A8 Rasterdaten

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Manipulation von Rasterdaten

```
library(raster)
```

```
## Loading required package: sp
```

```
x <- raster()
x
```

```
## class       : RasterLayer
## dimensions  : 180, 360, 64800  (nrow, ncol, ncell)
## resolution  : 1, 1  (x, y)
## extent      : -180, 180, -90, 90  (xmin, xmax, ymin, ymax)
## coord. ref. : +proj=longlat +datum=WGS84 +ellps=WGS84 +towg
```

Andere Parameter wählen

```
x1 <- raster(ncol=36, nrow=18, xmn=-1000, xmx=1000, ymn=-100,
x1
```

```
## class       : RasterLayer
## dimensions  : 18, 36, 648  (nrow, ncol, ncell)
## resolution  : 55.55556, 55.55556  (x, y)
## extent      : -1000, 1000, -100, 900  (xmin, xmax, ymin, ym
## coord. ref. : NA
```

Den Zellen Werte zuordnen

```
r <- raster(ncol=10, nrow=10)
ncell(r)
```

```
## [1] 100
```

```
hasValues(r)
```

```
## [1] FALSE
```

```
values(r) <- runif(ncell(r))
hasValues(r)
```

```
## [1] TRUE
```

Das Ergebnis visualisieren

```
plot(r, main='Raster with 100 cells')
```

Import von Beispieldaten

```
link<-"https://raw.githubusercontent.com/GeoScripting-WUR/Intr
```

```
download.file(url = link, destfile = 'gewata.zip', method = 'a
unzip('gewata.zip')
```

```
list.files(pattern = glob2rx('*.tif'))
```

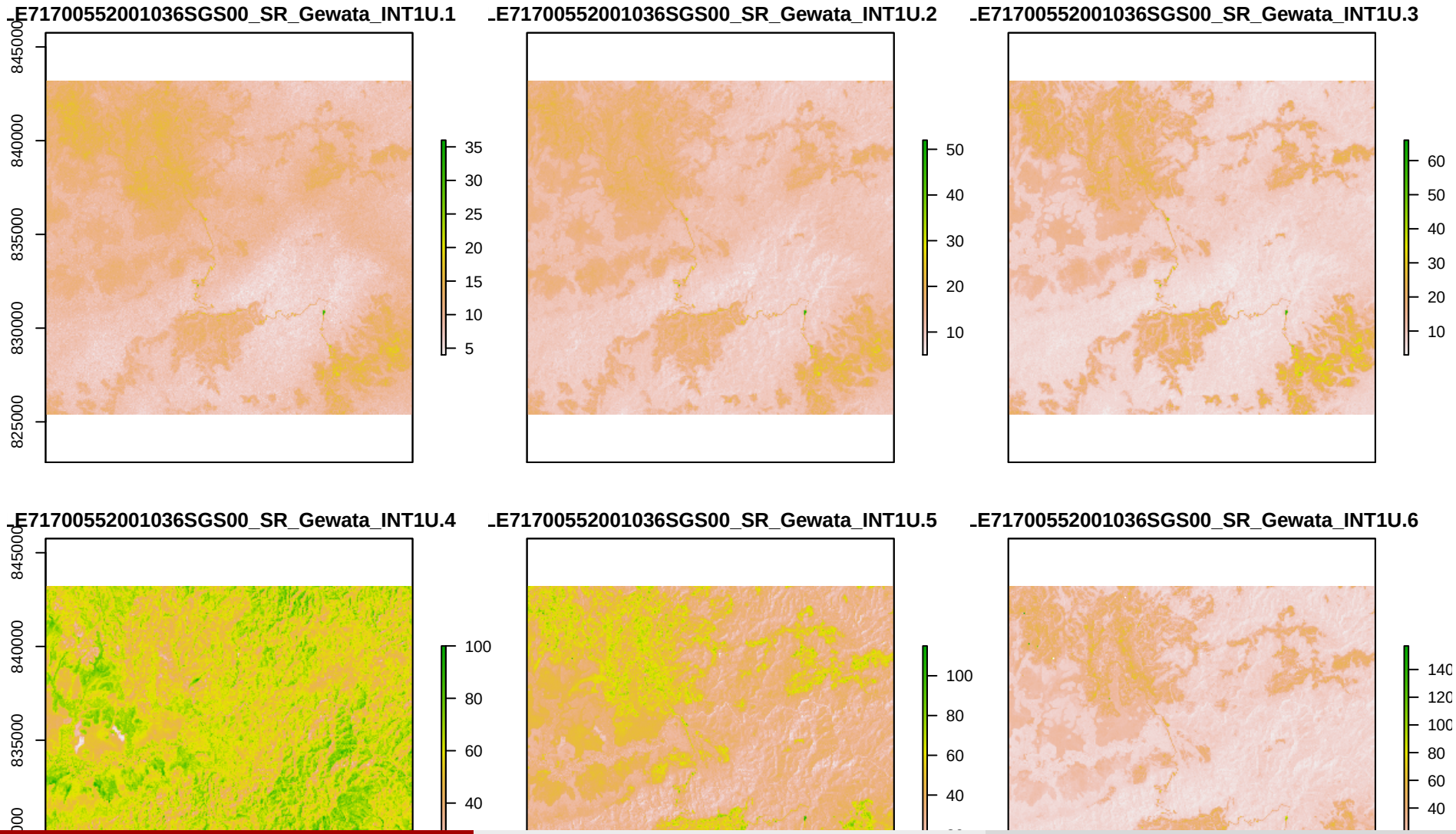
```
## character(0)
```

Import von Rasterdaten - `.tif` file

```
gewata <- raster::brick('../data/
LE71700552001036SGS00_SR_Gewata_INT1U.tif')
```

