

Creating a global land mask raster

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Libraries

```
library(tidyverse)
library(terra)
library(sf)
library(rnaturalearth)
library(here)
library(raster)
```

First get the shapefile for the land from Natural Earth

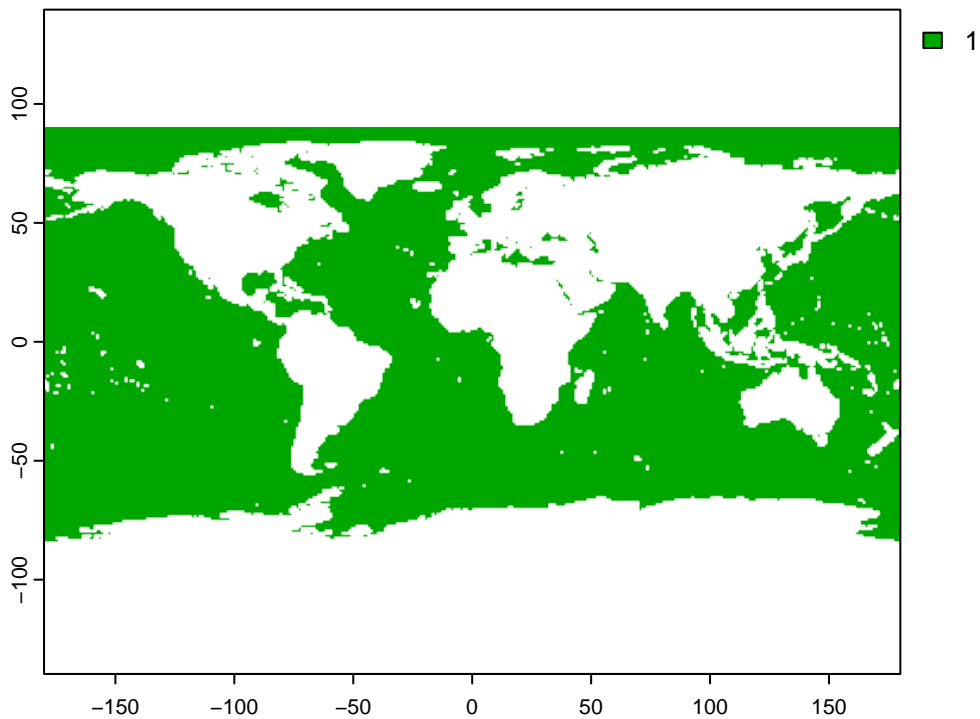
```
land_sf <- ne_countries(scale = "medium", returnclass = "sf")
```

Now get a blank raster in the projection and resolution you want (using the default wgs84 here but in 1 degree). The output raster can then be multiplied with your raster of interest to return all non-land cells. If you want to keep only land cells, replace `inverse = TRUE` with `inverse = FALSE` in the mask call.

```
base_r <- rast(res = 1)
terra::values(base_r) <- 1

#this creates a raster with na values for the land (1 elsewhere)
land_mask_terra <- terra::mask(base_r, vect(land_sf), inverse=TRUE)

#retains 1 for land
plot(land_mask_terra)
```



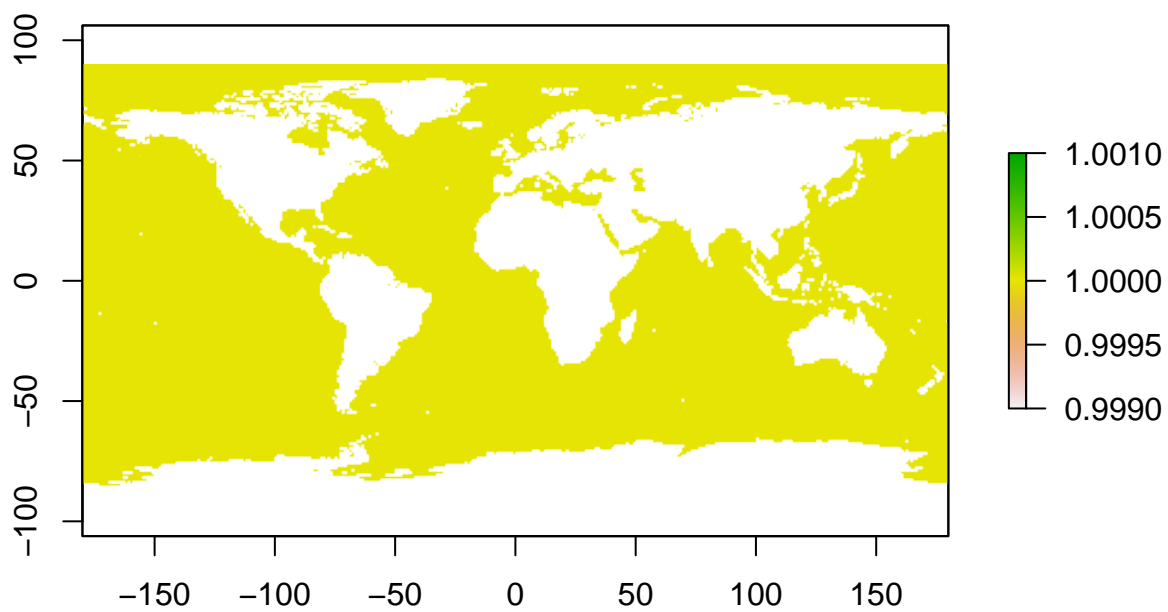
```
writeRaster(x = land_mask_terra, filename = here("data/landmask_spatrast.tif"), overwrite = TRUE)
```

This time in raster format

```
base_r <- raster(res = 1)
raster::values(base_r) <- 1

#this creates a raster with na values for the land (1 elsewhere)
land_mask_raster <- raster::mask(base_r, land_sf, inverse=TRUE)

plot(land_mask_raster)
```



```
raster::writeRaster(x = land_mask_raster, filename = here("data/landmask_rasterlayer.tif"), overwrite =
```