

# Mountain Pine Beetle Climatic Suitability Maps

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## Overview

We have 7 MPB climate scenarios (using four different indices: **S**, **L**, **R**, **G**) ready to use as model drivers. The Logan suitability index (**L**) is based on summer temperatures. The Regniere suitability index (**R**) is based on MPB cold tolerance (*i.e.*, winter survival). The Safranyik suitability index (**S**) is based on aspects of both summer temperatures and winter survival. Finally, the composite SLR index (**G**) takes the harmonic mean of the **S**, **L**, and **R** models.

index	description
S	Safranyik
L	Logan
R	Regniere
G	Composite

For each of the four indices, there are 1981-2010 normals plus the projections from two RCP scenarios (either 4.5 or 8.5), covering a span of 120 years, split into 30-year frames.

All maps are projected using LCC and cover all of Canada.

## Data source

Maps were produced in BioSim (*need info!*).

They were uploaded to and retrieved from the NoFC FTP site on 26 October 2016.

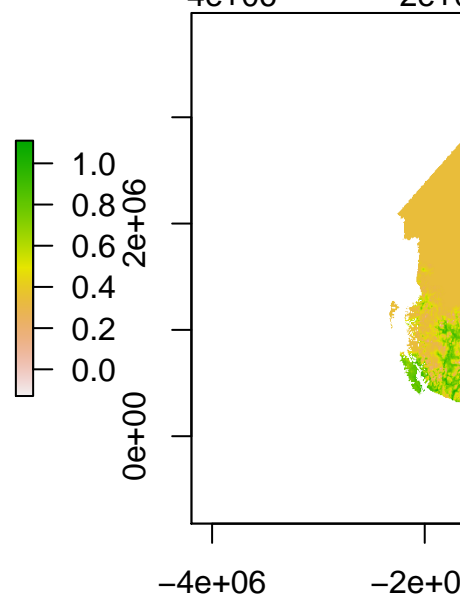
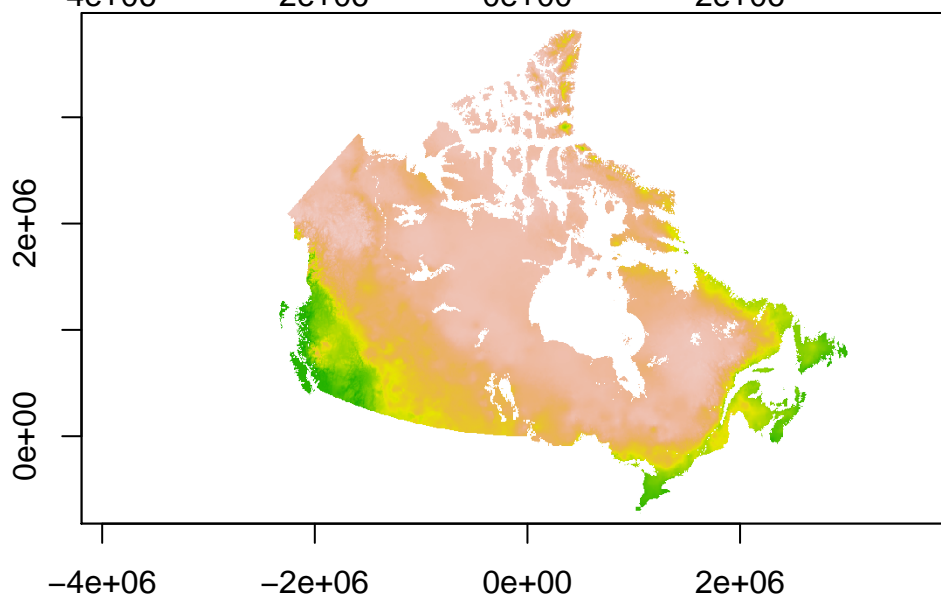
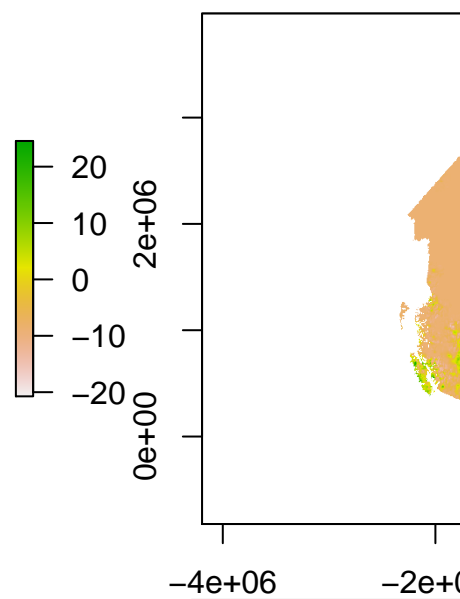
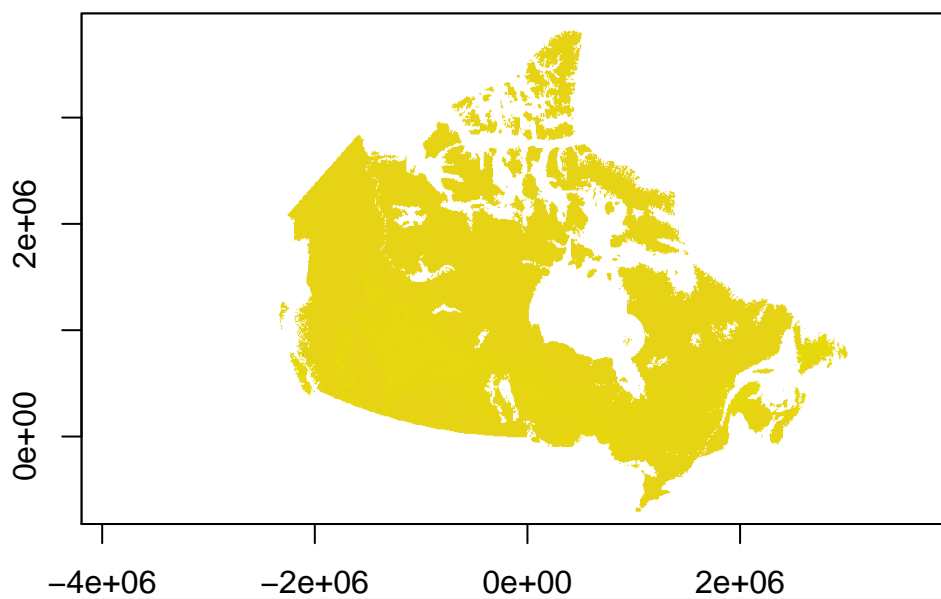
## Load maps