Erste plots erstellen

```
plot(gewata)
```



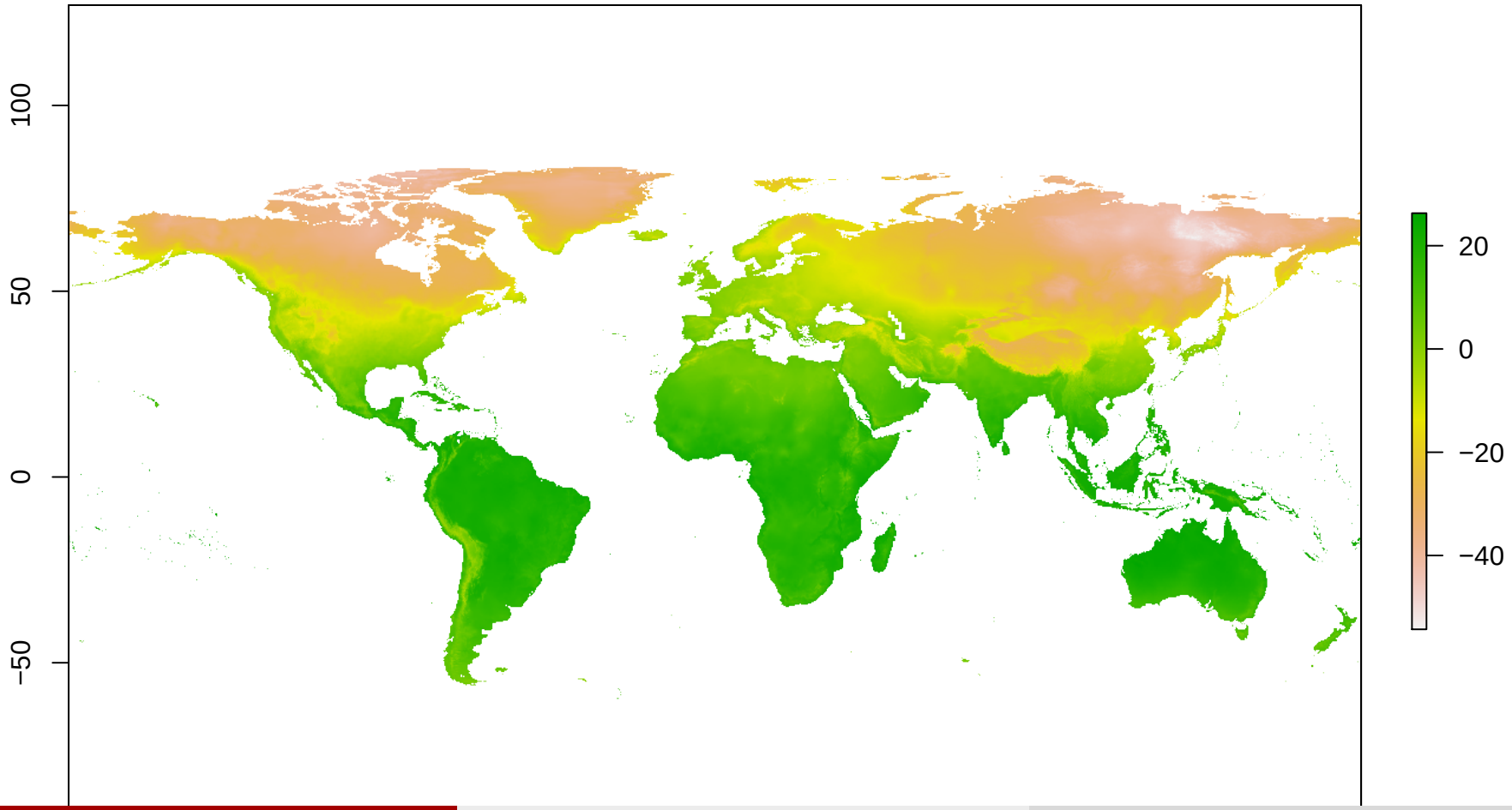
Worldclim Daten importieren

```
# this will download
# global data on minimum temperature at 10' resolution
tmin <- raster::getData("worldclim", var = "tmin", res = 10)
```

```
tmin1 <- raster::raster( "../data/wc10/tmin1.bil")
tmin1 <- tmin1/10
```

Minimum Temperatur plotten

```
plot(tmin1)
```



Links

- Neon - **Intro to Raster Data in R**