'report_mig_mult'
calcule(object, negative = FALSE, silent = FALSE)
```

Arguments

- **object**: An object of class report_mig_mult-class
- **negative**: a boolean indicating if a separate sum must be done for positive and negative values, if true, positive and negative counts return different rows
- **silent**: Default FALSE, should messages be stopped

Value

report_mig_mult with a list in slot calcdatum. For each dc one will find a list with the following elements

- **method**: In the case of instantaneous periods (video counting) the sum of daily values is done by the fun_report_mig_mult method and the value indicated in method is 'sum'. If any migration monitoring period is longer than a day, then the migration is split using the fun_report_mig_mult_overlaps function and the value indicated in the method is 'overlaps' as the latter method uses the overlap package to split migration period.
data  the calculated data. If weight are present, the columns display weight or numbers, the total number is 'Effectif_total' and corresponds to the addition of numbers and numbers converted from weight, the total weight is 'Poids_total' + poids_depuis_effectifs' and corresponds to weighed glass eel plus glass eel number converted in weights. CALCULE corresponds to calculated number, MESURE to measured numbers, EXPERT to punctual expertise of migration (for instance measured in other path, or known migration of fishes passing the dam but not actually counted, PONCTUEL to fishes counted by visual identification but not by the counting apparatus (in case of technical problem for instance)

content_poids  A boolean which indicates, in the case of glass eel, that the function fun_weight_conversion has been run to convert the weights to numbers using the weight to number coefficients in the database (see report_ge_weight).

negative  A parameter indicating if negative migration (downstream in the case of upstream migration devices) have been converted to positive numbers, not developed yet

Note

The class does not handle escapement rates, though structurally those are present in the database. If you want to use those you will have to do the calculation manually from the data in report_mig_mult@data.

calcule,report_sample_char-method

Calculation for report_sample_char

Description

In that class, most treatments are done in the query, this method checks that data are available and fills information for year, month, two weeks, week, doy

Usage

## S4 method for signature 'report_sample_char'
calcule(object, silent = FALSE)

Arguments

- object  An object of class report_sample_char-class
- silent  Boolean, if TRUE, information messages are not displayed, only warnings and errors

Value

An object of class report_sample_char-class with slot @data filled

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Calcule, report_sea_age-method

Split data according to the limits set in the limit1hm, and limit2hm arguments of the report_sea_age-class.

Description

If no value are provided in the limit1hm slot, an error is returned, if no value is provided in the limit2hm slot a default upper value for salmon size is taken to ensure all salmon are either of age 1 or 2, but no age 3 are returned.

Usage

```r
## S4 method for signature 'report_sea_age'
calcule(object, silent)
```

Arguments

- `object`: An object of class `report_sea_age-class`
- `silent`: Default FALSE, if TRUE the program should no display messages

Value

An object of class `report_sea_age-class` with calculated data in slot `calcdata`

Author(s)

Cedric Briand `<cedric.briand@eptb-vilaine.fr>`

calcule, report_silver_eel-method

Calculate individual silver eel parameters.

Description

This calcule method for report_silver_eel, will transform data from long (one line per size characteristic, size, weight, eye diameter, pectoral fin measurement, lateral line and constrast) to wide format (one line per silver eel). It will also calculate Durif silvering index and Pankhurst and Fulton’s K.

Usage

```r
## S4 method for signature 'report_silver_eel'
calcule(object, silent)
```
calcule, report_species-method

Arguments

object

An object of class report_silver_eel-class

silent

Boolean, if TRUE, information messages are not displayed, only warnings and errors

Value

An object of class report_silver_eel-class with slot calcdatal slot filled, as a list for each counting device

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

desc

calcule, report_species-method
calcule method for report_species

description

The number will be split according to the split argument passed to the class, e.g. per year or month or week. Data from different DC will be grouped. Counts are given per taxa, unless there are several stages, in which case the counts correspond to taxa + stage.

usage

## S4 method for signature 'report_species'
calcule(object, silent = FALSE)

arguments

object

An object of class report_species-class

silent

Boolean, if TRUE, information messages are not displayed, only warnings and errors

value

An object of class report_species-class with calcdatal slot filled.
charge

Generic method to load referentials

Description

Generic method to load referentials

Usage

charge(object, ...)

Arguments

- object: Object
- ...: Additional parm

Author(s)

cedric.briand

charge,ref_choice-method

Loading method for Refchoice referential objects

Description

Loading method for Refchoice referential objects

Usage

## S4 method for signature 'ref_choice'
charge(object, vecteur, label, selected)

Arguments

- object: An object of class ref_choice
- vecteur: A vector of name, see example code.
- label: Labels for the choices
- selected: An integer indicating which object is selected at launch

Value

An S4 object of class ref_choice-class
charge,ref_coe-method

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also
Other referential objects: ref_choice-class, ref_coe-class, ref_dc-class, ref_df-class, ref_horodate-class, ref_list-class, ref_par-class, ref_parqual-class, ref_parquan-class, ref_stage-class, ref_taxa-class, ref_year-class

Examples
## Not run:
object=new('ref_choice')
charge(object, vecteur=c('oui', 'non'), label='essai', selected=as.integer(1))

## End(Not run)

charge,ref_coe-method  loads the coefficients for the period defined in class

Description
The slots datedebut and datefin have to be filled before using charge

Usage
## S4 method for signature 'ref_coe'
charge(object)

Arguments
object  An object of class ref_coe-class

Value
An object of class ref_coe-class

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples
## Not run:
object<- new('ref_coe')
object@datedebut<- strptime('01/01/1996', format='%d/%m/%Y')
object@datefin<- strptime('01/01/1997', format='%d/%m/%Y')
charge(object)

## End(Not run)
## Description

### charge, ref_dc-method

Method to load the counting devices of the control station

### charge, ref_df-method

Loading method for DF referential objects

## Usage

### S4 method for signature 'ref_dc'

```r
charge(object)
```

### S4 method for signature 'ref_df'

```r
charge(object)
```

## Arguments

**object**

An object of class ref_dc-class

**object**

An object of class ref_df-class

## Value

An object of class ref_dc with data loaded

An object of class ref_df with df loaded

## Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Examples

```r
## Not run:
object=new('ref_df')
charge(object)

## End(Not run)
```

---

**Description**

Loading method for ref_env referential object

**Usage**

```r
## S4 method for signature 'ref_env'
charge(object)
```

**Arguments**

- `object` An object of class `ref_env-class`

**Value**

An S4 object of class `ref_env` with data loaded from the database

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**Examples**

```r
## Not run:
object=new('ref_env')
charge(object)

## End(Not run)
```
Loading method for ref_list referential objects

Description

Loading method for ref_list referential objects

Usage

```r
## S4 method for signature 'ref_list'
charge(object, listechoice, label)
```

Arguments

- `object`: An object of class `ref_list-class`
- `listechoice`: A character vector setting the possible values in which the user can select
- `label`: A label for refliste

Value

An S4 object of class `ref_list-class`
An S4 object of class `ref_list-class`

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
object=new('ref_list')
charge(object)
## End(Not run)
```
charge,ref_par-method  Loading method for ref_par referential objects

Description
Loading method for ref_par referential objects

Usage
## S4 method for signature 'ref_par'
charge(object)

Arguments
object An object of class ref_par-class

Value
An S4 object of class ref_par
An S4 object of class ref_par-class

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples
## Not run:
object=new('ref_par')
charge(object)
## End(Not run)

charge,ref_parqual-method  Loading method for Reparqual referential objects

Description
Loading method for Reparqual referential objects

Usage
## S4 method for signature 'ref_parqual'
charge(object)
charge,ref_parquan-method

**Arguments**

- `object` An object of class `ref_parqual-class`

**Value**

An S4 object of class `ref_parqual`

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**Examples**

```r
## Not run:
object=new('ref_parqual')
charge(object)

## End(Not run)
```

---

**charge,ref_parquan-method**

*Loading method for Reparquan referential objects*

---

**Description**

Loading method for Reparquan referential objects

**Usage**

```r
## S4 method for signature 'ref_parquan'
charge(object)
```

**Arguments**

- `object` An object of class `ref_parquan-class`

**Value**

An S4 object of class `ref_parquan-class` with data loaded

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Examples

## Not run:
object=new('ref_parquan')
charge(object)

## End(Not run)

---

charge.ref_stage-method

*Loading method for ref_stage referential objects*

Description

Loading method for ref_stage referential objects

Usage

```r
## S4 method for signature 'ref_stage'
charge(object)
```

Arguments

- `object`: An object of class `ref_stage-class`

Value

An S4 object of class `ref_stage-class` with all stages available in the database

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
object=new('ref_stage')
charge(object)

## End(Not run)
```
Description

Loading method for ref_taxa referential objects

Usage

## S4 method for signature 'ref_taxa'
charge(object)

Arguments

object An object of class ref_taxa-class

Value

An S4 object of class ref_taxa
An S4 object of class ref_taxa-class with all taxa loaded from the database

Author(s)

Cedric Briand <cedric.briand@epib-vilaine.fr>

Examples

## Not run:
object=new('ref_taxa')
charge(object)
## End(Not run)

Description

Loading method for ref_textbox referential objects

Usage

## S4 method for signature 'ref_textbox'
charge(object, title, label)
charge(ref_year-method)

Arguments

- object: An object of class ref_textbox-class
- title: A title for the frame
- label: A label for the TextBox

Value

An S4 object of class ref_textbox-class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
object=new('ref_textbox')
charge(object,title='un titre',label='20')

## End(Not run)
```

Description

Selects year available either in the bjo table if report_object==report_mig_interannual) or in the t_operation_ope table

Usage

```r
## S4 method for signature 'ref_year'
charge(object, objectreport = "report_ge_weight")
```

Arguments

- object: An object of class ref_year-class
- objectreport: The object report, default report_ge_weight other possible value report_mig_interannual

Value

- object: An object of class ref_year-class with slot data filled with the available years for the corresponding report

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Examples

```r
## Not run:
object = new("ref_year")
charge(object)
validObject(annee)
showMethods("charge")

## End(Not run)
```

charge, report_mig-method

 ADVISED additional data on migration control operations, df (fishway) dc (counting device).

Description

This method creates additional classes in envir_stacomi for later use in plot (operations, DF operation, DC operation). So unlike in most report classes where the charge method is only used by the graphical interface, it is necessary to run charge for report_mig.

Usage

```r
## S4 method for signature 'report_mig'
charge(object, silent = FALSE)
```

Arguments

- `object`: An object of class `report_mig-class`
- `silent`: Should the program be returning messages

Value

An object of class `report_mig-class` with slots filled from values assigned in envir_stacomi environment

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
charge, report_mig_env-method

charge method for report_mig_env class

Description

"Unique the other report classes where the charge method is only used by the graphical interface to collect and test objects in the environment envir_stacomi, and see if the right choices have been made in the graphical interface, this methods runs the charge, report_mig_mult-method and needs to be called from the command line (see examples)

Usage

```
## S4 method for signature 'report_mig_env'
charge(object, silent = FALSE)
```

Arguments

- `object`: An object of class report_mig_env-class
- `silent`: Should the function remain silent (boolean)

Value

An object of class report_mig_env-class with data set from values assigned in envir_stacomi environment

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

charge, report_mig_mult-method

charge method for report_mig_mult

Description

For the report_mig_mult class the charge method must be run to load data on migration control operations fishway operations, and counting devices operations as data from those are displayed in the main plots. For other classes the charge method is only used by the graphical interface (shiny)

Usage

```
## S4 method for signature 'report_mig_mult'
charge(object, silent = FALSE)
```
charge_complement

Arguments

- **object**: An object of class `report_mig_mult-class`
- **silent**: Default FALSE, if TRUE the program should no display messages

Value

An object of class `report_mig_mult-class` with slots filled from values assigned in `envir_stacomi` environment

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**Description**

Generic method to load additional data

**Usage**

```r
charge_complement(object, ...)
```

**Arguments**

- **object**: Object
- **...**: Additional parms

**Author(s)**

cedric.briand

---

**Description**

Loads an additional dataset this method is loaded to obtain the possible values of a qualitative parameter. Here data only contains one line

**Usage**

```
charge_complement,ref_parqual-method
```

**Description**

Loads an additional dataset this method is loaded to obtain the possible values of a qualitative parameter. Here data only contains one line
Usage

## S4 method for signature 'ref_parqual'
charge_complement(object)

Arguments

object | An object of class ref_parqual-class

Value

An S4 object of class ref_parqual-class with the valqual slot filled

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

## Not run:
dc_selected=6
taxa_selected=2038
stage_selected='AGJ'
object=new('ref_parqual')
object<-charge(object)
charge_complement(object)

## End(Not run)

---

charge_with_filter,ref_par-method

Loading method for ref_par referential objects searching only those parameters existing for a DC, a Taxa, and a stage

Description

Loading method for ref_par referential objects searching only those parameters existing for a DC, a Taxa, and a stage

Usage

## S4 method for signature 'ref_par'
charge_with_filter(object, dc_selected, taxa_selected, stage_selected)

Arguments

object | An object of class ref_par-class
dc_selected | A counting device selected for the report
taxa_selected | The taxa selected for the report
stage_selected | The stage selected for the report
charge_with_filter,ref_parqual-method

Value

An S4 object of class ref_par-class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
object=new('ref_par')
charge_with_filter(object,dc_selected=6,taxa_selected=2038,stage_selected=c('AGJ','CIV'))

## End(Not run)
```

Description

Loading method for Reparqual referential objects searching only those parameters existing for a DC, a Taxon, and a stage

Usage

```r
## S4 method for signature 'ref_parqual'
charge_with_filter(object, dc_selected, taxa_selected, stage_selected)
```

Arguments

- `object` An object of class ref_par-class
- `dc_selected` The dc set in the report object
- `taxa_selected` The taxa set in the report object
- `stage_selected` The stage set in the report object

Value

An S4 object of class ref_par-class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Examples

```r
## Not run:
dc_selected = 6
taxa_selected = 2038
stage_selected = 'AGJ'
object = new('ref_parquan')
charge_with_filter(object, dc_selected, taxa_selected, stage_selected)

## End(Not run)
```

Description

Loading method for Reparquan referential objects searching only those parameters existing for a DC (counting device), a Taxon, and a stage

Usage

```r
## S4 method for signature 'ref_parquan'
charge_with_filter(object, dc_selected, taxa_selected, stage_selected)
```

Arguments

- **object**: An object of class `ref_parquan-class`
- **dc_selected**: The dc set in the report object
- **taxa_selected**: The taxa set in the report object
- **stage_selected**: The stage set in the report object

Value

An S4 object of class `ref_parquan-class` with data loaded showing available parameters for one DC

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Examples

```r
## Not run:
dc_selected=6
taxa_selected=2038
stage_selected='AGJ'
object=new('ref_parquan')
charge_with_filter(object,dc_selected,taxa_selected,stage_selected)

## End(Not run)
```

Description

Loading method for ref_stage referential objects searching only those stages existing for a DC and a Taxon

Usage

```r
## S4 method for signature 'ref_stage'
charge_with_filter(object, dc_selected, taxa_selected)
```

Arguments

- `object` An object of class `ref_stage-class`
- `dc_selected` The selected counting device
- `taxa_selected` The selected species

Value

An S4 object of class `ref_stage-class` listing all stages available for one DC and one taxon

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
dc_selected=6
taxa_selected=2038
object=new('ref_stage')
charge_with_filter(object,dc_selected,taxa_selected)

## End(Not run)
```
charge_with_filter, ref_taxa-method

Loading method for ref_taxa referential objects searching only taxa existing for a DC

Description

Loading method for ref_taxa referential objects searching only taxa existing for a DC

Usage

## S4 method for signature 'ref_taxa'
charge_with_filter(object, dc_selected)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>An object of class ref_taxa-class</td>
</tr>
<tr>
<td>dc_selected</td>
<td>A counting device selected, only taxa attached to this dc are selected</td>
</tr>
</tbody>
</table>

Value

An S4 object of class ref_taxa-class with all taxa present on a DC (counting device)

Author(s)

Cedric Briand <cedric.briand@eptb-villeine.fr>

Examples

## Not run:
```r
dc_selected=6
object=new('ref_taxa')
charge_with_filter(object, dc_selected=dc_selected)
```
## End(Not run)

choice_c, ref_choice-method

Choice_c method for ref_choice referential objects

Description

Choice_c method for ref_choice referential objects

Usage

## S4 method for signature 'ref_choice'
choice_c(object, selectedvalue)
arguments

object An object of class ref_choice-class
selectedvalue the value selected in the combo

value

An S4 object of class ref_choice-class

author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

examples

## Not run:
object=new('ref_list')
object<-charge(object, vecteur=c('1','2'), label='please choose')
object<-choice_c(object)
## End(Not run)

description

the choice_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The parameters for dc are transformed to integer as the ref_dc only takes integer in the dc slots. The method also loads the stations and ouvrages (dams) associated with the counting device (dc). The values passed to the choice_c method are then checked with the setValidity method. Finally, if an objectreport is passed as a parameter, the method will do a charge_with_filter to select only the taxa present in the counting devices

usage

## S4 method for signature 'ref_dc'
choice_c(object, dc)

arguments

object an object of class ref_dc
dc a character vector of dc chosen

value

An object of class ref_dc with dc selected
choice_c,ref_df-method

Command line interface to choose a fishway

Description

the choice_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The parameters for dF are transformed to integer as the ref_df only takes integer in the df slots. DF are third in hierarchy in the stacomi database Station>ouvrage>DF>DC>operation. This class is only used in the report_df class.

Usage

## S4 method for signature 'ref_df'
choice_c(object, df)

Arguments

  object        an object of class ref_df-class
  df            a character vector of df chosen

Value

  An object of class ref_df with df selected

Author(s)

  Cedric Briand <cedric.briand@eptb-vilaine.fr>
choice_c,ref_env-method

Command line interface to select a monitoring station

Description

The choice_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line.

Usage

## S4 method for signature 'ref_env'
choice_c(object, stationMesure)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>an object of class ref_env</td>
</tr>
<tr>
<td>stationMesure</td>
<td>a character vector of the monitoring station code (corresponds to stm_libelle in the tj_stationmesure_stm table)</td>
</tr>
</tbody>
</table>

Value

an object of class ref_env-class with the monitoring station selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
choice_c,ref_horodate-method

*Choice_c method for ref_horodate*

**Description**

Choice_c method for ref_horodate

**Usage**

```r
## S4 method for signature 'ref_horodate'
choice_c(
  object,
  nomassign = "horodate",
  funoutlabel = "nous avons le choix dans la date\n",
  horodate,
  silent = FALSE
)
```

**Arguments**

- `object` An object of class `ref_horodate-class`
- `nomassign` The name assigned in environment `envir_stacomi`
- `funoutlabel` text displayed by the interface
- `horodate` The horodate to set, formats "%d/%m/%Y %H:%M:%s","%d/%m/%y %H:%M:%s", "%Y-%m-%d %H:%M:%s" formats can also be passed with the date set to the minute %d/%m/%Y %H:%M or the day %d/%m/%Y ... are accepted. The choice_c method assigns and
- `silent` Default FALSE, should messages be displayed

**Value**

An object of class `ref_horodate-class` with slot `horodate` set, and assigns an object of class POSIXt with name `nomassign` in `envir_stacomi`

choice_c,ref_list-method

*Choice_c method for ref_list referential objects*

**Description**

Choice_c method for ref_list referential objects
choice_c,ref_par-method

Command line interface to select a parameter

Description
Command line interface to select a parameter

Usage
## S4 method for signature 'ref_par'
choice_c(object, par, silent = FALSE)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>an object of class ref_par-class</td>
</tr>
<tr>
<td>par</td>
<td>A character vector of par</td>
</tr>
<tr>
<td>silent</td>
<td>Default FALSE but not used there</td>
</tr>
</tbody>
</table>

Note
the choice method assigns an object of class refList named ref_list in the environment envir_stacomi
Value

An object of class ref_par-class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

(choice_c,ref_stage-method)

Description

The choice_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The values passed to the choice_c method for stage is the code. Any numeric value will be discarded.

