

Package: rapr (via r-universe)

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Type Package

Title Interface to Rangeland Analysis Platform (RAP) Vegetation
Biomass and Cover Products

Version 0.1.2

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Description Provides access to Rangeland Analysis Platform (RAP)
products <<https://rangelands.app/products>> for arbitrary
extents via GDAL virtual file system.

License GPL (>= 3)

Encoding UTF-8

LazyData true

URL <https://github.com/brownag/rapr>, <https://humus.rocks/rapr>,
<http://humus.rocks/rapr/>

BugReports <https://github.com/brownag/rapr/issues>

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Imports sf, terra

Suggests soilDB, xml2, gifski, mapview (>= 2.10.0), httr, jsonlite,
rmarkdown, knitr, testthat (>= 3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

Config/pak/sysreqs libgdal-dev gdal-bin libgeos-dev libssl-dev
libproj-dev libsqlite3-dev libudunits2-dev

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

RemoteUrl <https://github.com/brownag/rapr>

RemoteRef HEAD

RemoteSha 352fb0a1b780d8a39a568940d6e71c2a4c629388

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get_rap	<i>Get Rangeland Analysis Platform (RAP) Grids</i>
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Description

Get Rangeland Analysis Platform (RAP) Grids

Usage

```
get_rap(
  x,
  years = c(1986, 1996, 2006, 2016),
  filename = NULL,
  product = c("vegetation-biomass", "vegetation-cover"),
  version = "v3",
  progress = NULL
)
```

Arguments

x	Target extent. Derived from an sf, terra, raster or sp object or numeric vector containing xmin, ymax, xmax, ymin in WGS84 longitude/latitude decimal degrees (EPSG:4326).
years	integer. Year(s) to query
filename	Output filename (optional; default stores in temporary files, see terra::sources())
product	Target data: "vegetation-biomass" and/or "vegetation-cover"
version	Target version: "v3" and/or "v2"
progress	logical. Show progress bar? Default: missing (NULL) will use progress bar when three or more layers are requested.

Details

You can query annual biomass and cover (versions 2 and 3) from 1986 to present

- product = "vegetation-biomass" returns two layers per year:
 - "annual forb and grass", "perennial forb and grass" (**lbs / acre**)
- product = "vegetation-cover" returns six layers per year:
 - "annual forb and grass", "bare ground", "litter", "perennial forb and grass", "shrub", "tree" (**% cover**)

When a filename argument is not specified, unique temporary files will be generated. The resulting SpatRaster object will retain reference to these files, and you can remove them manually with `unlink(terra::sources(<SpatRaster>))`.

When a filename *is* specified, temporary files will be removed after the result (often a multi-year/layer/product) SpatRaster is written to new file.

In lieu of a spatial object from {terra}, {raster}, {sf} or {sp} packages you may specify a bounding box using a numeric vector containing `xmin`, `ymin`, `xmax`, `ymin` in WGS84 longitude/latitude decimal degrees (corresponding to order used in `gdal_translate -projwin` option). e.g. `get_rap(x = c(-120, 37, -119.99, 36.99), ...)`.

```
(1: xmin, 2: ymax)-----|
|                           |
|          TARGET EXTENT   |
|   x = c(xmin, ymax, xmax, ymin)   |
|                           |
|-----(3: xmax, 4: ymin)
```

Value

a SpatRaster containing the requested vegetation-biomass and/or vegetation-cover layers by year. Native cell resolution is ~30m x 30m in WGS84 decimal degrees.

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