Package: mrfish (via r-universe)

August 23, 2024

Type Package

Title madrat data preparation for data connected to fish

Version 0.2.8

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Description Package contains routines to prepare data for validation
exercises.

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URL https://github.com/pik-piam/mrfish

BugReports https://github.com/pik-piam/mrfish/issues

Depends R (>= 2.10.0), madrat (>= 1.31), magclass (>= 3.17)

Imports reshape2

Suggests covr, testthat

Encoding UTF-8

LazyData no

RoxygenNote 7.2.3

Repository https://pik-piam.r-universe.dev

RemoteUrl https://github.com/pik-piam/mrfish

RemoteRef HEAD

RemoteSha e81f68553103d799a11b91abdfdaf7250249b20b

Contents

mrfish-package	*mrfish: madrat data preparation for data connected to fish*

Description

Package contains routines to prepare data for validation exercises.

Author(s)

Maintainer: Benjamin Leon Bodirsky <bodirsky@pik-potsdam.de>

Authors:

- Jasmin Wehner

See Also

Useful links:

- <https://github.com/pik-piam/mrfish>
- Report bugs at <https://github.com/pik-piam/mrfish/issues>

calcFAO_fishery	*calcFAO_fishery*

Description

calculates fish data as Mt dry matter, distinguishing capture and aquaculture as well as fishing areas

Usage

```
calcFAO_fishery(by_fishing_area = FALSE)
```

Arguments

by_fishing_area

        if TRUE, all fishing areas are provided. if FALSE, only marine and inlandwaters are distinguished

Value

Magpie object with fish data in dry matter

Author(s)

Jasmin Wehner, Benjamin Leon Bodirsky

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calcFishCCimpacts   *calcFishCCimpacts*

Description

Derive relative change of marine fish production (capture AND marine aquaculture) based on scenarios by Cheung et al 2018.

Usage

```
calcFishCCimpacts(
  impacts = c("marine_capture", "marine_aquaculture"),
  total = FALSE,
  proxies = c("Mediterranean and Black Sea", "Pacific Antarctic")
)
```

Arguments

impacts	fish types being affected by CC impacts. So far only available for "marine_capture" and "marine_aquaculture"
total	if TRUE, aggregated to total production over all fish types
proxies	fishing areas where we use proxie regions if no impact data is available.

Value

Data for each FAO Major Fishing area

Author(s)

Jasmin Wehner, Benjamin Leon Bodirsky

Examples

```
## Not run:  a <- calcOutput(type="FishCCimpacts")
```

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convertAQUASTAT   *convertAQUASTAT*

Description

Convert data based on AQUASTAT database (http://www.fao.org/nr/water/aquastat/data/query/index.html?lang=en)

Usage

```
convertAQUASTAT(x)
```

Arguments

x   MAgPIE object containing AQUASTAT data on country level

Value

magpie objects with results on contury level

Author(s)

Kristine Karstens

Examples

```
## Not run:
 readSource("AQUASTAT", subtype="ConsAgri", convert=TRUE)

## End(Not run)
```

---

convertFAO_fishery   *convertFAO_fishery*

Description

Converts readFAO_fishery output to complete MAgPIE object containing fishery data on country level (in tonnes)

Usage

```
convertFAO_fishery(x, subtype)
```

Arguments

x   magpie object with uncoverted source data

subtype   "capture" takes all fishdata into account that has been declared as capture fishery
                     "aquaculture" takes all fishdata into account that has been listed as aquaculture
                     fishery

Value

Fishery data as complete MAgPIE object on country level

Author(s)

Jasmin Wehner,Benjamin Leon Bodirsky

See Also

[readSource](#)

---

correctCheung2016 *Correct FAO climate impact data from Cheung et al 2016*

Description

Correct magpie objects

Usage

```
correctCheung2016(subtype)
```

Arguments

subtype "Area" data subtype. Areas in square km for each Large Marine Ecosystem obtained from Seaaroundus.org "PrimProdinmgCday" data subtype. Primary Production in mg C day^-1 for each Large Marine Ecosystem obtained from Seaaroundus.org "Degrees" data subtype. relative change to fishery production in degree1p5,degree2p5,degree3p5 scenarios. obtained from Cheung et al 2016