Usage

```r
## S4 method for signature 'ref_stage'
choice_c(object, stage, silent = FALSE)
```

Arguments

- **object**: An object of class ref_stage-class
- **stage**: The vector of stages chosen
- **silent**: Boolean, if TRUE, information messages are not displayed

Value

An S4 object of class ref_stage-class with the stage selected in the data slot

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
object=new('ref_stage')
object$charge(object)

## End(Not run)
```
Description

the choice_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line. The values passed to the choice_c method for taxa can be either numeric (2038 = Anguilla anguilla) or character.

Usage

## S4 method for signature 'ref_taxa'
choice_c(object, taxa)

Arguments

object  An object from the class ref_taxa

taxa   The vector of taxa, can be either code (numeric) or latin name

Value

An S4 object of class ref_taxa-class with data filtered according to the taxa

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

## Not run:
object=new('ref_taxa')
object<-charge(object)
objectreport=new('report_mig_mult')
choice_c(object=object,'Anguilla anguilla')

## End(Not run)
Choice_c method for ref_textbox referential objects

Usage

## S4 method for signature '/quotesingle.Var ref_textbox'
choice_c(object, value, nomassign = "ref_textbox")

Arguments

- **object**: An object of class `ref_textbox-class`
- **value**: The value to set
- **nomassign**: The name with which the object will be assigned in `envir_stacomi`

Value

An S4 object of class `ref_textbox-class` label selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

choice_c method for class `ref_timestep_daily`

Description

the choice_c method is intended to have the same behaviour as choice (which creates a widget in the graphical interface) but from the command line.

Usage

## S4 method for signature '/quotesingle.Var ref_timestep_daily'
choice_c(object, datedebut, datefin)

## S4 method for signature '/quotesingle.Var ref_timestep_daily'
choice_c(object, datedebut, datefin)
choice_c,ref_year-method

Arguments

object An object of class `ref_timestep_daily-class`
datedebut A character (format '15/01/1996' or '1996-01-15' or '15-01-1996'), or POSIXct object
datefin A character

Value

An S4 object of class `ref_timestep_daily-class` with date selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

```r
## Not run:
object=new('ref_dc')
object<-charge(object)
choice_c(object=object,datedebut='2012-01-01',datefin='2013-01-01')
## End(Not run)
```

Description

The choice_c method will issue a warning if the year is not present in the database Allows the selection of year and the assignment in environment envir_stacomi

Usage

```r
## S4 method for signature 'ref_year'
choice_c(
  object,
  annee,
  nomassign = "ref_year",
  funoutlabel = gettext("Year selected\n", domain = "R-stacomiR"),
  silent = FALSE
)
```
Arguments

object An object of class ref_year-class
annee The year to select, either as a character or as a numeric
nomassign The name to be assigned in envir_stacomi
funoutlabel The label that appears in funout
silent Stops messages from being displayed if silent=TRUE, default FALSE

Value

object An object of class ref_year-class with year selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Examples

## Not run:
object=new("ref_year")
object<-charge(object)
win=gwindow(title="test ref_year")
group=ggroup(container=win,horizontal=FALSE)
choice(object,nomassign="ref_year",funoutlabel="essai",titleFrame="essai ref_year",preselect=1)
dispose(win)

## End(Not run)
choice_c, report_dc-method

**Arguments**

- **object**: An object of class `report_annual-class`
- **dc**: A numeric or integer, the code of the dc, coerced to integer, see `choice_c, ref_dc-method`
- **taxa**: Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), it should match the ref.tr_taxon_tax referential table in the stacomi database, see `choice_c, ref_taxa-method`
- **stage**: A stage code matching the ref.tr_stagedeveloppement_std table in the stacomi database, see `choice_c, ref_stage-method`
- **start_year**: The starting the first year, passed as character or integer
- **end_year**: The finishing year
- **silent**: Boolean, if TRUE, information messages are not displayed

**Value**

An object of class `report_annual-class` with data selected

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**Description**

The `choice_c` method fills in the data slot for `ref_dc`, and then uses the `choice_c` methods of these object to "select" the data.

**Usage**

```r
## S4 method for signature 'report_dc'
choice_c(object, dc, horodatedebut, horodatefin, silent = FALSE)
```

**Arguments**

- **object**: An object of class `ref_dc-class`
- **dc**: The dc to set
- **horodatedebut**: A POSIXt or Date or character to fix the date of beginning of the report
- **horodatefin**: A POSIXt or Date or character to fix the last date of the report
- **silent**: Should program be silent or display messages
Value

An object of class ref_df-class with data selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

The choice_c method fills in the data slot for ref_df, and then uses the choice_c methods of these object to "select" the data.

Usage

```r
## S4 method for signature 'report_df'
choice_c(object, df, horodatedebut, horodatefin, silent = FALSE)
```

Arguments

- `object` An object of class ref_df-class
- `df` The df to set
- `horodatedebut` A POSIXt or Date or character to fix the date of beginning of the report
- `horodatefin` A POSIXt or Date or character to fix the last date of the report
- `silent` Should program be silent or display messages

Value

An object of class ref_df-class with data selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
choice_c,report_env-method

Description

The choice_c method fills in the data slot for ref_env-class by running the charge method of this object. It then runs the choice method on this object. It also applies the choice method for objects of class ref_horodate-class

Usage

## S4 method for signature 'report_env'
choice_c(object, stationMesure, datedebut, datefin, silent = FALSE)

Arguments

- **object**: An object of class report_env-class
- **stationMesure**: A character, the code of the monitoring station, which records environmental parameters choice_c,ref_env-method
- **datedebut**: The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
- **datefin**: The finishing date of the report, for this class this will be used to calculate the number of daily steps.
- **silent**: Boolean default FALSE, if TRUE information messages not displayed.

Value

An object of class report_env-class with data selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

choice_c,report_ge_weight-method

Description

command line interface for report_ge_weight-class
**Usage**

```r
## S4 method for signature 'report_ge_weight'
choice_c(object, dc, start_year, end_year, selectedvalue, silent = FALSE)
```

**Arguments**

- `object`: An object of class `report_ge_weight-class`
- `dc`: A numeric or integer, the code of the dc, coerced to integer, see `choice_c,ref_dc-method`
- `start_year`: The starting the first year, passed as character or integer
- `end_year`: The finishing year, must be > `start_year` (minimum one year in august to the next in august)
- `selectedvalue`: A character to select and object in the `ref_list-class`
- `silent`: Boolean, if TRUE, information messages are not displayed

**Value**

An object of class `report_ge_weight-class` with data selected. The `choice_c` method fills in the data slot for classes `ref_dc-class ref_year-class ref_coe-class ref_list-class`

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**Description**

The `choice_c` method fills in the data slot for `ref_dc`, `ref_taxa`, `ref_stage`, and `ref_ref_timestep_daily` and then uses the `choice_c` methods of these objects to select the data.

**Usage**

```r
## S4 method for signature 'report_mig'
choice_c(object, dc, taxa, stage, datedebut, datefin)
```

**Arguments**

- `object`: An object of class `report_mig-class`
- `dc`: A numeric or integer, the code of the dc, coerced to integer, see `choice_c,ref_dc-method`
- `taxa`: Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), these should match the `ref_tr_taxon_tax` referential table in the `stacomi` database, see `choice_c,ref_taxa-method`
stage  A stage code matching the ref.tr_stagedevelopment_std table in the stacomi database see choice_c,ref_stage-method

datedebut  The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input

datefin  The finishing date of the report, for this class this will be used to calculate the number of daily steps.

Value

An object of class report_mig-class with data selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

command line interface for report_mig_char class

Usage

## S4 method for signature 'report_mig_char'
choice_c(
  object,
  dc,
  taxa,
  stage,
  parquan = NULL,
  parqual = NULL,
  horodatedebut,
  horodatefin,
  echantillon = c("with", "without"),
  silent = FALSE
)

Arguments

| [object] An object of class report_mig_char-class |
| [dc] A numeric or integer, the code of the dc, coerced to integer,see choice_c,ref_dc-method |
| [taxa] '2220=Salmo salar’, can be a vector with several values these should match the ref.tr_taxon_tax referential table in the stacomi database, see choice_c,ref_taxa-method |
stage  The stages selected, can be a vector with several values
parquan  Quantitative parameter
parqual  Qualitative parameter
horodatedebut  The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
horodatefin  The finishing date of the report, for this class this will be used to calculate the number of daily steps
echantillon  'with' can be 'without', checking without modifies the query in the connect method so that subsamples are not allowed
silent  Default FALSE, if TRUE the program should no display messages

Value
An object of class report_sea_age-class The choice_c method fills in the data slot for classes ref_dc-class, ref_taxa-class, ref_stage-class, ref_par-class and two slots of ref_horodate-class and then uses the choice_c methods of these object to select the data.

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>
Arguments

object  An object of class report_env-class

dc      A numeric or integer, the code of the dc, coerced to integer, see choice_c.ref_dc-method

taxa    '2038=Anguilla anguilla', these should match the ref.tr_taxon_tax referential table in the stacomi database, see choice_c.ref_taxa-method

stage   'AGJ=Yellow eel', 'AGG=Silver eel', 'CIV=glass eel'

stationMesure  A character, the code of the monitoring station, which records environmental parameters choice_c.ref_env-method

datedebut  The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input

datefin   The finishing date of the report, for this class this will be used to calculate the number of daily steps.

silent   Boolean default FALSE, if TRUE information messages not displayed.

Value

An object of class report_env-class with data selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

command line interface for report_mig_interannual class

Usage

## S4 method for signature 'report_mig_interannual'
choice_c(object, dc, taxa, stage, start_year, end_year, silent = FALSE)

Arguments

object  An object of class report_mig_interannual-class

dc      A numeric or integer, the code of the dc, coerced to integer, see choice_c.ref_dc-method

taxa    Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), it should match the ref.tr_taxon_tax referential table in the stacomi database, see choice_c.ref_taxa-method
stage A stage code matching the ref.tr_stagedeveloppement_std table in the stacomi database, see choice_c,ref_stage-method

start_year The starting the first year, passed as character or integer

datefin The finishing year

silent Boolean, if TRUE, information messages are not displayed

Value

An object of class report_mig_interannual-class with data selected The choice_c method fills in the data slot for classes ref_dc-class, ref_taxa-class, ref_stage-class and two slots of ref_year-class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

The choice_c method fills in the data slot for ref_dc, ref_taxa, ref_stage and then uses the choice_c methods of these object to 'select' the data.

Usage

```r
## S4 method for signature 'report_mig_mult'
choice_c(object, dc, taxa, stage, datedebut, datefin, silent = FALSE)
```

Arguments

- **object** An object of class report_mig-class
- **dc** A numeric or integer, the code of the dc, coerced to integer, see choice_c,ref_dc-method
- **taxa** Either a species name in latin or the SANDRE code for species (ie 2038=An-guilla anguilla), these should match the ref.tr_taxon_tax referential table in the stacomi database, see choice_c,ref_taxa-method
- **stage** A stage code matching the ref.tr_stagedeveloppement_std table in the stacomi database see choice_c,ref_stage-method
- **datedebut** The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
- **datefin** The finishing date of the report, for this class this will be used to calculate the number of daily steps.
- **silent** Should messages be hided default FALSE
Value

An object of class `report_mig_mult-class` with data selected

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

#' The `choice_c` method fills in the data slot for classes `ref_dc-class`, `ref_taxa-class`, `ref_stage-class`, `ref_par-class` and two slots of `ref_horodate-class` and then uses the `choice_c` methods of these object to select the data.

Usage

## S4 method for signature 'report_sample_char'

```r
choice_c(
  object,
  dc,
  taxa,
  stage,
  par,
  horodatedebut,
  horodatefin,
  silent = FALSE
)
```

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>An object of class <code>report_sample_char-class</code></td>
</tr>
<tr>
<td>dc</td>
<td>A numeric or integer, the code of the dc, coerced to integer, see <code>choice_c.ref_dc-method</code></td>
</tr>
<tr>
<td>taxa</td>
<td>Either a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), these should match the ref.tr_taxon_tax referential table in the stacomi database, see <code>choice_c.ref_taxa-method</code></td>
</tr>
<tr>
<td>stage</td>
<td>A stage code matching the ref.tr_stadedeveloppement_std table in the stacomi database, see <code>choice_c.ref_stage-method</code></td>
</tr>
<tr>
<td>par</td>
<td>A parameter matching th ref.tg_parametre_par table in the stacomi database, see <code>choice_c.ref_par-method</code></td>
</tr>
<tr>
<td>horodatedebut</td>
<td>The starting date as a character, formats like <code>%Y-%m-%d</code> or <code>%d-%m-%Y</code> can be used as input</td>
</tr>
</tbody>
</table>
horodatefin  The finishing date of the report, for this class this will be used to calculate the number of daily steps.
silent     Boolean, if TRUE, information messages are not displayed

Value
An object of class `report_mig-class` with data selected

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description
#' The choice_c method fills in the data slot for classes `ref_dc-class`, `ref_taxa-class`, `ref_stage-class`, `ref_par-class` and two slots of `ref_horodate-class` and then uses the choice_c methods of these object to select the data.

Usage
```r
## S4 method for signature 'report_sea_age'
choice_c(
  object,
  dc,
  taxa = 2220,
  stage = c("5", "11", "BEC", "BER", "IND"),
  par = c("1786", "1785", "C001", "A124"),
  horodatedebut,
  horodatefin,
  limit1hm,
  limit2hm,
  silent = FALSE
)
```

Arguments
- **object**: An object of class `report_sea_age-class`
- **dc**: A numeric or integer, the code of the dc, coerced to integer, see `choice_c,ref_dc-method`
- **taxa**: '2220=Salmo salar', these should match the ref.tr_taxon_tax referential table in the stacomi database, see `choice_c,ref_taxa-method`
- **stage**: '5','11','BEC','BER','IND'
Parameters chosen for the report are measured body size (1786), measured fork length (1785), video size (C001) and number of year at sea (A124)

The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input

The finishing date of the report, for this class this will be used to calculate the number of daily steps.

Size limit of a salmon for an one sea winter fish

Size limit of a salmon for a two sea winter fish

Default FALSE, if TRUE the program should no display messages

An object of class report_sea_age-class

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

#' The choice_c method fills in the data slot for classes ref_dc-class, ref_taxa-class, ref_stage-class, ref_par-class and two slots of ref_horodate-class and then uses the choice_c methods of these object to select the data.

Usage

```r
## S4 method for signature 'report_silver_eel'
choice_c(
  object,
  dc,
  taxa = 2038,
  stage = "AGG",
  par = c("1786", "CCCC", "BBBB", "CONT", "LINP", "A111", "PECT"),
  horodatedebut,
  horodatefin,
  silent = FALSE
)
```
Arguments

object | An object of class report_silver_eel-class
dc | A numeric or integer, the code of the dc, coerced to integer, see choice_c,ref_dc-method
 taxa | '2038=Anguilla anguilla’, these should match the ref.tr_taxon_tax referential table in the stacomi database, see choice_c,ref_taxa-method
 stage | 'AGG’
 par | Parameters chosen for the report are body size (1786), vertical eye diameter (BBBB), horizontal eye diameter (CCCC), body contrast (CONT), presence of punctuation on the lateral line (LINP), length of the pectoral fin (PECT)
 horodatedebut | The starting date as a character, formats like %Y-%m-%d or %d-%m-%Y can be used as input
 horodatefin | The finishing date of the report, for this class this will be used to calculate the number of daily steps.
 silent | Boolean, if TRUE, information messages are not displayed

Value

An object of class report_mig-class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

## S4 method for signature 'report_species'

choice_c(report_species, object, dc, taxa = "all", split = "none", start_year, end_year, silent = FALSE)
**Arguments**

- **object**
  An object of class `report_species-class`

- **dc**
  A numeric or integer, the code of the dc, coerced to integer, see `choice_c_ref_dc-method`

- **taxa**
  Either 'all' (default) or a species name in latin or the SANDRE code for species (ie 2038=Anguilla anguilla), it should match the ref.tr_taxon_tax referential table in the stacomi database, see `choice_c_ref_taxa-method`

- **split**
  one of c('none','week','month','year')

- **start_year**
  The starting the first year, passed as character or integer

- **end_year**
  The finishing year

- **silent**
  Boolean, if TRUE, information messages are not displayed

**Value**

An object of class `report_species-class` with data selected

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**Silvering index coefficients from Caroline Durif (2009) to predict silverying stage from morphological parameters**

**Description**

Classification scores are calculated by multiplying the metrics BL = body length, W = weight, MD = mean eye diameter (Dv+Dh)/2, and FL length of the pectoral fin, with each parameter p as S=Constant+BL*p(bl)+W*p(W)... The stage chosen is the one achieving the highest score

**Usage**

`coef_durif`

**Format**

An object of class `matrix` (inherits from `array`) with 5 rows and 6 columns.

**References**

Builds a table with colors to merge with a dataframe for later use in ggplot. An initial check will be done on the name of the color vector. A data frame is built. It contains a column color which is a factor. The factor order match the order of the vector (not the alphabetical order of the colors).

Usage

```
colortable(  
  color = NULL,  
  vec,  
  palette = "Set2",  
  color_function = c("brewer.pal", "gray.colors", "random")  
)
```

Arguments

- **color**: Either null (default) or a named vector of colors, the names should correspond to the values of vec
- **vec**: The vector to match the color with, if a named vector or color is supplied the names should match
- **palette**: The name of the RColorBrewer palette, defaults to "Set2", ignored for other color gradient functions and if a named vector of colors is provided
- **color_function**: the name of the function used to brew the colors, one for "brewer.pal", "gray.colors", "random", default to "brewer.pal", this argument is ignored if a named vector of color is passed.

Value

A dataframe with two columns, the vector (name) and the color (color) as a reordered factor

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
**connect,report_annual-method**

connect method for report_annual class this method performs the sum over the year attention this function does not count subsamples.

**Description**

connect method for report_annual class this method performs the sum over the year attention this function does not count subsamples.

**Usage**

```r
## S4 method for signature 'report_annual'
connect(object, silent = FALSE)
```

**Arguments**

- **object**: An object of class `report_annual-class`
- **silent**: Stops messages from being displayed if silent=TRUE, default FALSE

**Value**

An instantiated object with values filled with user choice

An object of class `report_annual-class` including a dataframe with column effectif, comprising the sum of report_mig counts

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**connect,report_dc-method**

connect method for report_dc

**Description**

loads the working periods and type of arrest or disfunction of the DC

**Usage**

```r
## S4 method for signature 'report_dc'
connect(object, silent = FALSE)
```
connect.report_df-method

Arguments

object  An object of class report_dc-class
silent  boolean, default FALSE, if TRUE messages are not displayed

Value

An object of class report_dc-class with slot data filled from the database

Author(s)

cedric.briand

connect,report_df-method

connect method for report_df

Description

connect method for report_df

Usage

## S4 method for signature 'report_df'
connect(object, silent = FALSE)

Arguments

object  An object of class report_df-class loads the working periods and type of arrest or disfunction of the DF
silent  Boolean, TRUE removes messages.

Value

An object of class report_df with slot data filled from the database

Author(s)

cedric.briand
**connect,report_env-method**

*connect method for report_env class*

**Description**

connect method for report_env class

**Usage**

```r
## S4 method for signature 'report_env'
connect(object, silent = FALSE)
```

**Arguments**

- `object`  
  An object of class `report_env-class`
- `silent`  
  Default FALSE, if TRUE the program should no display messages

**Value**

An object of class `report_env-class` with slot data filled from the database

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**connect,report_ge_weight-method**

*connect method for report_Poids_moyen*

**Description**

The connect method adapts queries according to user choices, mean weight $w$ is calculated as $car_valeur_quantitatif/lot_effectif$. These coefficients are stored in the database, and the connect method loads them from the table using the `ref_coe-class`

**Usage**

```r
## S4 method for signature 'report_ge_weight'
connect(object, silent = TRUE)
```

**Arguments**

- `object`  
  An object of class `report_ge_weight-class`
- `silent`  
  Should the method be silent
connect,report_mig-method

**Value**

An object of class `report_ge_weight-class` with slots `data` and `coe` filled from the database.

**Note**

dates for the request are from august to august (a glass eel season)

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**connect,report_mig_char-method**

`connect` method for `report_mig_char`

**Description**

uses the `report_mig_mult` method

**Usage**