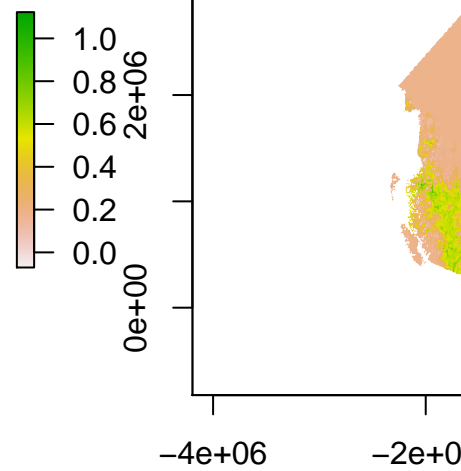
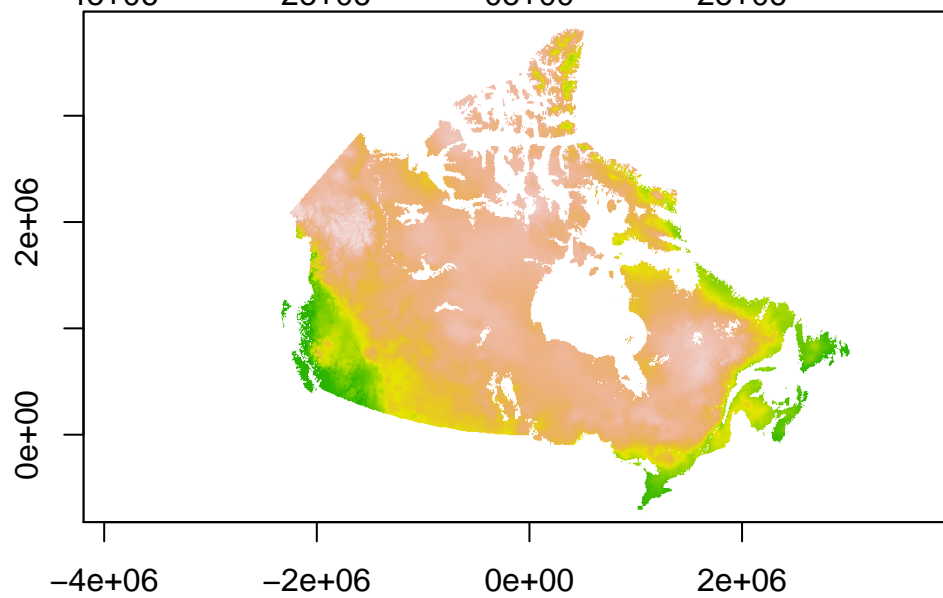
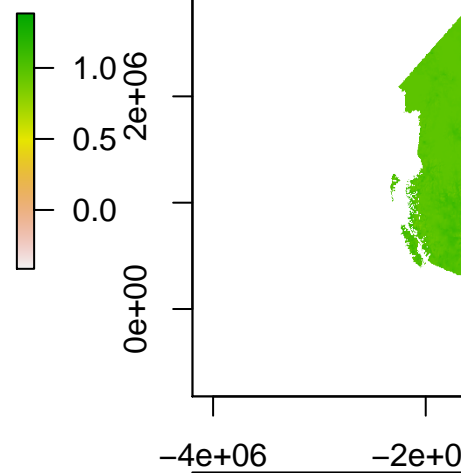
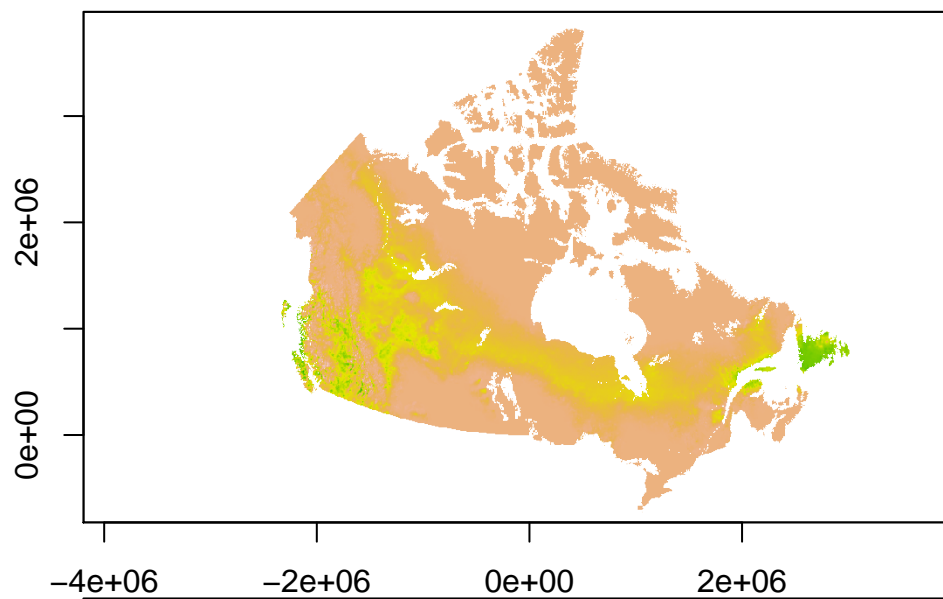
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library(raster)