Value

magpie object of the corrected Cheung et al 2016 data and converted x_PrimProdinmgCday into tCyr^(-1)^km2^(-1)

Author(s)

Jasmin Wehner

See Also

[readSource](#)

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correctCheung2018   *correctCheung2018*

Description

Converts readCheung2018 output to complete MAgPIE object containing fishery data on aggregated FAO Major Fishing areas

Usage

```
correctCheung2018(x, subtype)
```

Arguments

x	unconverted magpie object from the read function.
subtype	"General" data subtype. Areas in square km and Primary Production in mg C day^-1 or Mt yr^-1 for each Exclusive Economic Zone obtained from Seaaroundus.org "models" data subtype: DBEM Model output for RCP2.6;RCP8.5 obtained from Cheung et al 2018 "ModelOutputDynModel" data subtype. Dynamic Model output for RCP2.6;RCP8.5 obtained from Cheung et al 2018

Value

Fishery data as complete MAgPIE object on country level

Author(s)

Benjamin Leon Bodirsky, Jasmin Wehner

See Also

[readSource](#)

---

readAQUASTAT   *readAQUASTAT*

Description

Read in data based on AQUASTAT database (http://www.fao.org/nr/water/aquastat/data/query/index.html?lang=en)

Usage

```
readAQUASTAT(subtype = "ConsAgri")
```

Arguments

subtype "Conservation_agriculture_area_4454": multicropping factor on cropped (excluding fallow) land,

- aquastat: 4454|Conservation agriculture area (1000 ha) (4454_conservation_agriculture_area_in_1000_ha.csv)
- aquastatShare: 4455|Commoditiy Balance LivestockConservation agriculture area as (4455_conservation_agriculture_area_as_share_of_arable_land_areas.csv)

Value

magpie objects with results on contury level

Author(s)

Kristine Karstens

Examples

```
## Not run:
 readSource("AQUASTAT", subtype="ConsAgri", convert=TRUE)

## End(Not run)
```

---

readCheung2016 *Read climate impact data on marine fishery production for from Cheung 2016*

Description

Read-in a csv file as magclass object in absolut and percentage values

Usage

```
readCheung2016(subtype)
```

Arguments

subtype "Area" data subtype. Areas in square km for each Large Marine Ecosystem obtained from Seaaroundus.org "PrimProdinmgCday" data subtype. Primary Production in mg C day^-1 for each Large Marine Ecosystem obtained from Seaaroundus.org "Degrees" data subtype. relative change to fishery production in degree1p5,degree2p5,degree3p5 scenarios. obtained from Cheung et al 2016

Value

magpie object of the fishery data with Area, Primary Productivity and Degrees subtypes

Author(s)

Jasmin Wehner

See Also

readSource

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readCheung2018	*Read climate impact data on marine fishery production for from Cheung 2018*

Description

Read-in a csv file as magclass object in percentage values

Usage

```
readCheung2018(subtype)
```

Arguments

subtype   "General" data subtype. Areas in square km and Primary Production in mg
                   C day^-1 for each Exclusive Economic Zone obtained from Seaaroundus.org
                   "models" data subtype. DBEM Model output for RCP2.6;RCP8.5 and Dynamic
                   Model output for RCP2.6;RCP8.5 obtained from Cheung et al 2018

Value

magpie object of the fishery data with respecitive model outputs

Author(s)

Jasmin Wehner

See Also

readSource

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readFAO_fishery   *Read FAO fishery data*

Description

Read-in a csv file as magclass object in tonnes

Usage

```
readFAO_fishery(subtype)
```

Arguments

subtype   "capture" takes all fishdata into account that has been declared as capture fishery "aquaculture" takes all data into account that has been listed as aquaculture fishery

Value

magpie object of the fishery data with Capture or Aquaculture

Author(s)

Benjamin Leon Bodirsky, Jasmin Wehner

See Also

[readSource](#)

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