```r
## S4 method for signature 'report_mig_char'
connect(object, silent = FALSE)
```

**Arguments**

- `object` An object of class `report_mig-class`
- `silent` Boolean default FALSE, if TRUE information messages not displayed

**Value**

`report_mig_char` with slot `@data` filled from the database

---

**connect,report_mig_char-method**

`connect` method for `report_mig_char`

**Description**

uses the `report_mig_mult` method

**Usage**

```r
## S4 method for signature 'report_mig_char'
connect(object, silent = FALSE)
```
connect,report_mig_env-method

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>An object of class <code>report_mig_char-class</code></td>
</tr>
<tr>
<td>silent</td>
<td>Boolean default FALSE, if TRUE information messages not displayed</td>
</tr>
</tbody>
</table>

Value

An object of class `report_mig_char-class` with list in `data$parquan` and `data$parqual` filled in from the database

Description

connect method for report_mig_env class

Usage

```r
## S4 method for signature 'report_mig_env'
connect(object, silent = FALSE)
```

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>An object of class <code>report_mig_env-class</code></td>
</tr>
<tr>
<td>silent</td>
<td>Default FALSE, if TRUE the program should no display messages</td>
</tr>
</tbody>
</table>

Value

an object of report_mig_env class

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Description

This method will check if the data in the t_reportjournalier_bjo table has no missing data, if missing the program will load missing data. As a second step, the program will check if the numbers in the table t_reportjournalier_bjo differ from those in the database, and propose to re-run the report_mig (which has a write_database method to write daily reports) for those years.

Usage

```r
## S4 method for signature 'report_mig_interannual'
connect(object, silent = FALSE, check = TRUE)
```

Arguments

- **object**: An object of class `report_mig_interannual-class`
- **silent**: Stops messages from being displayed if silent=TRUE, default FALSE
- **check**: Checks that data are corresponding between report_annual and report_mig

Value

- `report_mig_interannual` an instantiated object with values filled with user choice

Note

We expect different results between daily reports from the t_reportjournalier_bjo table and the annual sums from report_annual for glass eels as those may have been weighted and not only counted. The t_reportjournalier_bjo table used by report_mig_interannual contains the sum of glass eel numbers converted from weights and those directly counted. The report_annual does not.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
connect, report_mig_mult-method

connect method for report_mig_mult

Description

this method loads data from the database for report_mig but also fills the table of conversion coefficient, if the taxa is eel. It also calls connect method for report_df-class, report_dc-class and report_ope-class associated with the report and used by the fungraph and fungraph_glasseel functions. As a side effect it assigns objects report_dc-class, report_df-class and report_ope-class in environment envir_stacomi.

Usage

## S4 method for signature 'report_mig_mult'
connect(object, silent = FALSE)

Arguments

object  
An object of class report_mig_mult-class

silent  
Boolean, if TRUE messages are not displayed

Value

An object of class report_mig_mult-class with slot @data filled from the database

connect, report_ope-method

connect method for report_ope

Description

connect method for report_ope

Usage

## S4 method for signature 'report_ope'
connect(object, silent = FALSE)

Arguments

object  
An object of class report_ope-class load data from the operation table, one dataset per DC

silent  
Boolean, TRUE removes messages.
Value
An object of class report_ope-class with slot data @data filled

Author(s)
cedric.briand

connect,report_sample_char-method
connect method for report_sample_char

Description
connect method for report_sample_char

Usage
## S4 method for signature 'report_sample_char'
connect(object, silent = FALSE)

Arguments
object An object of class report_sample_char-class
silent Boolean if TRUE messages are not displayed

Value
An object of class report_sample_char-class with slot data @data filled

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

connect,report_sea_age-method
connect method for report_sea_age

Description
connect method for report_sea_age

Usage
## S4 method for signature 'report_sea_age'
connect(object, silent = FALSE)
**connect,report_silver_eel-method**

**Arguments**

- **object**: An object of class `report_sea_age-class`
- **silent**: Default FALSE, if TRUE the program should no display messages

**Value**

An object of class `report_sea_age-class` with slot data @data filled

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**connect,report_silver_eel-method**

*connect method for report_silver_eel*

---

**Description**

connect method for report_silver_eel

**Usage**

```
## S4 method for signature 'report_silver_eel'
connect(object, silent = FALSE)
```

**Arguments**

- **object**: An object of class `report_silver_eel-class`
- **silent**: Boolean if TRUE messages are not displayed

**Value**

An object of class `report_silver_eel-class` with slot data @data filled

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>
connect, report_species-method

connect method for report_species

Description

connect method for report_species

Usage

## S4 method for signature 'report_species'
connect(object, silent = FALSE)

Arguments

object An object of class report_species
silent Boolean, if TRUE, information messages are not displayed

Value

An object of class report_species-class with data slot filled with slot data @data filled

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

envir_stacomi

Environment where most objects from the package are stored and then loaded by the charge method

Description

denvir_stacomi envir_stacomi <- new.env(parent = baseenv()) is the environment where most object created by the interface are stored
This is where the graphical interface stores its objects try ls(envir=envir_stacomi)
This is where the graphical interface stores its objects try ls(envir=envir_stacomi)

Usage

denvir_stacomi
denvir_stacomi
denvir_stacomi
Format

An object of class environment of length 0.
An object of class environment of length 0.
An object of class environment of length 0.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

fn_connect_report_mig_interannual

Get table content for table t_bilanmigrationjournalier_bjo in report_mig_interannual

Description

Each time a report mig runs, it can write its content in the t_bilanmigrationjournalier_bjo table which stores the results of the report_mig with one value per day

Usage

fn_connect_report_mig_interannual(years, taxa, stage, dc)

Arguments

years A vector of years
taxa One taxa
stage One stage
dc A vector of counting devices

Value

a data frame with the content of table t_bilanmigrationjournalier_bjo in the database
fungraph  

Function for report_mig graphs including numbers DF DC operations

Description
This graph is for species other than glass eel

Usage
fungraph(
  report_mig,  
  tableau,  
  time.sequence,  
  taxa,  
  stage,  
  dc = NULL,  
  silent,  
  color = NULL,  
  color_ope = NULL,  
  ...
)

Arguments
report_mig  An object of class report_mig

  tableau  A data frame with the with the following columns : No.pas,debut_pas,fin_pas,ope_dic_identifiant,lot_tax_code,lot_std_code,type_de_quantite,MESURE,CALCULE,EXPERT,PONCTUEL,Effectif_total,taux_d_echappement,coe_valeur_coefficient
time.sequence  A vector POSIXt
taxa  The species
stage  The stage
dc  The DC
silent  Message displayed or not
color  Default NULL, a vector of color in the following order, working, stopped, 1...5 types of operation for the fishway or DC, measured, calculated, expert, direct observation. If null will be set to brewer.pal(12,"Paired")[c(8,10,4,6,1,2,3,5,7)]
color_ope  Default NULL, a vector of color for the operations. Default to brewer.pal(4,"Paired")
...

Value
No return value, called for side effects
**fungraph_glasseeel**

**Graph function for glass eel migration.** Differs from fungraph as it does not draw the ggplot graph for month.

---

**Description**

This graph will also plot numbers and bars according to whether the glass eel have been counted through weight or numbers.

**Usage**

```r
defungraph_glasseeel(
    report_mig,
    table,
    time.sequence,
    taxa,
    stage,
    dc = NULL,
    silent,
    color = NULL,
    color_ope = NULL,
    ...
)
```

**Arguments**

- `report_mig`: an object of class `report_mig-class` or an object of class `report_mig_mult-class`
- `table`: a data frame with the results
- `time.sequence`: a vector POSIXt
- `taxa`: the species
- `stage`: the stage
- `dc`: the counting device, default to null, only necessary for `report_mig_mult-class`
- `silent`: Default NULL, a vector of length 11 of color in the following order, numbers, weight, working, stopped, 1...5 types of operation, the 2 latest colors are not used but kept for consistency with fungraph for the fishway, if null will be set to `brewer.pal(12, "Paired")[c(4,6,1,2,3,5,7,8,10,11,12)]`
- `color`: Default NULL, a vector of color for the operations. Default to `brewer.pal(4, "Paired")`
- `color_ope`: Default NULL, a vector of color for the operations. Default to `brewer.pal(4, "Paired")`
- `...`: additional parameters passed to plot, main, ylab, cex.main, font.main, type, xlim, ylim, lty, bty, pch it is not possible to change xlim

---

**Note**

This function is intended to be called from the plot method in `report_mig_mult` and `report_mig`.

**Author(s)**

Cédric Briand <cedric.briand@eptb-vilaine.fr>
funstat

Value

No return value, called for side effects

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

funstat Function to calculate statistics per month

Description

Function to calculate statistics per month

Usage

funstat(tableau, time.sequence, taxa, stage, DC, silent)

Arguments

tableau A table with the following columns: No.pas, debut_pas, fin_pas, ope_dic_identifiant, lot_tax_code, lot_std_code, type_de_quantite, MESURE, CALCULE, EXPERT, PONCTUEL, Effectif_total, taux_d_echappement, coe_valeur_coefficient

time.sequence Passed from report_mig or report_mig_mult
taxa Taxa
stage The Stage
DC The counting device
silent Message displayed or not

Value

No return value, called for side effects

Note

this function is intended to be called from within the summary method

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
funtable

function to print and save statistics in .csv and .html formats for report_mig and report_mig_mult class

Description

description

Usage

funtable(tableau, time.sequence, taxa, stage, DC, resum, silent)

Arguments

tableau A table with the following columns: No.pas,debut_pas,fin_pas, ope_dic_identifiant,lot_tax_code,lot_std_code,type_de_quantite,MESURE,CALCULE,EXPERT,PONCTUEL,Effectif_total,taux_d_echappement,coe_valeur_coefficient

time.sequence Passed from report_mig or report_mig_mult

taxa Taxa

stage The Stage

DC The counting device

resum A summary table generated by funstat

silent If TRUE, all messages turned off (except warnings and errors)

Value

No return value, called for side effects

Note

this function is intended to be called from within the summary method

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
fun_aggreg_for_plot

Calculates a data.frame where all components within the list calcdatal are aggregated and formatted for plot

Description

Calculates a data.frame where all components within the list calcdatal are aggregated and formatted for plot

Usage

fun_aggreg_for_plot(object)

Arguments

object An object of class report_mig_mult-class

Value

A data.frame

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

fun_char_spe

function used to remove special non utf8 character which cause the gtk interface to crash

Description

function used to remove special non utf8 character which cause the gtk interface to crash

Usage

fun_char_spe(text)

Arguments

text a text string which might contain no utf8 characters

Value

text

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
fun_date_extraction

This function extracts temporal characteristics from a dataframe

Description

This function extracts temporal characteristics from a dataframe

Usage

fun_date_extraction(
  data,
  nom_coldt,
  annee = TRUE,
  mois = TRUE,
  quinzaine = FALSE,
  semaine = TRUE,
  semaine_std = FALSE,
  jour_an = FALSE,
  jour_mois = TRUE,
  heure = FALSE
)

Arguments

data : a data frame containing a Date or POSIXt column
nom_coldt : the name of the column containing date or POSIXt entry to be processed
annee : logical do you want a column describing year to be added to the dataframe
mois : logical, add column with month
quinzaine : logical, add column with 15 days
semaine : logical, add column with weeks
semaine_std : logical, add column with standard weeks (using isoweek from lubridate)
jour_an : logical, add column with day of year
jour_mois : logical, add column with day of month
heure : logical, add column with hour

Value

The dataframe with date column filled

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
fun_report_mig_interannual

Description

Statistics per time period

Usage

fun_report_mig_interannual(dat, year = NULL, timesplit = NULL)

Arguments

dat a data frame with columns ("bjo_annee", "bjo_jour", "bjo_labelquantite", "bjo_valeur")
year The year to exclude from the historical series (it will be plotted against the historical series)
timesplit "week" "2 weeks" "month" as provided to seq.POSIXt, default NULL

Value

A data frame with mean, max, and min calculated for each timesplit

fun_report_mig_mult

Calculate daily migration by simple repartition

Description

Function to calculate daily migration from migration monitoring whose length is less than one day, typically video recording whose period are instant events.

Usage

fun_report_mig_mult(time.sequence, datasub, negative = FALSE)

Arguments

time.sequence the time sequence to be filled in with new data
datasub the initial dataset
negative 'boolean', default FALSE, TRUE indicates a separate sum for negative and positive migrations
Value

A data.frame with number summed over over the time.sequence. The function returns the same output than `fun_report_mig_mult_overlaps` but is intended to work faster. In the data.frame, the total number is 'Effectif_total' and corresponds to the addition of numbers and numbers converted from weight, the total weight is 'Poids_total'+'poids_depuis_effectifs' and corresponds to weighed glass eel plus glass eel number converted in weights.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

fun_report_mig_mult_overlaps

Function to calculate daily migration using overlaps functions

Description

Function to calculate daily migration from migration monitoring whose length is more than one day, this calculation relies on the (false) assumption that migration is evenly spread over time.

Usage

`fun_report_mig_mult_overlaps(time.sequence, datasub, negative = FALSE)`

Arguments

time.sequence  the time sequence to be filled in with new data
datasub        the initial dataset
negative        'boolean', default FALSE, TRUE indicates a separate sum for negative and positive migrations to time.sequence period and summed over the new sequence. A migration operation spanning several days will be converted to 'daily' values assuming that the migration was regular over time. The function returns one row per taxa, stages, counting device. It does not account for the destination of taxa. It returns separate rows for quantities and numbers. Several columns are according to the type of measure (MESURE, CALCULE, PONCTUEL or EXPERT).

Value

A data.frame with daily migrations

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

calcule, report_mig_mult-method
fun_schema  
*Creates a list of available schemas in the db*

**Description**

Creates a list of available schemas in the db

**Usage**

fun_schema()

**Value**

A table with of data providers with org_code, the user of each schema, and org_description the description of the schema

---

fun_stage_durif  
*Function to calculate the stages from Durif*

**Description**

Function to calculate the stages from Durif

**Usage**

fun_stage_durif(data)

**Arguments**

- **data**  
  A dataset with columns BL, W, Dv, Dh, FL corresponding to body length (mm), Weight (g), vertical eye diameter (mm), vertical eye diameter (mm), and pectoral fin length (mm)

**Value**

A data.frame with durif stages per individual

**Author(s)**

Laurent Beaulaton <laurent.beaulaton@ofb.fr>
fun_table_per_dis

functions called in DF and DC

Description

functions called in DF and DC

Usage

fun_table_per_dis(
  typeperiode,
  tempsdebut,
  temsfin,
  libelle,
  color,
  date = TRUE
)

Arguments

typeperiode ref.tr_typearretdisp_tar(per.tar_code) the code of the period (see table ref.tr_typearretdisp_tar)
tempdebut ref.tr_typearretdisp_tar(per_date_debut) starting timestamp of the period
temsfin The postgres column ref.tr_typearretdisp_tar(per.date_fin) ending timestamp of the period
libelle The postgres column ref.tr_typearretdisp_tar(libelle) description of the period
color A named vector of color matching libelle.
date Boolean, should the function return a POSIXt or date value

Value

A list

Note

returns either POSIXt or date if date=TRUE

Author(s)

Cedric Briand <cedric.briand@epb-vilaine.fr>
fun_weight_conversion returns a table where weights and number are calculated from number and weights respectively performs a query to collect the conversion coefficients

Description
returns a table where weights and number are calculated from number and weights respectively performs a query to collect the conversion coefficients

Usage
fun_weight_conversion(tableau, time.sequence, silent)

Arguments
tableau Table issued from report_mig
time.sequence Time sequence from report_mig
silent If silent=TRUE do not display messages

Value
tableau, the data frame with weight converted to numbers

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

fun_write_monthly This writes monthly data in t_reportmensuel_mens table

Description
This writes monthly data in t_reportmensuel_mens table

Usage
fun_write_monthly(report_mig, resum, silent)

Arguments
report_mig an object of class report_mig
resum data frame with summary per month
silent Suppresses messages
**getvalue**

**Value**

No return value, called for side effects

**Note**

This function is launched by `fun_write_daily`, the resum dataset is created by the `funstat` function

---

**getvalue**  
*Generic method getvalue*

---

**Description**

Generic method getvalue

**Usage**

`getvalue(object, ...)`

**Arguments**

- `object`: Object
- `...`: Additional parms

**Author(s)**

cedric.briand

---

**graphdate**  
*function used for some lattice graphs with dates*

---

**Description**

function used for some lattice graphs with dates

**Usage**

`graphdate(vectordate)`

**Arguments**

- `vectordate`: date or POSIXt

**Value**

`vectordate (without class)`
model,report_ge_weight-method

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

model

Generic for prediction

Description

Generic for prediction

Usage

model(object, ...)

Arguments

object Object
... Additional parms

Author(s)

cedric.briand

model,report_ge_weight-method

model method for report_ge_weight' this method uses samples collected over the season to model the variation in weight of glass eel or yellow eels.

Description

model method for report_ge_weight’ this method uses samples collected over the season to model the variation in weight of glass eel or yellow eels.

Usage

## S4 method for signature 'report_ge_weight'
model(object, model.type = "seasonal", silent = FALSE)

Arguments

object An object of class report_ge_weight-class
model.type default 'seasonal', 'seasonal1','seasonal2','manual'.
silent Default FALSE, if TRUE the program should no display messages
plot,report_annual,missing-method

Details

Depending on model.type several models are produced

`model.type='seasonal'`. The simplest model uses a seasonal variation, it is fitted with a sine wave curve allowing a cyclic variation \( w = a \cdot \cos(2 \pi \cdot (d' - T)/365) + b \) with a period \( T \). The modified day \( d' \) used in this model is set at 1 the 1st of August \( \text{doy} = d' + d_0; d_0 = 212 \), \( \text{doy} \) = julian days

`model.type='seasonal1'`. A time component is introduced in the model, which allows for a long term variation along with the seasonal variation. This long term variation is fitted with a gam, the time variable is set at zero at the beginning of the first day of observed values. The seasonal variation is modeled on the same modified julian time as model.type='seasonal' but here we use a cyclic cubic spline \( cc \), which allows to return at the value of \( d_0 = 0 \) at \( d=365 \). This model was considered as the best to model size variations by Diaz & Briand in prep. but using a large set of values over years.

`model.type='seasonal2'`. The seasonal trend in the previous model is now modelled with a sine curve similar to the sine curve used in seasonal. The formula for this is \( \sin(\omega vt) + \cos(\omega vt) \), where \( vt \) is the time index variable \( \omega \) is a constant that describes how the index variable relates to the full period (here, \( 2\pi/365 = 0.0172 \)). The model is written as following \( w \cdot \cos(0.0172 \cdot \text{doy}) + \sin(0.0172 \cdot \text{doy}) + s(\text{time}) \).

`model.type='manual'`. The dataset don (the raw data), coe (the coefficients already present in the database, and newcoe the dataset to make the predictions from, are written to the environment envir_stacomi. Please see example for further description on how to fit your own model, build the table of coefficients, and write it to the database.

Value

An object of class `report_ge_weight-class` with `@calcdat[@"import_coe"]` filled.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**plot,report_annual,missing-method**

*Plot method for report_annual*

Description

Plot method for report_annual

Usage

```r
## S4 method for signature 'report_annual,missing'
plot(x, plot.type = "point", silent = FALSE)
```
plot,report_dc,missing-method

Arguments

- **x**: An object of class report_annual-class
- **plot.type**: Default point
- **silent**: Stops displaying the messages.
  - plot.type="point": ggplot+geom_point

Value

No return value, called for side effects

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

- report_mig_interannual-class for examples

---

plot,report_dc,missing-method

*Different plots for report_dc*

Description

- **plot.type=1**: A barplot of the operation time per month
- **plot.type=2**: Barchat giving the time per type of operation
- **plot.type=2**: Rectangle plots drawn along a line
- **plot.type=4**: Plots per day drawn over the period to show the operation of a df, days in x, hours in y

Usage

```r
## S4 method for signature 'report_dc,missing'
plot(
  x,
  plot.type = 1,
  silent = FALSE,
  main = NULL,
  color_type_oper = c("Fonc normal" = "#76BEBE", "Arr ponctuel" = "#FF6700", "Arr maint" = "#9E0142", Dysfonc = "#EE1874", "Non connu" = "#999999"),
  color_etat = c("TRUE" = "#0F313A", "FALSE" = "#CEB99A")
)
```
Arguments

- **x**: An object of class `report_dc-class`.
- **plot.type**: 1 to 4, barplot, barchart, rectangle plot and box showing details of daily operation, a plot with adjacent rectangles.
- **silent**: Stops displaying the messages default to FALSE
- **main**: The title of the graph, if NULL a default title will be plotted with the number of the DF.
- **color_type_oper**: Named vector of color for the graph, must match type operation default to c("Fonc normal" = "#76BEBE", "Arr ponctuel" = "#FF6700", "Arr maint" = "#9E0142", "Dysfonc" = "#EE1874", "Non connu" = "#999999").
- **color_etat**: Named vector state value (must match the names "TRUE", "FALSE").

Value

Nothing but prints the different plots.

Note

The program cuts periods which overlap between two month. The splitting of different periods into month is assigned to the `envir_stacomi` environment.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**plot,report_df,missing-method**

_Different plots for report_df_

**Description**

- **plot.type=1**: A barplot of the operation time per month
- **plot.type=2**: Barchart giving the time per type of operation
- **plot.type=2**: Rectangle plots drawn along a line
- **plot.type=4**: Plots per day drawn over the period to show the operation of a df, days in x, hours in y

**Usage**

```r
## S4 method for signature 'report_df,missing'
plot(
  x,
  plot.type = 1,
  silent = FALSE,
  main = NULL,
)```

```r
```
color_type_oper = c('Fonc normal' = "#1B9E77", 'Arr ponctuel' = "#E6AB02", 'Arr maint' = "#9E0142", Dysfonc = "#E41A1C", 'Non connu' = "#999999"),
color_etat = c('TRUE' = "chartreuse3", 'FALSE' = "orangered3")
)

Arguments

x
An object of class report_df-class.

plot.type
1 to 4.

silent
Stops displaying the messages.

main
The title of the graph, if NULL a default title will be plotted with the number of the DF.

color_type_oper
Named vector of color for the graph, must match type operation default to c("Fonc normal" = "#1B9E77","Arr ponctuel" = "#E6AB02", "Arr maint" = "#9E0142", "Dysfonc" = "#E41A1C","Non connu" = "#999999").

color_etat
Named vector state value (must match the names "TRUE","FALSE").

