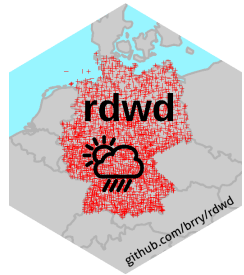
rdwd: R interface to German Weather Service data



Berry Boessenkool, e-Rum2020 Milano

github.com/brry/rdwd
bookdown.org/brry/rdwd

berry-b@gmx.de

Presentation template generated with
`berryFunctions::createPres`

The DWD has a ton of data freely available

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In den übergeordneten Ordner wechseln

Name	Größe	Zuletzt verände
Datei: BESCHREIBUNG_obsgermany_climate_daily_soil_tem...	69 KB	30.03.2020 13:12:
Datei: DESCRIPTION_obsgermany_climate_daily_soil_temp...	68 KB	30.03.2020 13:12:
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  - gridded raster data from radar + interpolation

Usage example for observational data - station selection

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interactive map of available stations

Usage example for observational data - data selection

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overview of available datasets

res= / var=	1_minute	10_minutes	hourly	subdaily	daily	monthly	annual	multi_annual
	per	per	per	per	per	per	per	per
air_temperature		<<	<	<				
cloudiness			<	<				
cloud_type			<					
dew_point			<					
extreme_temperature		<<						
extreme_wind		<<						
kl					<	<	<	
moisture				<				

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## ftp://opendata.dwd.de/climate_environment/CDC/observations_germany/
## climate/daily/kl/recent/tageswerte_KL_03987_akt.zip
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clim <- dataDWD(link, read=TRUE, varnames=TRUE)
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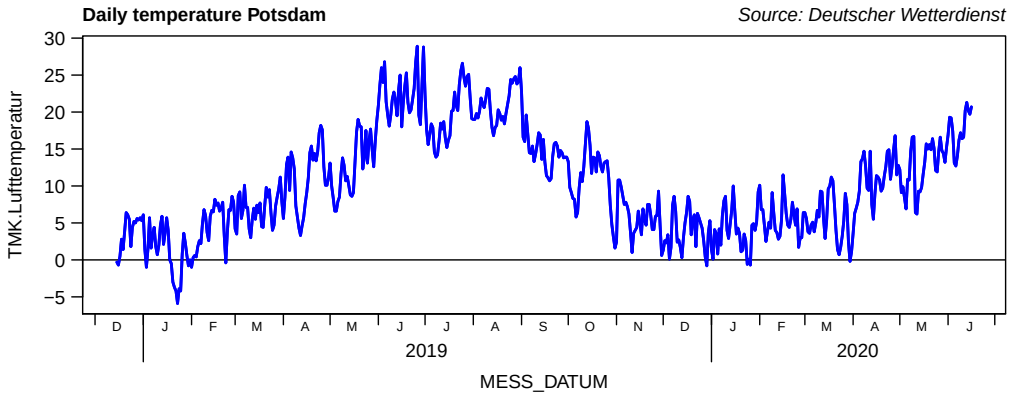
```
colnames(clim)
##  [1] "STATIONS_ID"            "MESS_DATUM"             "QN_3"
##  [4] "FX.Windspitze"          "FM.Windgeschwindigkeit" "QN_4"
##  [7] "RSK.Niederschlagshoehe" "RSKF.Niederschlagsform" "SDK.Sonnenscheindauer"
## [10] "SHK_TAG.Schneehoehe"    "NM.Bedeckungsgrad"      "VPM.Dampfdruck"
## [13] "PM.Luftdruck"           "TMK.Lufttemperatur"     "UPM.Relative_Feuchte"
## [16] "TXK.Lufttemperatur_Max" "TNK.Lufttemperatur_Min" "TGK.Lufttemperatur_5cm"
## [19] "eor"
```

Usage example for observational data - further processing

```
plot(clim[,c(2,14)], type="l", xaxt="n", las=1, col="blue", lwd=2)
berryFunctions::monthAxis()   ;   abline(h=0)
```



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links <- indexFTP("hourly/radolan/recent/bin", base=gridbase, overwrite=TRUE)
rad <- dataDWD(links[4047], base=gridbase, joinbf=TRUE, read=TRUE)
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links <- indexFTP("hourly/radolan/recent/bin", base=gridbase, overwrite=TRUE)
rad <- dataDWD(links[4047], base=gridbase, joinbf=TRUE, read=TRUE)
plotRadar(rad$dat, main=rad$meta$date, mar=c(2.5, 3.5, 1.5, 5))
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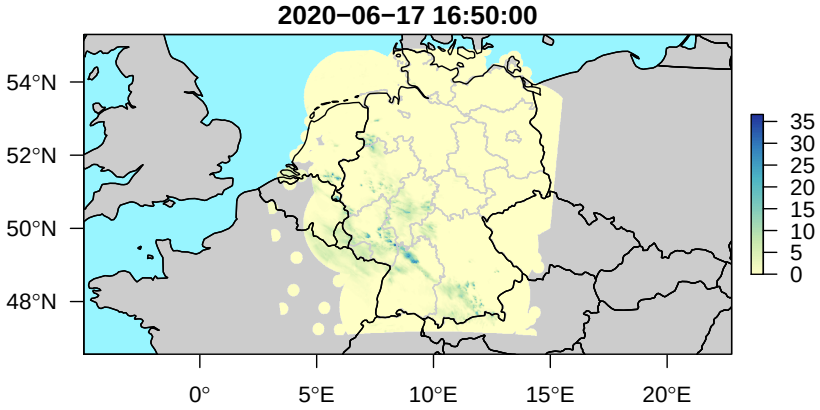

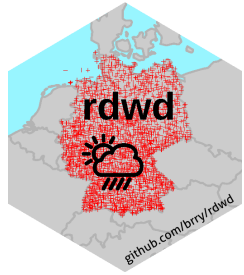


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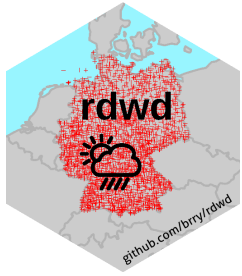
analyze climate change in Germany:

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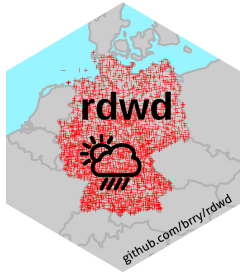


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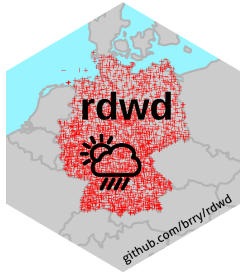


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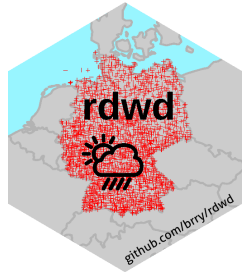


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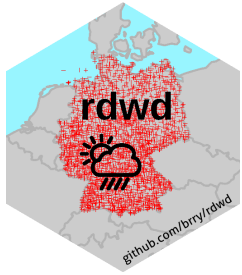
bookdown.org/brry/rdwd

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