

Package ‘FAIBOracle’

January 30, 2023

Title Load ground sample data from FAIB's databases

Version 1.0

Description Load ground sample data from FAIB's three oracle databases: VGIS, GYS and ISMC.

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Suggests knitr

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extractVegComp_byFID	<i>Load the attributes from vegcomp rank 1 layer from bcgw warehouse by feature id.</i>
----------------------	---

Description

This function is to extract the attributes from vegcomp rank 1 layer from bcgw warehouse for given feature id

Usage

extractVegComp_byFID(bcgwUserName, bcgwPassword, FID, extractAttributes)

Arguments

- bcgwUserName character, Specifies a valid user name for bcgw database.
- bcgwPassword character, Specifies the password to the user name.
- FID character, Specifies the feature_id in vegcomp rank1 layer.
- extractAttributes character, The attributes that are intended to extract from vegcomp layer. The entire list of attributes can be found at [here](#)

Value

a data table with the attributes

Note

the maximum number of feature id is 1000

Author(s)

Yong Luo

extractVegComp_byLoc	<i>Load the attributes from vegcomp rank 1 layer from bcgw warehouse by location.</i>
----------------------	---

Description

This function is to extract the attributes from vegcomp rank 1 layer from bcgw warehouse for given locations.

Usage

```
extractVegComp_byLoc(  
  bcgwUserName,  
  bcgwPassword,  
  locationID,  
  x_BCAIbers,  
  y_BCAIbers,  
  extractAttributes  
)
```

Arguments

bcgwUserName	character, Specifies a valid user name for bcgw database.
bcgwPassword	character, Specifies the password to the user name.
locationID	character, Specifies the location id.
x_BCAIbers	numeric, Specifies x coordinate for the location, It must be in BC albers projection.
y_BCAIbers	numeric, Specifies y coordinate for the location, It must be in BC albers projection.
extractAttributes	character, The attributes that are intended to extract from vegcomp layer. The entire list of attributes can be found at here

Value

a data table with the attributes

Author(s)

Yong Luo

loadGYS	<i>Load the data from GYS Oracle database</i>
---------	---

Description

This function is to load the natural growth PSP data from GYS Oracle database. This function is adapted from the first part of `cv_gys.sas`.

Usage

```
loadGYS(userName, passWord, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in GYS Oracle database.
passWord	character, Specifies the password to the user name.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

no value returned

Author(s)

Yong Luo

loadISMC_all	<i>Load all key data from ISMC Oracle database</i>
--------------	--

Description

This function is to load all the key ground sample data from ISMC database.

Usage

```
loadISMC_all(
  userName,
  passWord,
  env,
  savePath = ".",
  saveFormat = "rds",
  overWrite = FALSE
)
```

Arguments

userName	character, Specifies a valid user name in ISMC Oracle database.
passWord	character, Specifies the password to the user name.
env	character, Specifies which environment the data reside. Currently, the function supports INT (intergration) and {TEST(test) environment.

Value

No value returned. There are 19 tables will be saved with ISMC_YYYYMMDDHHHH(ALL)_ as a prefix. These tables are SampleSites, AccessNotes, Plots, SampleSiteVisits, GroundSampleCrewActivities, PlotDetails, SampleMeasurements, SmallLiveTreeTallies, TreeMeasurements, Trees, TreeDetails, TreeDamageOccurrences, TreeLossIndicators, TreeLogAssessments, StumpTallies, SiteNavigation, IntegratedPlotCenter, ReferencePoint and TiePoint.

Author(s)

Yong Luo

loadISMC_bySampleType *Load the data from ISMC Oracle database using sample type(s)*

Description

This function is to load the ground sample data from ISMC database using sample type(s).

Usage

```
loadISMC_bySampleType(
  userName,
  passWord,
  env,
  sampleType,
  savePath = ".",
  saveFormat = "rdata",
  overWrite = FALSE
)
```

Arguments

userName	character, Specifies a valid user name in ISMC Oracle database.
passWord	character, Specifies the password to the user name.
env	character, Specifies which environment the data reside. Currently, the function supports INT (intergration) and {TEST(test) environment.

Value

No value returned. There are 16 tables will be saved with prefix of ISMC_YYYYMMDDHHHH(sampletype)_. These tables are SampleSites, AccessNotes, SampleSiteVisits, GroundSampleCrewActivities, PlotDetails, SampleMeasurements, SmallLiveTreeTallies, TreeMeasurements, Trees, TreeDetails, TreeDamageOccurrences, TreeLossIndicators, TreeLogAssessments, StumpTallies, SiteNavigation, IntegratedPlotCenter, ReferencePoint and TiePoint.

Author(s)

Yong Luo

loadISMC_bySiteID	<i>Load the data from ISMC Oracle database using site name(s)</i>
-------------------	---

Description

This function is to load the ground sample data from ISMC database using site name(s).

Usage