Value

Nothing but prints the different plots.

Note

The program cuts periods which overlap between two month. The splitting of different periods into month is assigned to the envir_stacomi environment.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

Plot method for report_env

Usage

## S4 method for signature 'report_env,missing'
plot(x, silent = FALSE)

Arguments

x
An object of class report_env-class

silent
Stops displaying the messages
Value

Nothing, called for its side effect of plotting data

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

Plot method for report_ge_weight'

Usage

## S4 method for signature 'report_ge_weight,missing'
plot(x, plot.type = 1, silent = FALSE)

Arguments

x
An object of class report_ge_weight-class

plot.type
Default '1'. '1' plot of mean weight of glass eel against the mean date of operation (halfway between start, and end of operation). The ggplot 'p' can be accessed from envir_stacomi using get('p', envir_stacomi). '2' standard plot of current coefficient. '3' same as '1' but with size according to number.

silent
Stops displaying the messages

Value

Nothing, called for its side effect of plotting data

Note

the model method provides plots for the fitted models

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
plot,report_mig,ANY-method

Plots of various type for report_mig.

Description

- **plot.type="standard"** calls `fungraph` and `fungraph_glasseel` functions to plot as many "report_mig" as needed, the function will test for the existence of data for one dc, one taxa, and one stage.

- **plot.type="step"** creates Cumulated graphs for report_mig_mult. Data are summed per day for different dc taxa and stages.

- **plot.type="multiple"** Method to overlay graphs for report_mig_mult (multiple dc/taxa/stage in the same plot).

Usage

```r
## S4 method for signature 'report_mig,ANY'
plot(
  x,
  y,
  plot.type = "standard",
  color = NULL,
  color_ope = NULL,
  silent = FALSE,
  ...
)
```

Arguments

- **x** An object of class report_mig
- **y** From the formals but missing
- **plot.type** One of "standard","step". Default to standard the standard report_mig with dc and operation displayed, can also be step or multiple
- **color** Default NULL, argument passed for the plot.type="standard" method. A vector of color in the following order : (1) working, (2) stopped, (3:7) 1...5 types of operation, (8:11) numbers, weight, NULL, NULL (if glass eel), (8:11) measured, calculated, expert, direct observation for other taxa. If null will be set to `brewer.pal(12,"Paired")[c(8,10,4,6,1,2,3,5,7)]`
- **color_ope** Default NULL, argument passed for the plot.type="standard" method. A vector of color for the operations. Default to `brewer.pal(4,"Paired")`
- **silent** Stops displaying the messages.
- **...** Additional arguments passed to matplot or plot if plot.type="standard", see ... in `fungraph_glasseel` and `fungraph`
Value

Nothing, called for its side effect

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

plot method for report_mig_char

Usage

## S4 method for signature 'report_mig_char,missing'
plot(x, color_parm = NULL, plot.type = "qual", silent = FALSE, ...)

Arguments

x
An object of class report_mig_char

color_parm
A named vector for the colors of either parameters (if plot.type=quant) or levels for parameters (if plot.type=qual).

plot.type
One of 'qual', 'quant' 'crossed' default to qual

silent
Boolean default FALSE, if TRUE information messages not displayed

...
Additional parameters

Value

Nothing, called for its side effect of plotting data

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
**Plot method for report_mig_env**

**Description**

Plot method for report_mig_env

**Usage**

```r
## S4 method for signature 'report_mig_env,missing'
plot(x, color_station = NULL, color_dc = NULL, silent = FALSE)
```

**Arguments**

- `x`: An object of class `report_mig_env`
- `color_station`: A named vector of station color (e.g. `c("temp_gabion"="red","coef_maree"="blue","phases_lune"="green")` default null
- `color_dc`: A named vector giving the color for each dc default null (e.g. `c(5="#4D4D4D",6="#E6E6E6",12="#AEAEAE")`)
- `silent`: Stops displaying the messages.

**Value**

Nothing, called for its side effect of plotting

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**Plot method for report_mig_interannual**

**Description**

Several of these plots are scaled against the same year, i.e. the comparison is based on year 2000, meaning that day 1 would correspond to the first date of 2000, which is also a saturday, the last day of the week.
plot.report_mig_interannual,missing-method

Usage

## S4 method for signature 'report_mig_interannual,missing'
plot(
  x,
  plot.type = "standard",
  timesplit = "month",
  year_choice = NULL,
  alpha = 1,
  silent = FALSE
)

Arguments

- **x**: An object of class `report_mig_interannual-class`
- **plot.type**: Default standard
- **timesplit**: Used for plot.type barchart or dotplot, Default month other possible values are day, week, 2 weeks, month French values "jour" "semaine" "quinzaine" "mois" are also accepted.
- **year_choice**: The year chosen to calculate statistics which will be plotted against the historical series, should be a character vector of length one e.g. '2012', default NULL, when NULL the latest year is selected.
- **alpha, silent**: argument passed when plot.type=barchart, pointrange, standard default 1

Value

Nothing, called for its side effect of plotting
plot.report_mig_mult,missing-method

Plots of various type for report_mig_mult

Description

**plot.type='standard'** calls `fungraph` and `fungraph_glasseel` functions to plot as many 'report_mig' as needed, the function will test for the existence of data for one dc, one taxa, and one stage

**plot.type='step'** creates Cumulated graphs for report_mig_mult. Data are summed per day for different dc taxa and stages

**plot.type='multiple'** Method to overlay graphs for report_mig_mult (multiple dc/taxa/stage in the same plot)

Usage

```r
## S4 method for signature 'report_mig_mult,missing'
plot(
  x,
  plot.type = "standard",
  color = NULL,
  color_ope = NULL,
  silent = FALSE,
  ...
)
```

Arguments

- **x** An object of class `report_mig_mult`
- **plot.type** One of 'standard', 'step', 'multiple'. Default to standard the standard report_mig with dc and operation displayed, can also be step or multiple
- **color** Default NULL, argument passed for the plot.type='standard' method. A vector of color in the following order : (1) working, (2) stopped, (3:7) 1...5 types of operation, (8:11) numbers, weight, NULL, NULL (if glass eel), (8:11) measured, calculated, expert, direct observation for other taxa. If null will be set to `brewer.pal(12,'Paired')[c(8,10,4,6,1,2,3,5,7)]`
- **color_ope** Default NULL, argument passed for the plot.type='standard' method. A vector of color for the operations. Default to `brewer.pal(4,'Paired')`
- **silent** Stops most messages from being displayed
- **...** Additional arguments passed to `matplot` or `plot` if plot.type='standard', see ... in `fungraph_glasseel` and `fungraph`
Value

Nothing, called for its side effect of plotting

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

Plots of various type for reportcarlot

Usage

```r
## S4 method for signature 'report_sample_char,missing'
plot(x, plot.type = "l", silent = FALSE)
```

Arguments

- `x` An object of class report_sample_char
- `plot.type` One of 'l','violin plot'. Default to 1, can also be boxplot or 3 points.
- `silent` Stops displaying the messages

Value

Nothing, called for its side effect, plotting

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
plot, report_sea_age, missing-method

Plots of various type for report_sea_age

Description

Plots of various type for report_sea_age

Usage

## S4 method for signature 'report_sea_age, missing'
plot(x, plot.type = "1", silent = FALSE)

Arguments

x
An object of class report_sea_age-class

plot.type
Default "1"

plot.type="1" density plot by sea age
plot.type="2" Density plot by sea age and dc

silent
Default FALSE, if TRUE the program should no display messages.

Value

Nothing, called for its side effect of plotting

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

plot, report_silver_eel, missing-method

Plots of various type for report_silver_eel

Description

Plots of various type for report_silver_eel

Usage

## S4 method for signature 'report_silver_eel, missing'
plot(x, plot.type = c("1", "2", "3", "4"), silent = FALSE)
Arguments

- **x**: An object of class `report_species-class`.
- **plot.type**: Default "1".
  - **plot.type="1"**: Lattice plot of Durif’s stages according to Body Length and Eye Index (average of vertical and horizontal diameters). If several DC are provided then a comparison of data per dc is provided.
  - **plot.type="2"**: Lattice plot giving a comparison of Durif’s stage proportion over time, if several DC are provided an annual comparison is proposed, if only one DC is provided then the migration is split into month.
  - **plot.type="3"**: Series of graphs showing mean Fulton’s coefficient, Pankhurst eye index, along with a size weight analysis and regression using robust regression (rlm more robust to the presence of outliers).
  - **plot.type="4"**: Lattice cloud plot of Pankurst~ Body Length ~ weight).
- **silent**: Stops displaying the messages.

Value

A lattice xy.plot if plot.type =1, a lattice barchart if plot.type=2, nothing but plots a series of graphs in a single plot if plot.type=3, a lattice cloud object if plot.type=4.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

Plot method for `report_species`.

Usage

```r
## S4 method for signature 'report_species,missing'
plot(x, plot.type = "pie", color = NULL, silent = FALSE)
```

Arguments

- **x**: An object of class `report_species-class`.
- **plot.type**: Default pie #’
  - **plot.type="pie"** A pie
  - **plot.type="barchart"** A barchart
- **color**: Default NULL, a vector of colors of length corresponding to the number of taxa-stage different values, use `unique(bilesp@calcdata$taxa_stage)` to get that number. The color applies to both pie and barchart plots.
- **silent**: Stops displaying the messages.
Value

Nothing, called for producing plots

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

print, `report_dc`-method

Method to print the command line of the object.

Description

Method to print the command line of the object.

Usage

```r
## S4 method for signature 'report_dc'
print(x, ...)
```

Arguments

- `x` An object of class `report_dc`
- `...` Additional parameters passed to `print`

Value

Nothing, called for its side effect

Author(s)

cedric.briand

print, `report_df`-method

Method to print the command line of the object

Description

Method to print the command line of the object

Usage

```r
## S4 method for signature 'report_df'
print(x, ...)
```
**print_report_mig-method**

**Arguments**

- **x**: An object of class `report_df`  
- ...: Additional parameters passed to print

**Value**

Nothing, called for its side effect of printing data

**Author(s)**

cedric.briand

---

**print_report_mig-method**

*Method to print the command line of the object*

**Description**

Method to print the command line of the object

**Usage**

```r
## S4 method for signature 'report_mig'
print(x, ...)
```

**Arguments**

- **x**: An object of class `report_mig`  
- ...: Additional parameters passed to print

**Author(s)**

cedric.briand
print,report_mig_mult-method

Method to print the command line of the object

Description
Method to print the command line of the object

Usage
## S4 method for signature 'report_mig_mult'
print(x, ...)

Arguments
x  An object of class report_mig_mult
... Additional parameters passed to print

Author(s)
cedric.briand

print,report_sample_char-method

Method to print the command line of the object

Description
Method to print the command line of the object

Usage
## S4 method for signature 'report_sample_char'
print(x, ...)

Arguments
x  An object of class report_sample_char
... Additional parameters passed to print

Author(s)
cedric.briand
Method to print the command line of the object

## S4 method for signature 'report_sea_age'
print(x, ...)

Arguments

x An object of class report_sea_age
...

Author(s)

cedric.briand

Method to print the command line of the object

## S4 method for signature 'report_silver_eel'
print(x, ...)

Arguments

x An object of class report_silver_eel
...

Value

NULL, prints data in the console

Author(s)

cedric.briand
ref_choice-class

Class 'ref_choice'

Description

ref_choice referential class allows to choose within several values with radiobuttons interface

Slots

- listechoice A character vector giving possible choices
- label A character, title of the box giving the possible choices
- selected An Integer the initial selected value (as an index), first=1 used in gradio

Objects from the Class

Objects can be created by calls of the form `new('ref_choice', listechoice=character(), label=character(), selected=integer())`.

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

Other referential objects: `charge, ref_choice-method, ref_coe-class, ref_dc-class, ref_df-class, ref_horodate-class, ref_list-class, ref_par-class, ref_parqual-class, ref_parquan-class, ref_stage-class, ref_taxa-class, ref_year-class`

ref_coe-class

Class 'ref_coe'

Description

Enables to load conversion coefficients quantity-number. This class only exists to load the data with its method charge. It is not used directly as component of the graphical interface, as the year is already loaded in the different report objects

Slots

- data A data.frame
- datedebut A 'POSIXlt'
- datefin A 'POSIXlt'
Objects from the Class

Objects can be created by calls of the form `new('ref_coe')`.

Note

Class loading coefficient of conversion between quantity (weights or volumes of glass eel) and numbers between a starting and finishing date

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

Other referential objects: `charge,ref_choice-method,ref_choice-class,ref_dc-class,ref_df-class,ref_horodate-class,ref_list-class,ref_par-class,ref_parqual-class,ref_parquan-class,ref_stage-class,ref_taxa-class,ref_year-class`

---

**ref_dc-class**

*Class 'ref_dc'*

**Description**

Description of a control device.

**Slots**

- `dc_selected` Object of class 'integer', The selected device
- `ouvrage` Object of class 'integer', the attached dam
- `station` Object of class 'character', the attached migration monitoring station, this is necessary to join the table of escapements calculated at the station level.
- `data` Object of class 'data.frame' data pertaining to the control device

Objects from the Class

Objects can be created by calls of the form `new('ref_dc', dc_selected=integer(), ouvrage=integer(), data=data.frame())`.

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

Other referential objects: `charge,ref_choice-method,ref_choice-class,ref_coeclass,ref_df-class,ref_horodate-class,ref_list-class,ref_par-class,ref_parqual-class,ref_parquan-class,ref_stage-class,ref_taxa-class,ref_year-class`
**ref_df-class**

**Description**

Representation of a fishway, contains description data of all fishways from the database along with the selected fishways (df) (integer) Objects from the Class: Objects can be created by calls of the form `new('ref_df', df_selected=integer(), ouvrage=integer(), data=data.frame())`.

**Arguments**

- `df_selected` Object of class 'integer' The identifier of the fishway
- `ouvrage` Object of class 'integer' The attached dam
- `data` Object of class 'data.frame' Data concerning the fishway

**Author(s)**

cedric.briand@eptb-vilaine.fr

**See Also**

Other referential objects: `charge`, `ref_choice-method`, `ref_choice-class`, `ref_coe-class`, `ref_dc-class`, `ref_horodate-class`, `ref_list-class`, `ref_par-class`, `ref_parqual-class`, `ref_parquan-class`, `ref_stage-class`, `ref_taxa-class`, `ref_year-class`

---

**ref_env-class**

**Description**

Enables to load measure stations and to select one of them

**Slots**

- `dataframe` Data concerning the measure station
- `env_selected` The selected measure station

**Objects from the Class**

Objects can be created by calls of the form `new('ref_env', ...)`.

**Author(s)**

cedric.briand@eptb-vilaine.fr
Class `ref_horodate`

**Description**
choice of date with method to show current and previous year

**Slots**
- `horodate` a "POSIXt"

**Objects from the Class**
Objects can be created by calls of the form `new("ref_horodate", ...{})`.

**Author(s)**
Cedric Briand <cedric.briand@eptb-vilaine.fr>

**See Also**
Other referential objects: charge, ref_choice-method, ref_choice-class, ref_coe-class, ref_dc-class, ref_df-class, ref_list-class, ref_par-class, ref_parqual-class, ref_parquan-class, ref_stage-class, ref_taux-class, ref_year-class

Class `ref_par`

**Description**
Class enabling to load the list of parameters and select one of them

**Slots**
- `data` A `data.frame`
- `par_selected` A character vector corresponding to `par_code`
- `data='data.frame'` the list of parameters

**Objects from the Class**
Objects can be created by calls of the form

**Author(s)**
cedric.briand@eptb-vilaine.fr
See Also

Other referential objects: `charge`, `ref_choice-method`, `ref_choice-class`, `ref_coe-class`, `ref_dc-class`, `ref_df-class`, `ref_horodate-class`, `ref_list-class`, `ref_par-class`, `ref_parquan-class`, `ref_parqual-class`, `ref_stage-class`, `ref_taxa-class`, `ref_year-class`

---

`ref_parqual-class`  
Class 'ref_parqual'

Description

Class enabling to load the list of qualitative parameters and to select one of them. It inherits from 'ref_par', uses its 'choice' method

Slots

valqual = 'data.frame' the list of qualitative parameters

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

Other referential objects: `charge`, `ref_choice-method`, `ref_choice-class`, `ref_coe-class`, `ref_dc-class`, `ref_df-class`, `ref_horodate-class`, `ref_list-class`, `ref_par-class`, `ref_parquan-class`, `ref_parqual-class`, `ref_stage-class`, `ref_taxa-class`, `ref_year-class`

---

`ref_parquan-class`  
Class 'ref_parquan'

Description

Class enabling to load the list of quantitative parameters and to select one of them. It inherits from 'ref_par', uses its 'choice' method

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

Other referential objects: `charge`, `ref_choice-method`, `ref_choice-class`, `ref_coe-class`, `ref_dc-class`, `ref_df-class`, `ref_horodate-class`, `ref_list-class`, `ref_par-class`, `ref_parquan-class`, `ref_parqual-class`, `ref_stage-class`, `ref_taxa-class`, `ref_year-class`
ref_stage-class

Description

Representation of a fish phase

Slots

data A data frame containing data loaded from the database by either charge or charge_with_filter methods
stage_selected Contains the code 'tax_code' of the stage selected by choice_c() method

Objects from the Class

Objects can be created by calls of the form new('ref_stage', data='data.frame').

list('data') Object of class 'data.frame' ~ The phases available in the database
: Object of class 'data.frame' ~ The phases available in the database

Author(s)

cedric.briand@epth-vilaine.fr

See Also

Other referential objects: charge,ref_choice-method,ref_choice-class,ref_coe-class,ref_dc-class,
ref_df-class,ref_horodate-class,ref_list-class,ref_par-class,ref_parqual-class,
ref_parquan-class,ref_taxa-class,ref_year-class

ref_taxa-class

Description

Loading and selection of fish species. This class is a referential class, and it is integrated into refreport objects.