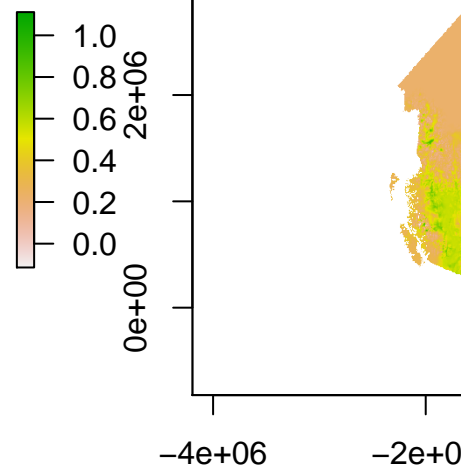
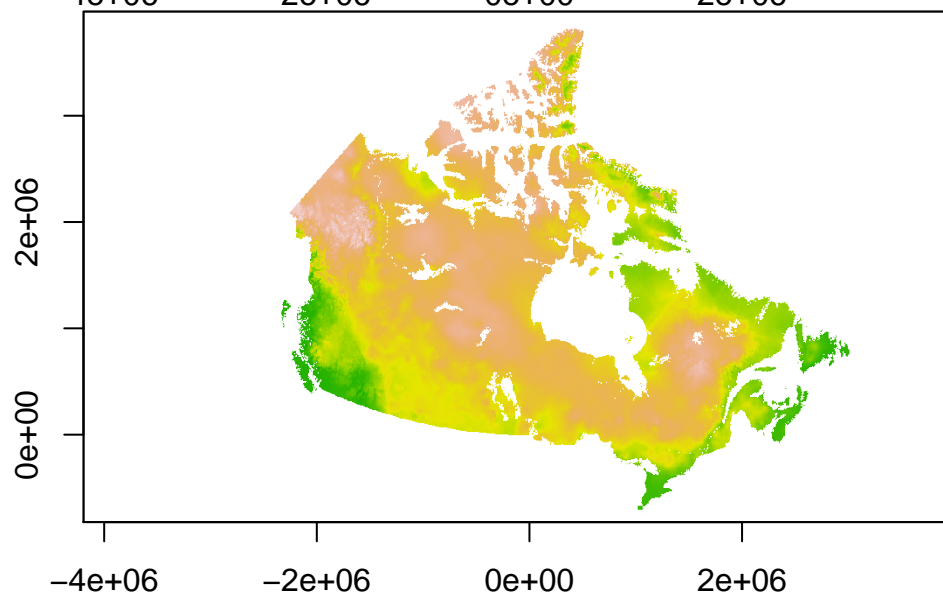
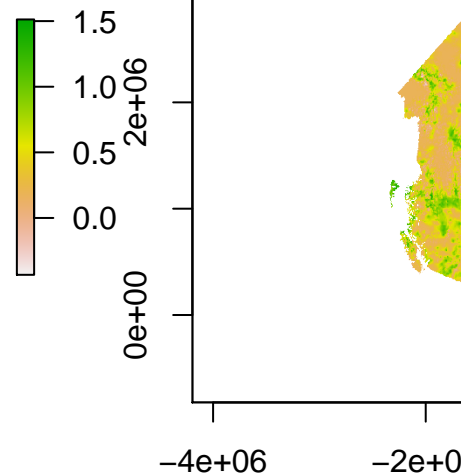
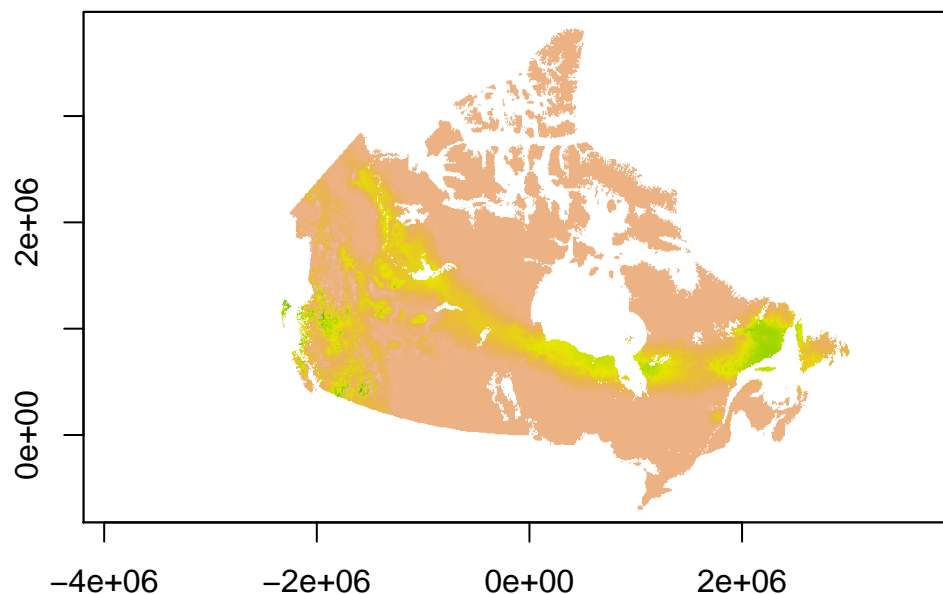
files <- dir(path = maps.dir, pattern = '.*tif', full.names = TRUE)