```
loadISMC_bySiteID(
  userName,
  passWord,
  env,
  siteID,
  savePath = ".",
  saveName,
  saveFormat = "rdata",
  overWrite = FALSE
)
```

Arguments

userName	character, Specifies a valid user name in ISMC Oracle database.
passWord	character, Specifies the password to the user name.
env	character, Specifies which environment the data reside. Currently, the function supports INT (intergration) and {TEST(test) environment.

Value

No value returned. There are 16 tables will be saved with prefix of saveName. These tables are SampleSites, AccessNotes, SampleSiteVisits, GroundSampleCrewActivities, PlotDetails, Sample-Measurements, SmallLiveTreeTallies, TreeMeasurements, Trees, TreeDetails, TreeDamageOccurrences, TreeLossIndicators, TreeLogAssessments, StumpTallies, SiteNavigation, IntegratedPlot-Center, ReferencePoint and TiePoint. Note that if the save format is xlsx, all the tables will be saved into one workbook.

Author(s)

Yong Luo

loadISMC_sizedata	<i>Load all DBH-Height data from ISMC Oracle database</i>
-------------------	---

Description

This function is to load all the DBHG-height data regardless of sample site visit type. Note that this function is specifically used for loading DBH and Height for deriving DBH-height function that used in the PSP and VRI compiler. Hence, the broken top trees are excluded in the dataset. The data is limited for the five major repeatedly measured projects, i.e., 'PSP', 'M', 'Y', 'L', 'F'. The I and S samples in the PSP projects also excluded.

Usage

```
loadISMC_sizedata(userName, passWord, env)
```

Arguments

userName	character, Specifies a valid user name in ISMC Oracle database.
passWord	character, Specifies the password to the user name.
env	character, Specifies which environment the data reside. Currently, the function supports INT (integration) and {TEST(test) environment.

Value

DBH and height table.

Author(s)

Yong Luo

loadVGIS	<i>Load the data from VGIS Oracle database</i>
----------	--

Description

This function is to read the data from VGIS Oracle database

Usage

```
loadVGIS(userName, passWord, saveThem = FALSE, savePath = ".")
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path that directs to the VRI original data source, i.e., //Mayhem/GIS_TIB/RDW/RDW_Data2/Work_Areas/VRI_ASCII_PROD/vri_sa.

Value

no files

Author(s)

Yong Luo

loadVGISCrew	<i>Load the crew data from Oracle database</i>
--------------	--

Description

This function is to load the crew data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISCrew(userName, passWord, saveThem = FALSE, savePath = ".")
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off.

Value

Depends on saveThem, if it is turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISCWD

Load the CWD data from Oracle database

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISCWD(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISEcology

Load the ecological data from Oracle database

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISEcology(
  userName,
  passWord,
  saveThem = FALSE,
  savePath = file.path("."))
)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISLossIndicator *Load the loss indicator data from Oracle database*

Description

This function is to load the loss indicator data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISLossIndicator(
  userName,
  passWord,
  saveThem = FALSE,
  savePath = file.path(".")
)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it has turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISNotes	<i>Load the sql note data from Oracle database</i>
---------------	--

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISNotes(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it has turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISPhoto	<i>Load the photo data from Oracle database</i>
---------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISPhoto(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISPlot	<i>Load the plot header data from Oracle database</i>
--------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISPlot(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISRange

Load the range data from Oracle database

Description

This function is to load the crew data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISRange(userName, passWord, saveThem = FALSE, savePath = ".")
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- forage
- shrub

Author(s)

Yong Luo

loadVGISSample	<i>Load the sample header data from Oracle database</i>
----------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISSample(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISSampleAccess	<i>Load the sample access data from Oracle database</i>
----------------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISSampleAccess(
  userName,
  passWord,
  saveThem = FALSE,
  savePath = file.path("."))
)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISSiteTree	<i>Load the site/stump/small tree (3s) data from Oracle database</i>
------------------	--