Slots

data A 'data.frame' of species available in the database
taxa_selected Contains the code 'tax_code' of the taxa selected by choice_c() method

Objects from the Class

Objects can be created by calls of the form new('ref_taxa', ...).
ref_timestep-class

Description
allows to put a value within a glabel

Slots

title='character' the title of the box giving the possible choices
labels the logical parameters choice
checked a vector

Author(s)
cedric.briand@eptb-vilaine.fr

See Also
Other referential objects: charge, ref_choice-method, ref_choice-class, ref_coe-class, ref_dc-class, ref_df-class, ref_horodate-class, ref_list-class, ref_par-class, ref_parqual-class, ref_parquan-class, ref_stage-class, ref_year-class

ref_textbox-class ref_textbox referential class

Description
allows to put a value within a glabel

Objects from the Class

Objects can be created by calls of the form new("ref_timestep",dateDebut="POSIXt",step_duration=numeric(),nb_step=numeric(),nocurrent_step=integer())

list("dateDebut") Object of class "POSIXt" Starting date
: Object of class "POSIXt" Starting date
list("step_duration") Object of class "numeric" Step length
: Object of class "numeric" Step length
list("nb_step") Object of class "numeric" Number of steps
: Object of class "numeric" Number of steps
list("nocurrent_step") Object of class "integer" Number of the current step
: Object of class "integer" Number of the current step
Class "ref_timestepChar"

Description
Character to represent a ref_timestep

Objects from the Class
Objects can be created by calls of the form new("ref_timestepChar", ...{})

Author(s)
cedric.briand@eptb-vilaine.fr

See Also
ref_timestep_daily

Examples

showClass("ref_timestepChar")

Class 'ref_timestep_daily'

Description
Representation of a ref_timestep object with a step length equal to one day. It receives an inheritance from ref_timestep

Details
validity_ref_timestep_daily
Objects from the Class

Objects can be created by calls of the form `new('ref_timestep_daily', dateDebut='POSIXt', step_duration=numeric(), nb_step=numeric(), nocurrent_step=integer()).`

- `list('dateDebut')` Object of class 'POSIXt' Starting date
  - Object of class 'POSIXt' Starting date
- `list('step_duration')` Object of class 'numeric' Step length
  - Object of class 'numeric' Step length
- `list('nb_step')` Object of class 'numeric' Number of steps
  - Object of class 'numeric' Number of steps
- `list('nocurrent_step')` Object of class 'integer' Number of the current step
  - Object of class 'integer' Number of the current step

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

- `ref_timestep`

ref_year-class

Year reference class

Description

Class used to select one or several years

Slots

data  A data.frame with the list of possible years selected as numerics

year_selected  A numeric vector

Objects from the Class

Objects can be created by calls of the form `new("ref_year", data=data.frame(), year_selected=numeric()).`

Author(s)

cedric.briand@eptb-vilaine.fr

See Also

Other referential objects: `charge, ref_choice-method, ref_choice-class, ref_coe-class, ref_dc-class, ref_df-class, ref_horodate-class, ref_list-class, ref_par-class, ref_parqual-class, ref_parquan-class, ref_stage-class, ref_taxa-class`
Description

This class displays annual migration counts, for several counting device, taxa or stages.

Slots

- **dc**: Object of class `ref_dc-class`, the counting device, multiple values allowed
- **data**: Object of class "data.frame" data for report lot
- **taxa**: An object of class `ref_taxa-class`, multiple values allowed
- **stage**: An object of class `ref_stage-class`, multiple values allowed
- **start_year**: Object of class `ref_year-class`, ref_year allows to choose year of beginning
- **end_year**: Object of class `ref_year-class`, ref_year allows to choose last year of the report

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: `report_dc-class`, `report_df-class`, `report_env-class`, `report_ge_weight-class`, `report_mig-class`, `report_mig_char-class`, `report_mig_env-class`, `report_mig_interannual-class`, `report_mig_mult-class`, `report_sample_char-class`, `report_sea_age-class`, `report_silver_eel-class`, `report_species-class`

Examples

```r
# launching stacomi without database for demo
stacomi(database_expected=FALSE)
# the following piece of script will load the Arzal dataset and connected to iav postgres schema
# it requires a working database
# prompt for user and password but you can set appropriate options for host, port and dbname
## Not run:
stacomi(database_expected=TRUE, sch='iav')
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host ="localhost",
stacomiR.port = "5432",
stacomiR.user = user,
```

```r
# the setting of the report_annual-class

report_annual-class

r_ann <- new("report_annual")
r_ann <- choice_c(r_ann,
dc = c(5, 6, 12),
taxa = c("Anguilla anguilla"),
stage = c("AGJ", "AGG"),
start_year = "1996",
end_year = "2015",
silent = FALSE)
r_ann <- connect(r_ann)

## End(Not run)

# the following dataset has been generated by the previous code
data(r_ann)
xtr_ann <- stacomiR::xtable(r_ann,
dc_name = c("Passe bassins", "Piege anguille RG", "Piege anguille RD"),
tax_name = "Anguille",
std_name = c("Arg.", "Jaun.")

# below not run but one can create a file as following

## Not run:

path <- file.path(path.expand(get("datawd", envir = envir_stacomi)),
paste(paste(r_ann@dc@dc_selected, collapse = "+"), 
"_", 
paste(r_ann@taxa@taxa_selected, collapse = "+"), 
"_", 
paste(r_ann@stage@stage_selected, collapse = "+"), 
"_", 
r_ann@start_year@year_selected, 
":", 
r_ann@end_year@year_selected, ".html", sep=""), sep="/"

# here you can add an argument file=path

print(xtr_ann, type="html")

# the following uses the "addtorow" argument which creates nice column headings,
# format.args creates a thousand separator
# again this will need to be saved in a file using the file argument

print(xtr_ann,
add.to.row = get("addtorow", envir = stacomi),
include.rownames = TRUE,
include.colnames = FALSE,
format.args = list(big.mark = " ", decimal.mark = ""))

# barplot transforms the data, further arguments can be passed as to barplot

barplot(r_ann)

barplot(r_ann,
args.legend = list(x="topleft", bty = "n"),
col = c("CA003E", "1A9266", "E10168", "005327", "FF9194"))

# An example with custom arguments for legend.text (overriding plot defaults)

data(r_ann_adour)

if (requireNamespace("RColorBrewer", quietly = TRUE)) {
lesdc <- r_ann_adour@dc@data$dc_code[r_ann_adour@dc@data$dc%in%r_ann_adour@dc@dc_selected]

barplot(r_ann_adour,
legend.text = lesdc,
args.legend = list(x="topleft", bty = "n"),
col = RColorBrewer::brewer.pal(9, "Spectral"),
)
```

report_{dc-class}  

```r
beside=TRUE)
}
plot(r_ann_adour)

## End(Not run)
```

report_{dc-class}  

**Class** "report_{dc}" **report du fonctionnement du dispositif de comptage**

**Description**

The counting device is not always working. It may me stopped either following a monitoring protocol, or due to malfunction of the device, this class allows to draw graphics allowing an overview of the device operation.

**Slots**

- data  A data frame
- dc  An object of class ref_{dc-class}
- horodatebut  An object of class ref_{horodate-class}
- horodatefin  An object of class ref_{horodate-class}

**Objects from the Class**

Objects can be created by calls of the form `new("report_{dc}", ...)`.  

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**See Also**

Other report Objects: `report_annual-class`, `report_{df-class}`, `report_{env-class}`, `report_{ge_weight-class}`, `report_{mig-class}`, `report_{mig_char-class}`, `report_{mig_env-class}`, `report_{mig_interannual-class}`, `report_{mig_mult-class}`, `report_{sample_char-class}`, `report_{sea_age-class}`, `report_{silver_eel-class}`, `report_{species-class}`

**Examples**

```r
# An example that will work only if the database is present
# and the program installed and comprises the schema iav
# prompt for user and password but you can set appropriate options for host, port and dbname
## Not run:
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
```

password <- readline(prompt="Enter password: ")
}

options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host = "localhost",
stacomiR.port = "5432",
stacomiR.user = user,
stacomiR.password = password
)
}
stacomi(TRUE,sch="iav")
r_dc=new("report_dc")
r_dc<-choice_c(r_dc,
5,
horodatedebut="2000-01-01",
horodatefin="2015-12-31",
silent=TRUE)
r_dc<-connect(r_dc)

##
# this dataset has been loaded by the previous lines
# This dataset has been loaded by the previous lines
# this option allows to launch the program without the interface to display
# some of the program features.
stacomi(database_expected=FALSE)
data("r_dc")
plot(r_dc,plot.type="1")
plot(r_dc,plot.type="2")
plot(r_dc,plot.type="3",main="trial title")
plot(r_dc,plot.type="4",main="trial title")
# the following will write in the datawd folder
summary(r_dc)

## End(Not run)

# Description
Fishways (DF) are of various nature, from very simple eel ladders fed by water discharged from the river, to more complex fishways with levels adjusted by the opening of various gates and regulators.
The objective of this class is to provide an assessment of the working status of a fishway throughout the year. A number of fishes ascending a fishway has meaning only if we know that the fishway is operational, and that the counting operated on the fishway has remained operational. In the database the operation of the fishway (DF) and counting device (DC) is aggregated in one table (t_periodefonctdispositif_per). The column per_etat_fonctionnement indicates whether the fishway is operational (with a boolean) and the column per_tar_code indicates the status of either the fishway or DC. In the database four types of operation are set, "1"=normal operation, "2"=Device stopped in normal operation (ie lift ascending, high tide...), "3"="Stopped for maintenance or other problem", "4"="Works but not fully operational,i.e.flow problem, flood, clogged with debris...", "5"="Not known")

Slots

data  A data frame
df  An object of class ref_df-class
horodatedebut  An object of class ref_horodate-class
horodatefin  An object of class ref_horodate-class

Objects from the Class

Objects can be created by calls of the form new("report_df").

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: report_annual-class, report_dc-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, report_species-class

Examples

stacomi(
database_expected=FALSE)
# An example that will work with the database installed only and schema iav in the database
# prompt for user and password but you can set appropriate options for host, port and dbname

## Not run:
stacomi(
database_expected=TRUE, sch='iav')
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(
```r
report_env.dbname = "bd_contmig_nat",
report_env.host = "localhost",
report_env.port = "5432",
report_env.user = user,
report_env.user = password

r_df=new("report_df")
r_df<-choice_c(r_df,
1,
horodatedebut="2015-01-01",
horodatefin="2015-12-31",
silent=TRUE)
Sys.setenv(TZ='GMT')
# the times at Arzal are recorded continuously
# they are converted to date when a time appears while the hour is changing
# hence the following
r_df<-connect(r_df)
```

```r
## End(Not run)
data("r_df")
plot(r_df,plot.type="4")
# the following examples work but take a while to compute
## Not run:
plot(r_df,plot.type="1")
plot(r_df,plot.type="2",main="A nice title")
plot(r_df,plot.type="3",main="A nice title")
## End(Not run)
```

---

**report_env-class**

*class report_env simple output of one or several environmental conditions...*

**Description**

Annual overview of environmental conditions. This class enables to draw some plot, but will mostly be used to build joined graphs crossing the information from `report_mig_mult-class` and `report_mig_env-class`.

**Slots**

- `horodatedebut` *ref_horodate-class*
- `horodatefin` *ref_horodate-class*
- `stationMesure` *ref_env-class*
- `data` *data.frame*
Author(s)

cedric.briand@epib-vilaine.fr

See Also

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, report_species-class

Examples

```r
stacomi(
  database_expected=FALSE)
## Not run:
  if (interactive()){
    if (!exists("user")){
      user <- readline(prompt="Enter user: ")
      password <- readline(prompt="Enter password: ")
    }
  }
  options(
    stacomiR.dbname = "bd_contmig_nat",
    stacomiR.host = "localhost",
    stacomiR.port = "5432",
    stacomiR.user = user,
    stacomiR.user = password
  )
  r_env<-new("report_env")
  r_env<-choice_c(r_env,
                 stationMesure=c("temp_gabion","coef_maree"),
                 datedebut="2008-01-01",
                 datefin="2008-12-31",
                 silent=FALSE)
  r_env<-connect(r_env)

## End(Not run)

  data("r_env")
  plot(r_env,silent=TRUE)
```

---

**report_ge_weight-class**

*Trend of wet weight in glass eel*
Description

In trapping ladders, glass eel are seldom counted, as they are too tiny to handle and too numerous to count. The usual operation is to weight them, or to use a bucket to measure their volume. These weights or volumes will later need to be converted to numbers. The glass eel weight may follow a seasonal pattern. It’s the case for Anguilla anguilla glass eel in the Bay of Biscay. Weights can be modelled using sine wave curves, or more complex gam models. This class has a model method to try those models, which can also be used to extract coefficients manually to manually test more complex models. Some plots are provided to display the coefficients stored in the database, and the model results. A parameter provided in the graphical interface or in the command line (slot liste) takes values ‘1’, ‘>1’, ‘tous’ which mean respectively use only individual sample of glass eels, or use 'group weights' which can be more close to the real weight of glass eel during counts as glass eel are not completely drained from their water during handling to preserve their mucus. The list choice 'tous' means that both individual and group weights are selected.

Slots

data A 'data.frame' data for report lot

calcdata A list containing two processed data frames, data and coe
dc Object of class ref_dc-class, the counting device
start_year Object of class ref_year-class, ref_year allows to choose the year of beginning
end_year Object of class ref_year-class ref_year allows to choose last year of the report
coe Object of class ref_coe-class class loading coefficient of conversion between quantity (weights or volumes of glass eel) and numbers
liste Object of class ref_list-class ref_list referential class choose within a list, here the choice is whether subsamples or not. Subsamples in the stacomi database are samples with a non null value for parent sample. Migration counts are never made on subsamples but those can be integrated to calculate mean weights.

Note

In this class some tools are available to import glass eel measurement from experimental fishing in the estuary. For the charge method dates for the request are from august to august (a glass eel season)

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, report_species-class
Examples

```
require(stacomiR)
# launching stacomi without selecting the scheme or interface
stacomi(
  database_expected=FALSE, sch='iav'
)
# this requires a working database with the schema iav
# prompt for user and password but you can set appropriate options for host, port and dbname
## Not run:
stacomi(
  database_expected=TRUE, sch='iav'
)
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(
  stacomiR.dbname = "bd_contmig_nat",
  stacomiR.host = "localhost",
  stacomiR.port = "5432",
  stacomiR.user = user,
  stacomiR.user = password
)

# create an instance of the class
r_gew<-new("report_ge_weight")
r_gew@liste<-charge(object=r_gew@liste,listchoice=c("=1",">1","tous"),label="")
# here I'm using weights when number are larger than 1 i.e. wet weight
# always choose a date from one year to the next eg 2010 to 2011
# as the dates are from august to august
r_gew<-choice_c(r_gew, dc=c(6),
start_year="2009",
end_year="2015",
selectedvalue=">1",
silent=FALSE)
r_gew<-connect(r_gew)
r_gew<-calcule(r_gew)
## End(Not run)
```

# load the dataset generated by previous lines
data("r_gew")
# the calculation will fill the slot calcdata

# A ggplot showing the trend in weight
plot(r_gew, plot.type=1)
# A plot showing both the data and the trend as recorded in the database
plot(r_gew, plot.type=2)
# Same as plot.type=1 but with size according to size of the sample,
# useful for wet weights where weight are recorded on a number of glass eel
plot(r_gew, plot.type=3)
## Not run:
# First model with nls, see Guerault and Desaunay (1993)
model(r_gew, model.type="seasonal")
model(r_gew, model.type="seasonal1")

## End(Not run)

---

**report_mig-class**  
**Migration report for one DC, one species and one stage**

### Description
This class performs a migration summary. A migration monitoring operation can correspond to a single horodate (in the case of some video monitoring operation) or comprise a period which does not necessarily span a full day. The daily migration is calculated by splitting the operation between days, and the migration is either grouped or split according to the length of the different time spans.

### Slots
- `dc` Object of class `ref_dc-class`: the control device
- `taxa` Object of class `ref_taxa-class`: the species
- `stage` Object of class `ref_stage-class`: the stage of the fish
- `timestep` Object of class `ref_timestep_daily-class`: the time step constrained to daily value and 365 days
- `data` Object of class `data.frame` with data filled in from the connect method
- `calcdata` A "list" of calculated daily data, one per dc, filled in by the calcule method
- `coef_conversion` A data.frame of daily weight to number conversion coefficients, filled in by the connect method if any weight are found in the data slot
- `time.sequence` Object of class `POSIXct`: a time sequence of days generated by the calcule method

### Note
In practise, the `report_mig` class uses methods (calcule, connect...) from the more elaborate `report_mig_mult-class`

### Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

### See Also
Other report Objects: `report_annual-class`, `report_dc-class`, `report_df-class`, `report_env-class`, `report_ge_weight-class`, `report_mig_char-class`, `report_mig_env-class`, `report_mig_interannual-class`, `report_mig_mult-class`, `report_sample_char-class`, `report_sea_age-class`, `report_silver_eel-class`, `report_species-class`
Examples

```
report_mig-class

stacomi(database_expected=FALSE)
# If you have a working database
# the following line of code will create the r_mig dataset from the iav (default)
# schema in the database
## Not run:
stacomi(database_expected=TRUE)
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host = "localhost",
stacomiR.port = "5432",
stacomiR.user = user,
stacomiR.password = password
)
stacomi(
  database_expected=TRUE)
  r_mig=new("report_mig")
  r_mig=choice_c(r_mig,
    dc=5,
    taxa=c("Chelon ramada"),
    stage=c("IND"),
    datedebut="2015-01-01",
    datefin="2015-12-31")
  r_mig<-charge(r_mig)
  # launching charge will also load classes associated with the report
  # e.g. report_ope, report_df, report_dc
  r_mig<-connect(r_mig)
  # launching charge will also load classes associated with the report
  # e.g. report_ope, report_df, report_dc
  r_mig<-calcule(r_mig,silent=TRUE)

## End(Not run)
```

```
# calculations
r_mig<-calcule(r_mig,silent=TRUE)

```

```
# loading data
# use the following to get the raw data loaded by the connect method
# not shown there as the database and program might not be installed
# All three classes report... were created by the charge and connect method
# of report_mig_mult
# in the previous example

```

data("r_mig")
data("r_mig_ope")
assign("report_ope",r_mig_ope,envir=envir_stacomi)
data("r_mig_df")
assign("report_df",r_mig_df,envir=envir_stacomi)
```
data("r_mig_dc")
assign("report_dc",r_mig_dc,envir=envir_stacomi)

# Individual plot for all DC (standard), taxa and stage where data present
# silent argument to stop all messages
plot(r_mig,plot.type="standard",silent=TRUE)
# cumulated migration at the station (all stages and DC grouped)
plot(r_mig,plot.type="step")

# data will be written in the data directory specified in datawd argument to stacomi default "~" file
## Not run:
summary(r_mig,silent=TRUE)
## End(Not run)
# this will write the daily report for later in in the reportnMigrationInterannuelle-class
## Not run:
write_database(r_mig,silent=TRUE,dbname="bd_contmig_nat",host="localhost",port=5432)
## End(Not run)

---

### report_mig_char-class

**Migration report along with quantitative and qualitative characteristics**

**Description**

Migration along with qualitative or quantitative characteristics or both (e.g.) weight of eels according to the size class per period of time, weight of fish according to gender, number of fish per age class. This class does not split migration evenly over time period. So, unlike calculations made in class report_mig and report_mig_mult the whole time span of the migration operation is not considered, only the date of beginning of the operation is used to perform calculations.

**Slots**

- calcdata: A 'list' of calculated data, filled in by the calcule method
- data: A data.frame inherited from `report_sample_char-class`
- dc: An object of class `ref_dc-class` inherited from `report_sample_char-class`
- taxa: An object of class `ref_taxa-class` inherited from `report_sample_char-class`
- stage: An object of class `ref_stage-class` inherited from `report_sample_char-class`
- horodatedebut: An object of class `ref_horodate-class` inherited from `report_sample_char-class`
- horodatefin: An object of class `ref_horodate-class` inherited from `report_sample_char-class`
- par: An object of class `ref_par-class` inherited from `report_sample_char-class`
- echantillon: An object of class `ref_choice-class`, vector of choice
- parquan: An object of class `ref_parquan-class`, quantitative parameter
- parqual: An object of class `ref_parqual-class`, qualitative parameter
Objects from the Class

Objects can be created by calls of the form `new('report_mig_char', ...)`. They are loaded by the interface using `interface_report_mig_char` function.

Note

The main difference between this class and `report_sample_char-class` is that this class allows to select (or not) the samples, and that it handles quantitative and qualitative parameters separately.

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: `report_annual-class`, `report_dc-class`, `report_df-class`, `report_env-class`, `report_ge_weight-class`, `report_mig-class`, `report_mig_env-class`, `report_mig_interannual-class`, `report_mig_mult-class`, `report_sample_char-class`, `report_sea_age-class`, `report_silver_eel-class`, `report_species-class`

Examples

```r
require(stacomiR)

stacomi(
  database_expected=FALSE, sch='logrami')
  # this requires a database with the schema logrami
  # prompt for user and password but you can set appropriate options for host, port and dbname
  ## Not run:
  stacomi(database_expected=TRUE, sch='logrami')
  if (interactive()){
    if (!exists("user")){
      user <- readline(prompt="Enter user: ")
      password <- readline(prompt="Enter password: ")
    }
  }
  options(
    stacomiR.dbname = "bd_contmig_nat",
    stacomiR.host ="localhost",
    stacomiR.port = "5432",
    stacomiR.user = user,
    stacomiR.user = password
  )
  r_mig_char <- new("report_mig_char")
  # here parqual is not in the list
  # so this is equivalent to parqual=NULL
  # default for echantillon is "with"
  r_mig_char <- choice_c(r_mig_char,
    dc=c(107,108,101),
    taxa=c("Salmo salar"),
    stage=c("5","11","BEC","BER","IND"),
  )
```
parquan=c('C001','1786','1785'),
horodatedebut="2012-01-01",
horodatefin="2012-12-31",
silent=FALSE)
# r_mig_char<-charge(r_mig_char) not necessary there
r_mig_char <- connect(r_mig_char)

## End(Not run)
# load the dataset generated by previous lines
data("r_mig_char")

r_mig_char<-calcule(r_mig_char, silent=TRUE)
plot(r_mig_char,plot.type="quant", silent=TRUE)
# one quantitative parameter found, manual choice of color
plot(r_mig_char,plot.type="quant",color_parm=c("C001"="red"), silent=TRUE)
# age will be plotted as a qualitative variable
# here we split size data accoding to the limit known between different ages from
# scale reading in the Loire
r_mig_char <- setasqualitative(r_mig_char,par='C001',
breaks=c(0,675,850,2000),
labels=c("age 1","age 2","age 3"))

r_mig_char<-calcule(r_mig_char, silent=TRUE)
plot(r_mig_char, plot.type="qual", silent=TRUE)
plot(r_mig_char, plot.type="crossed")
plot(r_mig_char, plot.type="crossed",
color_parm=c("age 1"="#379ec6","age 2"="#173957","age 3"="#b09953"))

xt<-xtable(r_mig_char)
# use method print.xtable to get the output

---

**report_mig_env-class**  
Class "report_mig_env"

### Description

Enables to compute an annual overview of fish migration and environmental conditions in the same chart. Environmental conditions may trigger migration events, variation in flow or temperatures can be plotted along migration to check graphically for a possible relation. To enable this, environmental conditions are loaded from an "environmental monitoring station", which records environmental parameters and is attached to a migratory station in the database. This class enables both continuous output (temperature -flow) as well as discrete parameters (qualitative = moon phase, type of operation of a gate, opening of a gate...) which will be displayed on the graph. Values are scaled so that single plot can display migration numbers and environmental parameters. Environmental parameters when stored at a time scale lower that a day are averaged per day, unless they are qualitative parameters, in which case only the first event of the day is displayed on the annual plot.
Slots

  report_mig_mult  report_mig_mult-class
  report_env  report_env-class

Author(s)

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See Also

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, report_species-class

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, report_species-class

Examples

```r
require(stacomiR)
staconi(
  database_expected=FALSE)
  # the following will load the data provided the user has access to the database
  # with data in the iav example scheme.
  # prompt for user and password but you can set appropriate options for host, port and dbname
  ## Not run:
  staconi(
    database_expected=TRUE)
  if (interactive()){
    if (!exists("user")){
      user <- readline(prompt="Enter user: ")
      password <- readline(prompt="Enter password: ")
    }
  }
  options(
    stacomiR.dbname = "bd_contmig_nat",
    stacomiR.host = "localhost",
    stacomiR.port = "5432",
    stacomiR.user = user,
    stacomiR.user = password
  )
  r_mig_env<-new("report_mig_env")
  r_mig_env<-choice_c(r_mig_env,
    dc=c(5,6,12),
    taxa=c("Anguilla anguilla"),
    stage=c("AGJ","AGG","CIV"),
    stationMesure=c("temp_gabion","coef_maree","phases_lune"),
```

report_mig_interannual-class

Class "report_mig_interannual"

Description

When daily report are written in the t_reportjournalier_bjo table by the report_mig-class they can be used by this class to display interannual comparisons of migration. When running its connect method, this class will run the report_mig-class for each year where data are missing, or where the annual sum in the t_reportjournalier_bjo table differs from the counts generated by the report_annual-class: rows have been changed in the database. Different charts are produced with different period grouping. See write_database,report_mig-method for details about how this method inserts data in the t_reportjournalier_bjo table.

Slots

dc An object of class ref_dc-class, the counting device
data A data.frame data loaded from the daily migration table t_bilanmigrationjournalier_bjo
taxa An object of class ref_taxa-class, there can only be one taxa
stage An object of class ref_stage-class, there can only be one stage
start_year An object of class ref_year-class. ref_year allows to choose year of beginning
end_year An object of class ref_year-class ref_year allows to choose last year of the report
calcdat A list of calculated data, filled in by the calcule method

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
See Also

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, report_species-class

Examples

```r
require(stacomiR)
# launching stacomi without selecting the scheme or interface
stacomi(
database_expected=FALSE, sch='pmp')
# If you have connection to the database with the pmp scheme
# prompt for user and password but you can set appropriate options for host, port and dbname
## Not run:
stacomi(database_expected=TRUE, sch="pmp")
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host ="localhost",
stacomiR.port = "5432",
stacomiR.user = user,
stacomiR.user = password
)

# (longest historical dataset available
# in France for eel ...) this suppose you have access to the pmp schema...
# a glimpse of the dataset is still available in the r_mig_interannual dataset
# loaded in the package...

r_mig_interannual <- new("report_mig_interannual")
r_mig_interannual <- choice_c(r_mig_interannual,
dc=c(16),
taxa=c("Anguilla anguilla"),
stage=c("PANG"),
start_year="1990",
end_year="2015",
year_choice=NULL,
silent=TRUE)
r_mig_interannual <- charge(r_mig_interannual)
r_mig_interannual <- connect(r_mig_interannual, check=TRUE)
r_mig_interannual <- calcule(r_mig_interannual, silent=TRUE)

## End(Not run)
```

# otherwise use this
# load the dataset generated by previous lines

data("r_mig_interannual")
```
# the first plot is of little interest, it allows to see what data are available... simple lines
# For irregular operations like those reported at the enfrenaux eel ladder....
plot(r_mig_interannual,plot.type="line", year_choice=2015, silent=TRUE)

# a plot to show the seasonality, this graph may be misleading if the migration is not monitored all year round. Note the y unit is not very informative
# you need to have the viridis package loaded to run this example
plot(r_mig_interannual,plot.type="density",year_choice=2015, silent=TRUE)
## Not run:
if (requireNamespace("ggplot2", quietly = TRUE)&
requireNamespace("viridis", quietly = TRUE)){
  g<-get("g",envir=envir_stacomi)
  g+
ggplot2::scale_fill_manual(values=viridis::viridis(22))+
ggplot2::ggtitle("Saisonnalite de la migration aux Enfrenaux")
}

# the standard plot is showing daily values
# the standard plot is showing daily values
plot(r_mig_interannual,plot.type="standard",year_choice=2015,silent=TRUE)
# Manual edition of the graph produced
if (requireNamespace("ggplot2", quietly = TRUE)){
  g1<-get("g1",envir=envir_stacomi)
  g1<-g1+ggplot2::ggtitle("Les Enfrenaux")+
ggplot2::scale_fill_manual(name="Source",
values=c("purple","#0A0C01"),
labels = c("historical set","2015 values"))+
ggplot2::scale_colour_manual(name="Source", values="#B8EA00",
labels = c("historical mean")) +
ggplot2::ylab("Nombre d’anguilles")
  print(g1)
}

# Another graph to show a "manual" processing of the data
# and their extraction from the data slot
if (requireNamespace("ggplot2", quietly = TRUE)&
requireNamespace("viridis", quietly = TRUE)){
  dat<-fun_date_extraction(r_mig_interannual@data, # data to import
"bjo_jour", # name of the column where dates are found
annee=FALSE,
mois=TRUE,
semaine =TRUE,
jour_mois=FALSE)
  res<-dplyr::select(dat,bjo_valeur,bjo_annee,semaine)
  res<-dplyr::group_by(res,bjo_annee,semaine)
  res<-dplyr::summarize(res,effectif=sum(bjo_valeur))
  ggplot2::ggplot(res, ggplot2::aes(x = semaine, y = bjo_annee,fill=effectif)) +
ggplot2::geom_tile(colour="black") + ggplot2::coord_fixed() +
viridis::scale_fill_viridis(begin=0,option="D") + ggplot2::theme_bw()+
ggplot2::theme(panel.background= ggplot2::element_rect(fill = "#9360A9"),
panel.grid.major=ggplot2::element_line(colour="#C1DB39"),
panel.grid.minor=ggplot2::element_line(colour="#7DD632")) +
 ggplot2::ylab("year") + ggplot2::xlab("week") +
 ggplot2::ggtitle("Historical trend at Les Enfrenaux Eel trap")
)

# barchart with different splitting periods
# the migration is displayed against seasonal data
# extracted from all other years loaded in the report
# available arguments for timesplit are "quinzaine" and "mois" and "semaine"
# with the silent=TRUE argument, it's always the latest year that is selected,
# otherwise the user is prompted with a choice, to select the year he wants
# to compare will all others...

plot(r_mig_interannual, plot.type="barchart", timesplit="quinzaine", year_choice=2015, silent=TRUE)

# Comparison with historical values. Each year and 2 weeks values
# is a point on the graph...

plot(r_mig_interannual, plot.type="pointrange", timesplit="mois", year_choice=2015, silent=TRUE)

# Step plot
# different years shown in the graph
# the current year (or the selected year if silent=FALSE)
# is displayed with a dotted line

plot(r_mig_interannual, plot.type="step", year_choice=2015, silent=TRUE)
if (requireNamespace("ggplot2", quietly = TRUE) &
requireNamespace("viridis", quietly = TRUE)){

g<-get("g", envir=envir_stacomi) + ggplot2::theme_minimal()

g+viridis::scale_color_viridis(discrete=TRUE)+
 ggplot2::ggtitle("Cumulated migration step plot at les Enfrenaux eel trap")
}

# Plots for seasonality of the salmon migration
# using a Loire river dataset (Vichy fishway)

data("r_mig_interannual_vichy")
# the following show how data are processed to get
# statistics for seaonal migration, daily values

r_mig_interannual_vichy<-calcule(r_mig_interannual_vichy, timesplit="jour", year_choice=2012, silent=TRUE)

#r_mig_interannual_vichy@calcdata #check this to see the results
# statistics for seaonal migration, weekly values

r_mig_interannual_vichy<-calcule(r_mig_interannual_vichy, timesplit="semaine", year_choice=2012, silent=TRUE)

# the plot method also runs the calcule method

plot(r_mig_interannual_vichy, plot.type="seasonal",
timesplit="semaine", year_choice=2012, silent=TRUE)
plot(r_mig_interannual_vichy, plot.type="seasonal", timesplit="mois", year_choice=2012, silent=TRUE)
plot(r_mig_interannual_vichy, plot.type="seasonal", timesplit="jour", year_choice=2012, silent=TRUE)

# plots for seasonality using another Loire river dataset
# with the migration of Lampreys (Petromyzon marinus)
# recorded at the Descarte DF (Vienne)
# run this only if you are connected to the logrami dataset
staconi(database_expected = TRUE, sch = 'logrami')
bmi_des<-new("report_mig_interannual")
bmi_des<-choice_c(bmi_des, dc=c(23), taxa=c("Petromyzon marinus"), stage=c("5"), start_year="2007", end_year="2014", silent=TRUE)
bmi_des<-connect(bmi_des)
bmi_des<-calcule(bmi_des, timesplit="semaine")
plot(bmi_des, plot.type="seasonal", timesplit="semaine", year_choice=2014)
plot(bmi_des, plot.type="seasonal", timesplit="jour", year_choice=2014)
plot(bmi_des, plot.type="seasonal", timesplit="mois", year_choice=2014)

## End (Not run)

---

**report_mig_mult-class**  *Migration reports for multiple DC / species / stages*

**Description**

Migration counts for several Fish counting devices (DC), several taxa and several stages. This migration count can be built either by the graphical interface or from the command line (see examples).

**Slots**

dc An object of class ref_dc-class
taxa An object of class ref_taxa-class
stage An object of class ref_stage-class
timestep An object of class ref_timestep_daily-class
data A data.frame containing raw data filled by the connect method
calcdatalist A 'list' of calculated daily data, one per dc, filled in by the calcule method
coef_conversion  A data frame of daily weight to number conversion coefficients, filled in by the 
connect method if any weight are found in the data slot.

time.sequence  A POSIXt time sequence

**Note**

A Migration report comes from a migration monitoring: the fishes are monitored in a section of 
river, this section is called a control station (station). Most often, there is a dam, one or several 
fishways (DF) which comprise one or several counting devices (DC). On each counting device, 
the migration is recorded. It can be either an instant recording (video control) or the use of traps, 
Operations are monitoring operations during a period. For each operation, several species of fishes 
can be recorded (samples). In the case of migratory fishes the stage of development is important as 
it may indicate generic migrations, to and fro, between the river and the sea.

Hence a Multiple Migration report is built from several one or several counting devices (DC), one 
or several Taxa (Taxon), one or several stages (stage). The migration can be also recorded not as 
numbers, but in the case of glass eels, as weight, which will be later transformed to number, from 
daily conversion coefficients. The methods in this class test whether the counts are numbers or 
another type of quantity. This class makes different calculations than report_mig, it does not handle 
escapement coefficients, it uses quantities other than numbers if necessary (only used for glass eel 
in the connect method).

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**See Also**

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, 
report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, 
report_mig_interannual-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class, 
report_species-class

**Examples**

```R
library(stacomiR)

stacomi(database_expected=FALSE)
## launches the application in the command line
## here an example of loading
## the following lines will only run if you have the program installed
## and the iav scheme available in the database
## this example generates the r_mig_mult dataset
## not for user and password but you can set appropriate options for host, port and dbname
## not run:
## stacomi(
  database_expected=TRUE)
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
  }
  password <- readline(prompt="Enter password: ")
```
options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host = "localhost",
stacomiR.port = "5432",
stacomiR.user = user,
stacomiR.password = password
)

r_mig_mult <- new("report_mig_mult")
r_mig_mult <- choice_c(r_mig_mult,
dc=c(5,6,12),
taxa=c("Anguilla anguilla"),
stage=c("AGG","AGJ","CIV"),
datedebut="2011-01-01",
datefin="2011-12-31")
r_mig_mult <- charge(r_mig_mult)
# launching charge will also load classes associated with the report
# e.g. report_ope, report_df, report_dc
r_mig_mult <- connect(r_mig_mult)
# calculations
r_mig_mult <- calcule(r_mig_mult,silent=TRUE)

# Individual plot for all DC, taxa and stage where data present

# Not run:
plot(r_mig_mult,plot.type="standard",silent=TRUE)
# colors in the following order (glass eel)
# working, stopped, 1...5 types of operation, numbers, weight, 2 unused colors
# for yellow eel and other taxa
# stopped, 1...5 types of operation, ponctuel, expert, calcule, mesure, working,
plot(r_mig_mult,plot.type="standard",
color=c("#DEF7BE","B950B5","9ABDDA","781A74","BF9D6E","FFC26E",
"A66F24","012746","6C3E00","C7ED8","8AA123"),
color_ope=c("5589B5","FFD86E","FF996E","1C4D76"),
# For the following plot, beware, all stages and DC are grouped. This can make sense # for instance if you want to display the cumulated migration for one species # in several counting devices located on the same dam...
plot(r_mig_mult,plot.type="step",silent=TRUE)

# Combined plot for ggplot2
plot(r_mig_mult,plot.type="multiple",silent=TRUE)
# Data will be written in the data directory specified in
# the datadir argument to stacomi, default "~"
summary(r_mig_mult,silent=FALSE)

## End(Not run)

---

**report_ope-class**

**Report on operations**

**Description**

Operations are monitoring operations generated between two dates. In the case of video monitoring or similar, they can be instantaneous.

**Objects from the Class**

Objects can be created by calls of the form `new("report_ope")`.

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

**report_sample_char-class**

*Class 'report_sample_char'*

**Description**

The report_sample_char class is used to load and display sample characteristics, which can be either continuous or discrete variable, for instance, it can be used to analyze size or sex structure during a given period.
Slots

data  A data frame
dc  An object of class ref_dc-class: the control devices
taxa  An object of class ref_taxa-class: the species
stage  An object of class ref_stage-class: the stages of the fish
par  An object of class ref_par-class: the parameters used
horodatedebut  An object of class ref_horodate-class
horodatefin  An object of class ref_horodate-class

Objects from the Class

Objects can be created by calls of the form new('report_sample_char', ...)

Note

This class is displayed by interface_report_sample_char, in the database, the class calls the content of the view vue_lot_ope_car

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_interannual-class, report_mig_mult-class, report_sea_age-class, report_silver_eel-class, report_species-class

Examples

# launching stacomi without connection to the database
stacomi(database_expected=FALSE)
# If you have a working database
# the following line of code will create the r_sample_char dataset from the iav (default) schema in the database
## Not run:
stacomi(database_expected=TRUE) # uses default option sch = 'iav'
# prompt for user and password, you can set these in the options,
# including dbname and host
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(stacomiR.dbname = "bd_contmig_nat",
stacomiR.host ="localhost",}
stacomiR.port = "5432",
stacomiR.user = user,
stacomiR.user = password
)
# create an instance of the class
r_sample_char <- new("report_sample_char")
# the following will load data for size,
# parameters 1786 (total size) C001 (size at video control)
# dc 5 and 6 are fishways located on the Arzal dam
# two stages are selected
r_sample_char <- choice_c(r_sample_char,
dc=c(5,6),
taxa=c("Anguilla anguilla"),
stage=c("AGJ","CIV"),
par=c(1785,1786,1787,"C001"),
horodatedebut="2013-01-01",
horodatefin="2013-12-31",
silent=FALSE)
# two warning produced, ignored if silent=TRUE
r_sample_char <- connect(r_sample_char)
r_sample_char <- calcule(r_sample_char,silent=TRUE)

## End(Not run)
# load the dataset generated by previous lines
data("r_sample_char")

# A "violin" plot
plot(r_sample_char,plot.type="1",silent=TRUE)
# get the plot from envir_stacomi to change labels for name
# if you use require(ggplot2) the :: argument is not needed
# e.g. write require(ggplot2);g<-get("g",envir=envir_stacomi)
# g+xlab("size")+ylab("year")
if (requireNamespace("ggplot2", quietly = TRUE)){
g<-get("g",envir=envir_stacomi)
g+ggplot2::xlab("size")+ggplot2::ylab("year")
}
# A boxplot per month
plot(r_sample_char,plot.type="2",silent=TRUE)
# A xyplot
plot(r_sample_char,plot.type="3",silent=TRUE)

## Not run:

#####################################
# an example graph created manually from data
#####################################
# two variables one on DC, one on stage
# passing dc information to the stage variable
r_sample_char@data$std_libelle[r_sample_char@data$ope_dic_identifiant==5]<-
  "Yellow eel (vert. slot fishway)"
r_sample_char@data$std_libelle[r_sample_char@data$std_libelle=="Anguille jaune"]<-
  "Yellow eel (ramp)"
r_sample_char@data$std_libelle[r_sample_char@data$std_libelle=="civelle"]<-
"Glass eel (ramp)"
# creating a boxplot with custom output : an example
# again if you use require(ggplot2) the :: argument is not needed

if (requireNamespace("ggplot2", quietly = TRUE)){
g<-ggplot2::ggplot(r_sample_char@data)+
ggplot2::geom_boxplot(ggplot2::aes(x=annee,
y =car_valeur_quantitatif,
fill = std_libelle))+
ggplot2::xlab("size")+ggplot2::ylab("year")+
ggplot2::scale_fill_manual("stage & fishway",
values=c("Yellow eel (vert. slot fishway)"="blue",
"Yellow eel (ramp)"="turquoise3",
"Glass eel (ramp)"="Cyan"))+
ggplot2::theme_bw()
print(g)
}

# get a simple summary using Hmisc::describe
summary(r_sample_char)
# get the command line to create the object using choice_c
# when the graphical interface has been used
print(r_sample_char)

## End(Not run)

---

**report_sea_age-class**

*Class* "report_sea_age"

**Description**

The `report_sea_age` class is used to dispatch adult salmons to age class according to their size and to basin dependent limits set by the user. Once checked with graphs and summary statistics, the results are to be written to the database.