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISSiteTree(
  userName,
  passWord,
  saveThem = FALSE,
  savePath = file.path(".")
)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it has turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISStumpSTree	<i>Load the stump and small tree data from Oracle database</i>
--------------------	--

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISStumpSTree(
  userName,
  passWord,
  saveThem = FALSE,
  savePath = file.path(".")
)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it has turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISSuccession	<i>Load the card 16 succession interpretations (eo) data from Oracle database</i>
--------------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISSuccession(
    userName,
    passWord,
    saveThem = FALSE,
    savePath = file.path(".")
)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it has turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISTreeC	<i>Load the full/enhanced/H-enhanced tree data from Oracle database</i>
---------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISTreeC(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISTreeI

Load the count tree data from Oracle database

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISTreeI(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

loadVGISVeg	<i>Load the veg data from Oracle database</i>
-------------	---

Description

This function is to load the sample header data from VGIS Oracle database. And associated them with cluster.

Usage

```
loadVGISVeg(userName, passWord, saveThem = FALSE, savePath = file.path("."))
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
saveThem	logical, Specifies whether the loaded data should be saved or returned. The default value is FALSE, which means the function will not save files for you.
savePath	character, Specifies the path to save your outputs, you do not need to specify if saveThem is turned off. If missing, the current working directory will be choosed.

Value

Depends on saveThem, if it hs turned off (i.e., FALSE). The function returns three datasets:

- contains the crews for conducting QA;
-

Author(s)

Yong Luo

projDate_rank1Layer	<i>Get the project date for the rank 1 layer.</i>
---------------------	---

Description

This function is to query the project date for the rank 1 layer. Use this as version indication.

Usage

```
projDate_rank1Layer(bcgwUserName, bcgwPassword)
```

Arguments

bcgwUserName	character, Specifies a valid user name for bcgw database.
bcgwPassword	character, Specifies the password to the user name.

Value

project date for the rank 1 layer

Author(s)

Yong Luo

sampleValidStat_ISMC	<i>Obtain sample validation status by measurement year, sample type and sample project</i>
----------------------	--

Description

This function is to load all the table names from ISMC database.

Usage

```
sampleValidStat_ISMC(  
  userName,  
  passWord,  
  env,  
  sampleYear = NA,  
  sampleType = NA,  
  sampleProject = NA  
)
```

Arguments

userName	character, Specifies a valid user name in ISMC Oracle database.
passWord	character, Specifies the password to the user name.
env	character, Specifies which environment the data reside. Currently, the function supports INT (intergration) and {TEST(test) environment.

Value

a data table

Author(s)

Yong Luo

See Also

[tablesInISMC](#)

tablesInGYS	<i>Obtain all the table names (and column names) in GYS</i>
-------------	---

Description

This function is to load all the table names from GYS database.

Usage

```
tablesInGYS(userName, passWord, columnNames = TRUE)
```

Arguments

userName	character, Specifies a valid user name in GYS Oracle database.
passWord	character, Specifies the password to the user name.
columnNames	logic, Obtain column names in each table. Default is TRUE.

Value

a data table

Author(s)

Yong Luo

See Also

[tablesInISMC](#) and [tablesInVGIS](#)

tablesInISMC	<i>Obtain all the table names (and column names) in ISMC</i>
--------------	--

Description

This function is to load all the table names from ISMC database.

Usage

```
tablesInISMC(userName, passWord, env, columnNames = TRUE)
```

Arguments

userName	character, Specifies a valid user name in ISMC Oracle database.
passWord	character, Specifies the password to the user name.
env	character, Specifies which environment the data reside. Currently, the function supports INT (intergration) and {TEST(test) environment.

Value

a data table

Author(s)

Yong Luo

See Also[tablesInGYS](#) and [tablesInVGIS](#)

tablesInVGIS*Obtain all the table names (and column names) in VGIS*

Description

This function is to load all the table names from VGIS database.

Usage

```
tablesInVGIS(userName, passWord, columnNames = TRUE)
```

Arguments

userName	character, Specifies a valid user name in VGIS Oracle database.
passWord	character, Specifies the password to the user name.
columnNames	logic, Obtain column names in each table. Default is TRUE.

Value

a data table

Author(s)

Yong Luo

See Also[tablesInISMC](#) and [tablesInGYS](#)

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