**Slots**

- **data** A data frame with data generated from the database
- **calcdat** A list of dc with processed data. This list consists of two elements
  - (1) data A dataset with age set to be used by the plot and summary methods
  - (2) tj_caracteristitiquelot_car A dataset to import into the database
- **dc** Object of class ref_dc-class: the control devices
- **taxa** Object of class ref_taxa-class: the species
- **stage** Object of class ref_stage-class: the stages of the fish
- **par** Object of class ref_par-class: the parameters used
Objects from the Class

Objects can be created by calls of the form `new("report_sea_age", ...)`

Note

This class is displayed by `interface_report_sea_age`

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: `report_annual-class`, `report_dc-class`, `report_df-class`, `report_env-class`, `report_ge_weight-class`, `report_mig-class`, `report_mig_char-class`, `report_mig_env-class`, `report_mig_interannual-class`, `report_mig_mult-class`, `report_sample_char-class`, `report_silver_eel-class`, `report_species-class`

Examples

```r
require(stacomiR)
stacomi(
database_expected=FALSE)
# If you have a working database
# the following line of code will create the r_seaa dataset
# from the logrami schema in the database
## Not run:
stacomi(database_expected=TRUE, sch='logrami')
# overrides the default option sch = 'iav'
# prompt for user and password, you can set these in the options,
# including dbname and host
if (interactive()){
  if (!exists("user")){
    user <- readline(prompt="Enter user: ")
    password <- readline(prompt="Enter password: ")
  }
}
options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host = "localhost",
stacomiR.port = "5432",
stacomiR.user = user,
stacomiR.user = password
)
# create an instance of the class
```
r_seaa<-new("report_sea_age")
r_seaa<-choice_c(r_seaa,
dc=c(107,108,101),
horodatebut="2012-01-01",
horodatefin="2012-12-31",
limit1hm=675,
limit2hm=875,
silent=FALSE
)
r_seaa<-connect(r_seaa)
r_seaa<-calcule(r_seaa)

## End(Not run)
# load the dataset generated by previous lines
# Salmons from the loire on two dams
data("r_seaa")
# the calculation will fill the slot caldata

# stages are in r_seaa@calcdta[["6"]][,"stage"]
# look at data structure using str(r_seaa@calcdta["6"])

# plot data to confirm the split by limits is correct
plot(r_seaa, plot.type=1)

# if there are several dc, data it split by dc
plot(r_seaa, plot.type=2)
## Not run:
# print a summary statistic, and save the output in a list for later use
stats<-summary(r_seaa)

write_database(r_seaa)

## End(Not run)

---

report_silver_eel-class

Class "report_silver_eel"

Description

The report_silver_eel class is used to calculate various statistics about the silver eel run. It comprises calculation of various maturation index such as Durif’s stages and Pankhurst eye index. The objective is to provide standardized output to the stations monitoring the silver eel run.

Slots

data  A data frame with data generated from the database
calcdta  A list of dc with processed data. Each dc contains a data frame with
• (1) qualitative data on body contrast (CONT), presence of punctuation on the lateral line (LINP)
• (2) quantitative data "BL" Body length,"W" weight,"Dv" vertical eye diameter,"Dh" horizontal eye diameter,"FL" pectoral fin length
• (3) calculated diurif stages, Pankhurst’s index, Fulton’s body weight coefficient K_ful
• (4) other columns containing data pertaining to the sample and the control operation: lot_identifiant, ope_identifiant, ope_dic_identifiant, ope_date_debut, ope_date_fin, dev_code (destination code of fish), dev_libelle (text for destination of fish)

de Object of class ref_dc-class: the control devices
taxa An object of class ref_taxa-class: the species
stage An object of class ref_stage-class : the stages of the fish
par An object of class ref_par-class: the parameters used
horodatedebut An object of class ref_horodate-class
horodatefin An object of class ref_horodate-class

Objects from the Class

Objects can be created by calls of the form new("report_silver_eel", ...)

Note

This class is displayed by interface_report_silver_eel

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

See Also

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_species-class

Examples

# launching stacomi without selecting the scheme or interface
stacomi(database_expected=FALSE)
# the following script will load data from the two Anguillere monitored in the Somme

# If you have a working database
# the following line of code will create the r_silver dataset
# from the "fd80." schema in the database
## Not run:
stacomi(database_expected=TRUE, sch="fd80.") # overrides the default option sch = 'iav'
# prompt for user and password, you can set these in the options,
# including dbname and host
if (interactive()){
if (!exists("user")){
  user <- readline(prompt="Enter user: ")
  password <- readline(prompt="Enter password: ")
}
}

options(
  stacomiR.dbname = "bd_contmig_nat",
  stacomiR.host = "localhost",
  stacomiR.port = "5432",
  stacomiR.user = user,
  stacomiR.user = password
)

# create an instance of the class
r_silver<-new("report_silver_eel")
r_silver<-choice_c(r_silver,
  dc=c(2,6),
  horodatedebut="2010-09-01",
  horodatefin="2016-10-04",
  silent=FALSE)
r_silver<-connect(r_silver)

## End(Not run)

# load the dataset generated by previous lines
data("r_silver")
# the calculation will fill the slot calcdata
r_silver<-calcule(r_silver)
# stages are in r_silver@calcdata[[6]][,"stage"]
# look at data structure using str(r_silver@calcdata[[6]])

# standard plot as drawn by Laurent Beaulaton (Analyse des donnees d'argenteur acquises en France)
# showing Durif's stage according to size and eye diameter
plot(r_silver, plot.type=1)

# number per month or year and Durif's stage (year if number of dc >1)
plot(r_silver, plot.type="2")

# plot showing fulton's coefficient, and size weight graphs
# inspired from Acou et al., 2009
# Differential Production and Condition Indices of Premigrant Eels in Two Small Atlantic Coastal Catchments of France
plot(r_silver, plot.type="3")

# get a list of summary data and print output to screen

plot(r_silver, plot.type="4")
# print a summary statistic, and save the output in a list for later use
stats<-summary(r_silver)

---

**report_species-class**  
Counts of number per taxa/stages
**Description**

This class is used to make the assessment of all species, and their number. It is intended as a simple way to check what fishes are present (taxa + development stage). It was altered to include ref_taxa, to allow excluding some of the most numerous taxa from reports. The taxa is reported unless a taxa has several stages, in which case the different stages for the taxa will be reported. Using the split arguments the calc method of the class will count numbers, subsamples are not accounted for in the Overview. The split argument currently takes values year or month. The class is intended to be used over long periods e.g. years. The plot method writes either an histogram or a pie chart of number per year/week/month.

**Slots**

- dc : an object of class ref_dc-class
- taxa : Object of class ref_taxa-class: the species
- start_year : Object of class ref_year-class
- end_year : Object of class ref_year-class
- data : data.frame
- calcdata : data.frame with data processed by the calc method
- split : Object of class ref_list-class ref_list referential class choose within a list

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

**See Also**

Other report Objects: report_annual-class, report_dc-class, report_df-class, report_env-class, report_ge_weight-class, report_mig-class, report_mig_char-class, report_mig_env-class, report_mig_interannual-class, report_mig_mult-class, report_sample_char-class, report_sea_age-class, report_silver_eel-class

**Examples**

```r
# launching stacomi without selecting the scheme or interface
stacomi(database_expected=FALSE)
# the following script will load data
# from the two Anguillere monitored in the Somme
# If you have a working database
# the following line of code will create the bilesp dataset from the "iav."
# schema in the database

## Not run:
bilesp <- new("report_species")
# split is one of "none", "year", "week", "month"
bilesp <- choice_c(bilesp,
dc=c(5,6,12),
split="year",
start_year="2008",
```

end_year="2012",
silent=FALSE)
bilesp <- connect(bilesp)
bilesp <- calcule(bilesp)
plot(bilesp, plot.type="pie", silent=FALSE)
plot(bilesp, plot.type="barplot", silent=FALSE)
bilesp <- choice_c(bilesp,
dc=c(5,6,12),
split="month",
start_year="2015",
end_year="2016",
silent=FALSE)
bilesp <- charge(bilesp)
bilesp <- connect(bilesp)
plot(bilesp, plot.type="pie", silent=FALSE)
plot(bilesp, plot.type="barplot", silent=FALSE)
#length(unique(bilesp@calcdata$taxa_stage)) # 15
# here creating a vector of length 15 with nice blending colours
if (requireNamespace("grDevices", quietly = TRUE)) {
  mycolorrampblue <-
grDevices::colorRampPalette(c("#395B74", "#010F19"))
mycolorrampyellow <-
grDevices::colorRampPalette(c("#B59C53", "#271D00"))
mycolorrampred <-
grDevices::colorRampPalette(c("#B56F53", "#270B00"))
  color<-c(mycolorrampblue(5),
            mycolorrampyellow(5),
            mycolorrampred(5))
  plot(bilesp,plot.type="barplot",color=color,silent=TRUE)
}
summary(bilesp)

## End(Not run)

r_ann

Annual migration of yellow and silver eel for three fishways / counting devices at the Arzal dam (data from 1995 to 2016)

Description

The dataset corresponds to the three fishways located on the Arzal dam, filled with annual data

Usage

r_ann

Format

An object of class report_annual-class with data slot loaded.
**r_ann_adour**

Annual migration of salmon in the Adour and tributaries

**Description**

The dataset corresponds to the fishways DC=33:40 of the Adour for adult migrant salmons from 1996 to 2005 (annual counts). It has been kindly provided as an example set by the Migradour association.

**Usage**

`r_ann_adour`

**Format**

An object of class `report_annual-class` with data slot loaded.

---

**r_dc**

Counting Device (DC) operation from 2000 to 2015 at the Arzal dam (Vilaine, France)

**Description**

This data corresponds to the data collected at the vertical slot fishway camera from 2000 to 2015. It represents an object of class `report_dc-class` with data loaded.

**Usage**

`r_dc`

**Format**

An object of class `report_dc` with 4 slots:

- **data** A dataframe with 544 obs. of 7 variables
  - `per_dis_identifiant` The number of the DC
  - `per_date_debut` Starting time a POSIXct
  - `per_date_fin` Ending time a POSIXct
  - `ope_dic_identifiant` DC id
  - `per_commentaires` A comment
  - `per_etat_fonctionnement` Integer 1= working, 0 not working
  - `per_tar_code` The type of operation ('1'=normal operation, '2'=Device stopped in normal operation (e.g. the trap is disactivated for the duration of the fish sorting and counting by operators), '3'='Stopped for maintenance or other problem', '4'='Works but not fully operational, i.e. the camera is not working properly because of high turbidity...', '5'='Not known')
**libelle** label corresponding to per_tar_code

**df** the ref_dc object with 3 slots filled with data corresponding to the iav postgres schema

**horodatedebut** the ref_horodate with horodate set for starting date

**horodatefin** the ref_horodate with horodate set for ending date

---

**r_df**

*Overview of the fishway operation at Arzal in (Vilaine France).*

---

**Description**

This dataset corresponds to the data collected at the vertical slot fishway in 2015, the fishway is working daily with a cycle depending on tide. This dataset is used to show an example of detailed output for an object of class `report_df-class` with data loaded.

**Usage**

```r
r_df
```

**Format**

An object of class report_df with 4 slots:

- **data** A dataframe with 4261 obs. of 7 variables
  - **per_dis_identifiant** The number of the DF
  - **per_date_debut** Starting time a POSIXct
  - **per_date_fin** Ending time a POSIXct
  - **ope_dic_identifiant** DF id
  - **per_commentaires** A comment
  - **per_etat_fonctionnement** Integer 1= working, 0 not working
  - **per_tar_code** The type of operation (’1’=normal operation, ’2’=Device stopped in normal operation (ie lift ascending, high tide...), ’3’=Stopped for maintenance or other problem’, ’4’=’Works but not fully operational,i.e.flow problem, flood, clogged with debris...’, ’5’=’Not known’)
  - **libelle** label corresponding to per_tar_code

- **df** the ref_df object with 3 slots filled with data corresponding to the iav postgres schema
  - **horodatedebut** the ref_horodate with horodate set for starting date
  - **horodatefin** the ref_horodate with horodate set for ending date
Description

The dataset corresponds to the daily temperatures and moon phases in Arzal (Vilaine estuary, France). This environmental station is used to analyze conditions in which fish migrated at Arzal dam.

Usage

r_env

Format

An object of class report_env-class with data slot loaded:

- `stationMesure` the ref_env object with 5 slots filled with data corresponding to the iav postgres schema
- `horodatedebut` object of class ref_horodate-class: the start date selected
- `horodatefin` object of class ref_horodate-class: the end date selected
- `data` A dataframe with 723 rows and 6 variables
  - `env_date_debut` start date
  - `env_date_fin` end date
  - `env_methode_obtention` method of data collection, measured, calculated...
  - `env_val_identifiant` the value of the parameter if qualitative
  - `env_valeur_quantitatif` the value of the parameter if quantitative
  - `env_stm_identifiant` station id

Description

Wet weight of glass eel from the trapping ladder (Arzal, Vilaine France)

Data correspond to glass eel collected in the Vilaine at the trapping ladder (Arzal, France). The years selected are 2009 to 2012, the query used in the report_ge_weight-class loads from 2008-08-01 to 2012-08-01 Glass eel are too numerous to be counted. They are weighted and in the stacom database, a table with daily coefficients (in N glass eel/g) to transform weight into number. The weight is called a ‘wet weight’ as we don’t wan’t to drain any of the mucus in glass eel when weighting them. Samples of 50 to 200 glass eel are weighted and then counted to provide an idea of the seasonal evolution of wet weight.
Usage

\texttt{r_gew}

Format

An object of class \texttt{report\_ge\_weight} of length 1.

\begin{tabular}{ll}
\textbf{r\_gew} & \textit{Video counting of Marine lamprey (Petromyzon marinus) in 2012 in the Vilaine (France)} \\
\end{tabular}

Description

This dataset corresponds to the data collected at the vertical slot fishway in 2012, video recording marine lamprey migration.

Usage

\texttt{r\_mig}

Format

An object of class \texttt{report\_mig} with 8 slots:

- \texttt{dc} the \texttt{ref\_dc} object with 4 slots filled with data corresponding to the iav postgres schema
- \texttt{taxa} the \texttt{ref\_taxa} the taxa selected
- \texttt{stage} the \texttt{ref\_stage} the stage selected
- \texttt{timestep} the \texttt{ref\_timestep\_daily} calculated for all 2015
- \texttt{data} A dataframe with 10304 rows and 11 variables
  - \texttt{ope\_identifiant} operation id
  - \texttt{lot\_identifiant} sample id
  - \texttt{lot\_identifiant} sample id
  - \texttt{ope\_dic\_identifiant} dc id
  - \texttt{lot\_tax\_code} species id
  - \texttt{lot\_std\_code} stage id
  - \texttt{value} the value
  - \texttt{type\_de\_quantite} either effectif (number) or poids (weights)
  - \texttt{lot\_dev\_code} destination of the fishes
  - \texttt{lot\_methode\_obtention} method of data collection, measured, calculated...
- \texttt{coef\_conversion} A data frame with 0 observations: no quantity are reported for video recording of mullets, only numbers
- \texttt{time\_sequence} A time sequence generated for the report, used internally
r_mig_char

Qualitative and quantitative parameters describing Salmon migration at Decize (Loire)

Description

The dataset corresponds to the characteristics (qualitative and quantitative) of salmo salar migrating at Decize (Loire river) and Vichy (Allier river) counting device in 2012. It has been loaded as an example for the report_mig_char-class and kindly provided by Loire Grands Migrateurs (LOGRAM).

Usage

r_mig_char

Format

An object of class report_mig_char-class with data slot loaded:

- **calcdata** slot to be filled with the calcule method
- **data** A list of 2 elements
  - **parqual** values of all the qualitative parameters
  - **parquan** values of all the quantitative parameters
- **dc** the ref_dc: the control devices selected
- **taxa** the ref_taxa: Salmo salar selected
- **stage** the ref_stage: the stages selected
- **par** an object of class ref_par-class: the parameters used
- **horodatedebut** an object of class ref_horodate-class: the start date selected
- **horodatefin** an object of class ref_horodate-class: the end date selected

r_mig_dc

Counting device operation for the video recording (Arzal dam, Vilaine, France).

Description

This dataset corresponds to the data collected in the vertical slot fishway for the video recording operation. It is loaded along with r_mig to demonstrate the use of the report_mig-class when the database is not loaded

Usage

r_mig_dc
Format

An object of class report_dc-class

---

**r_mig_df**  
*Fishway operation for the vertical slot fishway (Arzal dam, Vilaine, France).*

---

Description

This dataset corresponds to the data collected at in the vertical slot fishway it is loaded along with r_mig and used to demonstrate the report_mig-class when the database is not installed.

Usage

`r_mig_df`

Format

An object of class report_df-class

---

**r_mig_env**  
*An object of class report_mig_env with data loaded*

---

Description

The dataset correspond to data loaded for the Arzal dam (Vilaine) in 2008, two quantitative parameters (temperature and tide coefficient) and a qualitative parameter (moon phase) are loaded.

Usage

`r_mig_env`

Format

An object of class report_env-class with data slot loaded:

- **report_mig_mult**  
  An object of class report_mig_mult-class

- **report_env**  
  An object of class report_env-class
**r_mig_interannual**

*Daily glass eel and elver migration from 1984 to 2016 in the Sevre Niortaise*

**Description**

The first eel trapping ladder in France was built by Antoine Legault and the team from Rennes in the Sevre Niortaise, Marais Poitevin. Also refurbished several times since 1984 it has been operational at the same location and provides one of the longest series of eel migration. For this reason, the dataset has been loaded as an example for the report_mig_interannual-class. It has been kindly provided by the parc du Marais Poitevin. The stage corresponds to small eels (elvers) less than 150 mmm stage name 'PANG'.

**Usage**

```
r_mig_interannual
```

**Format**

An object of class `report_mig_interannual-class` with data loaded.

---

**r_mig_interannual_vichy**

*Seasonality of salmon migration at the Vichy counting station (Loire)*

**Description**

This data corresponds to the data collected at the Vichy fishway between 1997 and 2012, video recording of the Salmo salar upstream migration. This dataset has been kindly provided by Loire Grands Migrateurs.

**Usage**

```
r_mig_interannual_vichy
```

**Format**

An object of class `report_mig_interannual-class` with 7 slots:

- **dc** the ref_dc object with 4 slots filled with data corresponding to the iav postgres schema
- **taxa** the ref_taxa the taxa selected
- **stage** the ref_stage the stage selected
- **start_year** the ref_timestep_daily calculated for all 2015
- **end_year** the ref_timestep_daily calculated for all 2015
data  A dataframe with 7138 rows and 10 variables
  bjo_identifiant  sample id
  bjo_dis_identifiant  dc id
  bjo_tax_code  species id
  bjo_std_code  stage id
  bjo_annee  year
  bjo_jour  date
  bjo_labelquantite  method of data collection, measured, calculated...
  bjo_horodateexport  date with special format for export
  bjo_org_code  organisme provided the data

r_mig_mult  Anguilla migration at the Arzal station (report_mig_mult-class)

Description

This data corresponds to data collected from three fishways and correspond to the migration station at Arzal (Vilaine estuary, France) in 2011 for three continental stages of eel (Anguilla anguilla): glass eel, yellow eel and silver eel.

Usage

  r_mig_mult

Format

An object of class report_mig_mult with slots:

dc  the ref_dc object filled with data
taxa  the ref_taxa object filled in with data corresponding to dc
stage  the ref_stage object filled in with data corresponding to dc, and taxa
timestep  the ref_timestep_daily calculated for all 2011
data  A dataframe with 400 rows and 11 variables
  ope_identifiant  operation id
  lot_identifiant  sample id
  lot_identifiant  sample id
  ope_dic_identifiant  dc id
  lot_tax_code  species id
  lot_std_code  stage id
  value  the value
type_de_quantite  either effectif (number) or poids (weights)
  lot_dev_code  destination of the fishes
  lot_methode_obtention  method of data collection, measured, calculated...
**Description**

This dataset corresponds to data collected at three different control devices. This object is of class `report_dc-class` with data loaded it is loaded along with `r_mig_mult` and used in demonstration for the `report_mig_mult-class`.

**Usage**

`r_mig_mult_dc`

**Format**

An object of class `report_dc` with 4 slots

- **data** A dataframe with 25 rows and 7 variables
  - `per_dis_identifiant` the df or dc unique id
  - `per_date_debut` the starting date of the counting device operation `POSIXct`
  - `per_date_fin` the ending date of the counting device operation `POSIXct`
  - `per_commentaires` comments on the counting device operation
  - `per_etat_fonctionnement` Boolean, is the counting device working ?
  - `lot_std_code` stage id
  - `per_tar_code` The type of operation for the DC, 1 normal operation, 2 device stopped in normal operation (the stop is considered as normal, e.g. you don’t monitor video if a cage has been placed to trap fishes), 3 stopped for maintenance or other problem, 4 the DC is working but not well (escapement in a tank, high turbidity preventing video counting...), 5 unknown operation.
  - `libelle` The label for the type or operation
- **dc** the ref_dc the DC with 4 slots
  - `dc_selected` the selected device
  - `ouvrage` the dam
  - `station` the monitoring station, a section of river
  - `data` A dataset of all dc present in the database with 10 observations
- **horodatedebut** the beginning date, a `ref_horodate-class`
- **horodatefin** the ending date, a `ref_horodate-class`
r_mig_mult_df

*Fishway operation at the Arzal Dam (Vilaine France) (3 Fishways in 2011)*

**Description**

This dataset corresponds to the data collected at three different fishways it is loaded along with `r_mig_mult` and used in demonstration for the `report_mig_mult-class`

**Usage**

`r_mig_mult_df`

**Format**

An object of class `report_df-class`

---

r_mig_mult_ope

*Counting operations for three different counting device in Arzal (Vilaine, France)*

**Description**

This dataset corresponds to the data collected at three different control devices It is an object of class `report_ope-class` with data loaded. it is loaded along with `r_mig_mult`

**Usage**

`r_mig_mult_ope`

**Format**

An object of class `report_ope`
**r_mig_ope**

An object of class *report_ope-class* with data loaded

**Description**

This dataset corresponds to the data collected at the vertical slot fishway in Arzal (Vilaine river estuary, France). The operation of the fishway is dependent on tide and is recorded every 10 minutes. This dataset has to be loaded along with *r_mig* to demonstrate the use of the *report_mig-class*

**Usage**

*r_mig_ope*

**Format**

An object of class *report_ope*

---

**r_sample_char**

*Size of yellow and glass eel at the Arzal dam (Vilaine, France) in the fishway and main eel trapping ladder.*

**Description**

This dataset corresponds to the data collected at two different control devices at the Arzal control station (see example in *report_sample_char-class*), all body size parameters (total size, size converted from pixel in video control) are used in example

**Usage**

*r_sample_char*

**Format**

An object of class *report_sample_char-class*
r_seaa

An object of class report_sea_age with data loaded

Description

This dataset corresponds to the data collected at Vichy (left and right bank fishways) and Decize-Saint Leger des Vignes fishways (respectively on the Allier and Loire river, France) in 2012 on the size structure of Salmo salar. It has been kindly provided by the Loire Grands Migrateurs (LOGRAMI) association.

Usage

r_seaa

Format

An object of class report_sea_age-class with 8 slots:

dc the ref_dc : the control devices selected
taxa the ref_taxa : Salmo salar selected
stage the ref_stage : the stages selected
par Object of class ref_par-class: the parameters used
horodatedebut object of class ref_horodate-class: the start date selected
horodatefin object of class ref_horodate-class: the end date selected
limit1hm The size limit, in mm between 1 sea winter fishes and 2 sea winter fishes
limit2hm The size limit, in mm between 2 sea winter fishes and 3 sea winter fishes
data A dataframe with 898 rows and 20 variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ope_identifiant</td>
<td>operation id</td>
</tr>
<tr>
<td>lot_identifiant</td>
<td>sample id</td>
</tr>
<tr>
<td>ope_dic_identifiant</td>
<td>dc id</td>
</tr>
<tr>
<td>ope_date_debut</td>
<td>start date</td>
</tr>
<tr>
<td>ope_date_fin</td>
<td>end date</td>
</tr>
<tr>
<td>lot_effectif</td>
<td>number of fishes</td>
</tr>
<tr>
<td>lot_tax_code</td>
<td>species id</td>
</tr>
<tr>
<td>lot_std_code</td>
<td>stages id</td>
</tr>
<tr>
<td>tax_nom_latin</td>
<td>species latin names</td>
</tr>
<tr>
<td>std_libelle</td>
<td>stages names</td>
</tr>
<tr>
<td>dev_code</td>
<td>destination of the fishes id</td>
</tr>
<tr>
<td>dev_libelle</td>
<td>destination of the fishes names</td>
</tr>
<tr>
<td>par_nom</td>
<td>parameter name</td>
</tr>
<tr>
<td>car_par_code</td>
<td>parameter id</td>
</tr>
<tr>
<td>car_methode_obtention</td>
<td>method of data collection, measured, calculated...</td>
</tr>
<tr>
<td>car_valeur_quantitatif</td>
<td>the value of the parameter</td>
</tr>
</tbody>
</table>
Description

The dataset corresponds to the silver eel traps (anguilleres) for 2015-2016. This dataset has been kindly provided by the Federation de Peche de la Somme, given the upstream location of the trap, most individuals are female.

Usage

r_silver

Format

An object of class report_silver_eel-class with data slot loaded.

Description

Generic method to transform quantitative par into a qualitative one

Usage

setasqualitative(object, ...)

Arguments

object Object
...
Additional parms

Author(s)

cedric.briand
setasqualitative, report_mig_char-method

Sets a continuous parameter into discrete values

Description

The parm name becomes "parm_discrete". New values are created in the `data[['parqual']]` slot of the report and the parqual slot is updated.

Usage

```r
## S4 method for signature 'report_mig_char'
setasqualitative(object, par, silent = FALSE, ...)
```

Arguments

- **object**: An object of class `ref_parquan-class`
- **par**: The code of a quantitative parameter
- **silent**: Default FALSE, if TRUE the program should not display messages
- **...**: Additional parms to the cut method `cut`

Value

An object of class `ref_parquan-class` with lines removed from `r$data[['parquan']]` and added (after transformation to qualitative values) in `r$data[['parqal']]`

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

split_per_day

Create a dataframe suitable for charts per 24h and day

Description

This function takes a data frame with a column with starting time and another with ending time. If the period extends over midnight, it will be split into new lines, starting and ending at midnight.

Usage

```r
split_per_day(data, horodatedebut, horodatefin)
```
Arguments

data The dataframe
horodatedebut The beginning time
horodatefin The ending time

Value

A data frame with four new columns, Hmin (hour min), Hmax (hmax), xmin (day) and xmax (next day), and new rows

Author(s)

cedric.briand

Examples

datatemp<-structure(list(per_dis_identifiant = c(1L, 1L, 1L),
per_date_debut = structure(c(1420056600,
1420071000, 1420081200), class = c("POSIXct", "POSIXt"), tzone = ""),
per_date_fin = structure(c(1420071000, 1420081200, 1421000000
), class = c("POSIXct", "POSIXt"), tzone = ""), per_commentaires = c("fonct calcul",
"fonct calcul"), per_etat_fonctionnement = c(1L,
0L, 0L), per_tar_code = 1:3, libelle = c("Fonc normal", "Arr ponctuel",
"Arr maint")), .Names = c("per_dis_identifiant", "per_date_debut",
"per_date_fin", "per_commentaires", "per_etat_fonctionnement",
"per_tar_code", "libelle"), row.names = c(NA, 3L), class = "data.frame")
newdf<-split_per_day(data=datatemp,horodatedebut="per_date_debut",
horodatefin="per_date_fin")

stacomi

stacomi Main launcher for program stacomi

Description

When database_expected=FALSE a connection to the database is not expected. Therefore test are run by calling examples object stored in Rdata. To change the language use Sys.setenv(LANG = ‘fr’) or Sys.setenv(LANG = ‘en’)

Usage

stacomi(database_expected=TRUE, datawd = "~", sch = "test")

Arguments

database_expected Boolean, if TRUE pre launch tests will be run to test the connection validity
datawd The data working directory
sch The schema in the stacomi database default 'test'.
Value

Nothing, called for its side effect of loading

Author(s)

Cedric Briand <cedric.briand@epvb-vilaine.fr>

Examples

```r
require(stacomiR)
#launch stacmi
## Not run:
stacomi(database_expected=TRUE, datawd='~',sch= "iav")
## End(Not run)
# launch stacmi without connection to the database
stacomi(database_expected=FALSE)
# launch stacmi with options
options(
stacomiR.dbname = "bd_contmig_nat",
stacomiR.host = readline(prompt = "Enter host: ")
)
# another useful option to print all queries run by stacomiR to the console
options('stacomiR.printqueries'= TRUE)
```

Description

summary for report_dc, write csv and html output, and prints summary statistics

Usage

```r
## S4 method for signature 'report_dc'
summary(object, silent = FALSE, ...)
```

Arguments

- **object**: An object of class `report_dc-class`
- **silent**: Should the program stay silent or display messages, default FALSE
- **...**: Additional parameters (not used there)
Value

Nothing, called for its side effect of writing html, csv files and printing summary

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

summary for report_df, write csv and html output, and prints summary statistics

Usage

## S4 method for signature 'report_df'
summary(object, silent = FALSE, ...)

Arguments

object An object of class report_df-class
silent Should the program stay silent or display messages, default FALSE
... Additional parameters (not used there)

Value

Nothing, called for its side effect of writing html, csv files and printing summary

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
summary,report_mig-method

summary for report_mig calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory

Description

summary for report_mig calls functions funstat and funtable to create migration overviews and generate csv and html output in the user data directory

Usage

## S4 method for signature 'report_mig'
summary(object, silent = FALSE, ...)

Arguments

object An object of class report_mig-class
silent Should the program stay silent or display messages, default FALSE
... Additional parameters (not used there)

Value

Nothing, calls the summary.report_mig_mult method

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

summary,report_mig_char-method

summary for report_mig_char

Description

summary for report_mig_char

Usage

## S4 method for signature 'report_mig_char'
summary(object, silent = FALSE, ...)
Arguments

object  An object of class `report_mig_char-class`
silent  Should the program stay silent or display messages, default FALSE
...  Additional parameters

Value

A table with the summary

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

Description

Summary for `report_mig_interannual` provides summary statistics for the latest year (if silent=TRUE), or the year selected in the interface, if silent=FALSE. Mean, min and max are historical statistics and they always include the current year from the historical dataset.

Usage

```r
## S4 method for signature 'report_mig_interannual'
summary(object, year_choice = NULL, silent = FALSE, ...)
```

Arguments

object  An object of class `report_mig_interannual-class`
year_choice  The year chosen to calculate statistics which will be displayed beside the historical series,
silent  Should the program stay silent or display messages, default FALSE
...  Additional parameters (not used there)

Value

A list, one element per DC

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
**summary.report_sample_char-method**

**Description**

summary for report_sample_char

**Usage**

```r
## S4 method for signature 'report_sample_char'
summary(object, silent = FALSE, ...)
```

**Arguments**

- `object`: An object of class `report_sample_char-class`
- `silent`: Should the program stay silent or display messages, default FALSE
- `...`: Additional parameters (not used there)

**Value**

Nothing, runs funstat and funtable method for each DC

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>
Arguments

  object  An object of class report_sample_char-class
  silent  Should the program stay silent or display messages, default FALSE
  ...   Additional parameters

Value

Nothing, called for its side effect of printing a summary

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
summary,report_species-method

summary for report_species

Description

generate csv and html output in the user data directory

Usage

## S4 method for signature 'report_species'
summary(object, silent = FALSE)

Arguments

object An object of class report_species-class
silent Should the program stay silent or display messages, default FALSE

Value

A list per DC with statistic for Durif stages, Pankhurst, MD Eye diameter, BL body length and weight W

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

summary,report_silver_eel-method

summary for report_silver_eel

Description

summary for report_silver_eel

Usage

## S4 method for signature 'report_silver_eel'
summary(object, silent = FALSE, ...)

Arguments

object An object of class report_silver_eel-class
silent Should the program stay silent or display messages, default FALSE
...
Additional parameters

Value

A list per DC with statistic for Durif stages, Pankhurst, MD Eye diameter, BL body length and weight W

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
supprime

Value
nothing, but writes summary in get("datawd", envir = envir_stacomi), and prints output

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

supprime Generic method to delete entries from the database

Description
Generic method to delete entries from the database

Usage
supprime(object, ...)

Arguments
object Object
...

Additional parms

Author(s)
cedric.briand

See Also

supprime,ref_coe-method

supprime method for 'ref_coe' class

Description
supprime method for 'ref_coe' class

Usage
## S4 method for signature 'ref_coe'
supprime(object, tax, std, silent = FALSE)
Arguments

object  An object of class `ref_coe-class`
tax    '2038=Anguilla anguilla'
std    'CIV=civelle'
silent Default FALSE, if TRUE the program should no display messages

Value

Nothing, called for side effect

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

supprime,report_mig_interannual-method

supprime method for `report_mig_interannual` class, deletes values in table `t_bilanmigrationjournalier_bjo`

Description

supprime method for `report_mig_interannual` class, deletes values in table `t_bilanmigrationjournalier_bjo`

Usage

```r
## S4 method for signature 'report_mig_interannual'
supprime(object, silent = TRUE)
```

Arguments

object  An object of class `report_mig_interannual-class`
silent  Should the operation be returning the number of rows deleted

Value

nothing, called for its side effect, removing lines from the database

Author(s)

Cedric Briand <cedric.briand@eptb-vilaine.fr>
supprime method for report_mig_interannual class

Description
supprime method for report_mig_interannual class

Usage
## S4 method for signature 'report_sea_age'
supprime(object, silent = FALSE)

Arguments
object An object of class report_sea_age-class
silent Default FALSE, if TRUE the program should no display messages

Value
Nothing, called for its side effect of deleting data in the database

Author(s)
Cedric Briand <cedric.briand@eptb-vilaine.fr>

vector_to_listsql
Transforms a vector into a string called within an sql command e.g. c('A','B','C') => in ('A','B','C')

Description
Transforms a vector into a string called within an sql command e.g. c(A,B,C) => in ('A', 'B', 'C')

Usage
vector_to_listsql(vect)

Arguments
vect a character vector

Value
A list of value
write_database

**Generic method write_database**

**Description**

Generic method write_database

**Usage**

```r
write_database(object, ...) 
```

**Arguments**

- `object` Object
- `...` Additional parms

**Author(s)**

Cedric Briand <cedric.briand@eptb-vilaine.fr>

---

write_database,report_ge_weight-method

*Method to write data to the stacomi database for report_ge_weight-class*

**Description**

Data will be written in tj_coeficientconversion_coe table, if the class retrieves some data from the database, those will be deleted first.

**Usage**

```r
## S4 method for signature 'report_ge_weight'
write_database(object, silent = FALSE)
```

**Arguments**

- `object` An object of class report_ge_weight-class
- `silent` Boolean, if TRUE, information messages are not displayed

**Value**

Nothing, called for its side effect of writing to the database
**Command line method to write the daily and monthly counts to the t_bilanmigrationjournalier_bjo table**

**Description**
Daily values are needed to compare migrations from year to year, by the class `report_mig_interannual-class`. They are added by this function.

**Usage**

```r
## S4 method for signature 'report_mig'
write_database(object, silent = TRUE)
```

**Arguments**
- `object`: an object of class `report_mig`
- `silent`: TRUE to avoid messages, FALSE will need interactive mode as it calls for menu()

**Value**
Nothing, just writes data into the database

**Note**
the user is asked whether or not he wants to overwrite data only when silent is FALSE, if no data are present in the database, the import is done anyway.

**Examples**

```r
## Not run:
stacomi(database_expected=FALSE)
data("r_mig")
r_mig<-calcule(r_mig)
write_database(report_mig=r_mig,silent=FALSE)
## End(Not run)
```
write_database, report_sea_age-method

Command line method to write the characteristic "sea age" (car_par_code='A124') into the tj_caracteristiquelot_car table in the user's scheme

Description

The sea age characteristic is calculated from the measured or calculated size of salmon and with a size/age rule defined by the user.

Usage

```r
## S4 method for signature 'report_sea_age'
write_database(object, silent = TRUE)
```

Arguments

- **object**: an object of class report_sea_age-class
- **silent**: Default FALSE, if TRUE the program should no display messages.

Value

Nothing, called for its side effect of writing data to the database

Author(s)

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xtable, report_annual-method

xtable function for report_annual-class create an xtable objet but also assigns an add.to.column argument in envir_stacomi, for later use by the print.xtable method.

Description

xtable function for report_annual-class create an xtable objet but also assigns an add.to.column argument in envir_stacomi, for later use by the print.xtable method.
Usage

```r
## S4 method for signature 'report_annual'
xtable(  
x,  
caption = NULL,  
label = NULL,  
align = NULL,  
digits = 0,  
display = NULL,  
auto = FALSE,  
dc_name = NULL,  
tax_name = NULL,  
std_name = NULL
)
```

Arguments

- `x`, an object of class "report_annual"
- `caption`, see `xtable`
- `label`, see `xtable`
- `align`, see `xtable`, overridden if NULL
- `digits` default 0
- `display` see `xtable`
- `auto` see `xtable`
- `dc_name` A string indicating the names of the DC, in the order of `x@dc@dc_selected` if not provided DC codes are used.
- `tax_name` A string indicating the names of the taxa, if not provided latin names are used
- `std_name` A string indicating the stages names, if not provided then std_libelle are used

Value

A xtable for annual report

Description

`xtable` function for `report_mig_char-class` create an xtable objet to be later used by the print.xtable method.
Usage

## S4 method for signature 'report_mig_char'
xtable(
  x,
  caption = NULL,
  label = NULL,
  align = NULL,
  digits = NULL,
  display = NULL,
  auto = FALSE,
  ...
)

Arguments

x, an object of class 'report_mig_char'
caption, see xtable
label, see xtable
align, see xtable, overridden if NULL
digits, see xtable
display see xtable
auto see xtable
... Additional parameters

Value

A xtable
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