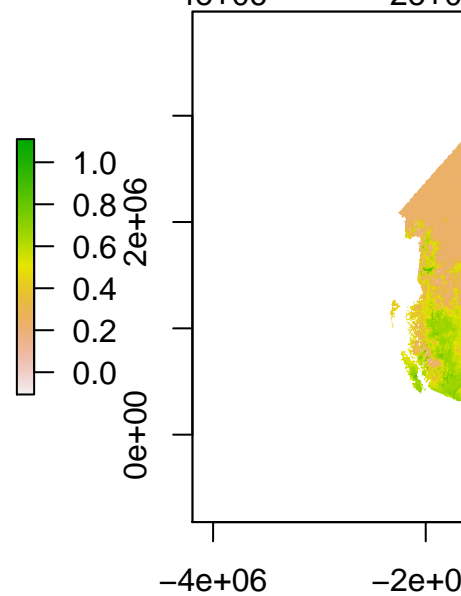
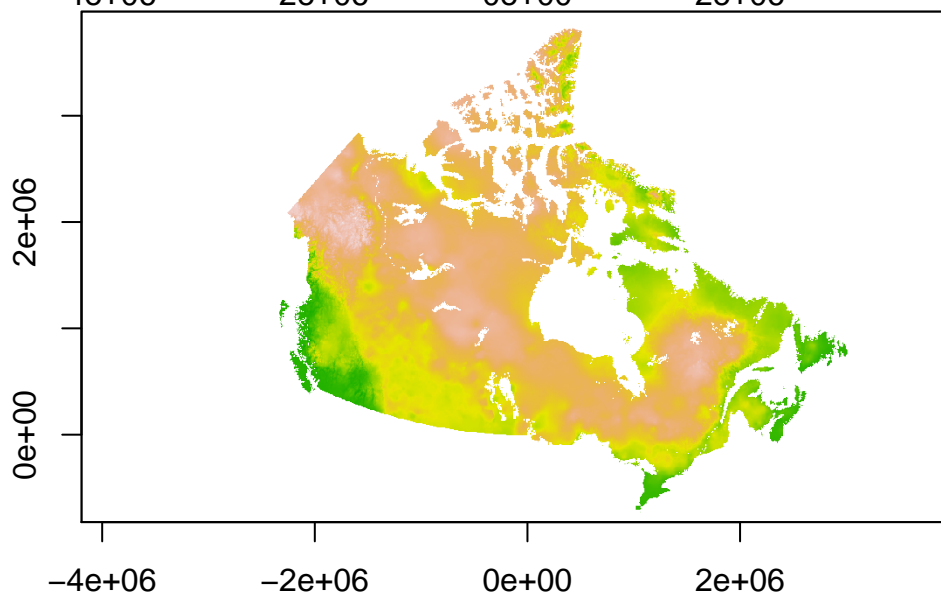
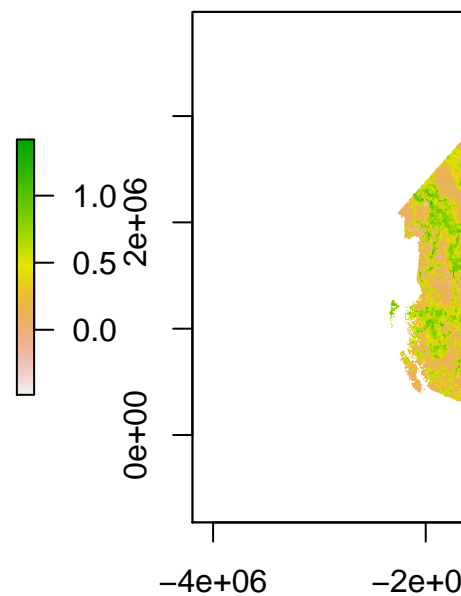
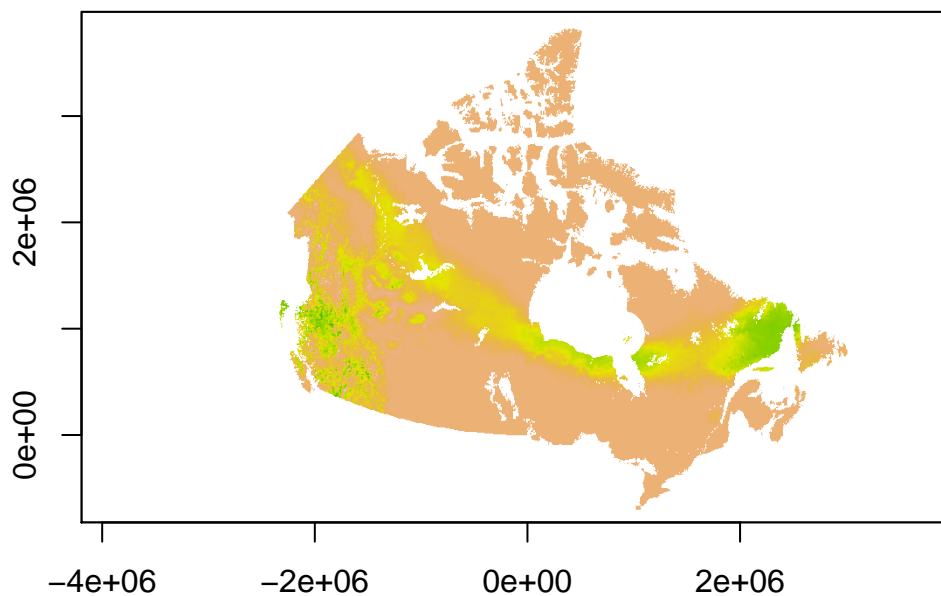
maps <- lapply(files, function(f) {
  raster(f)
})
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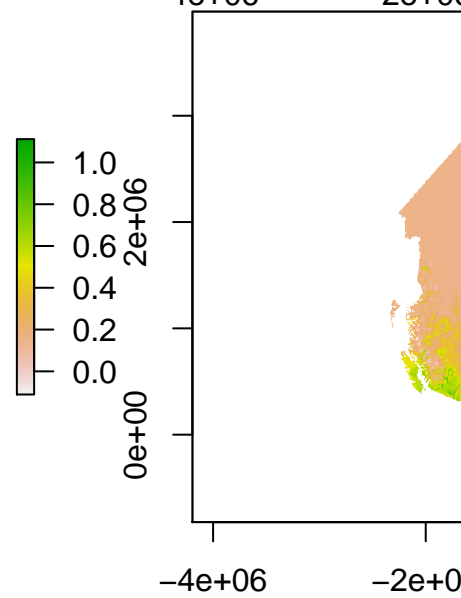
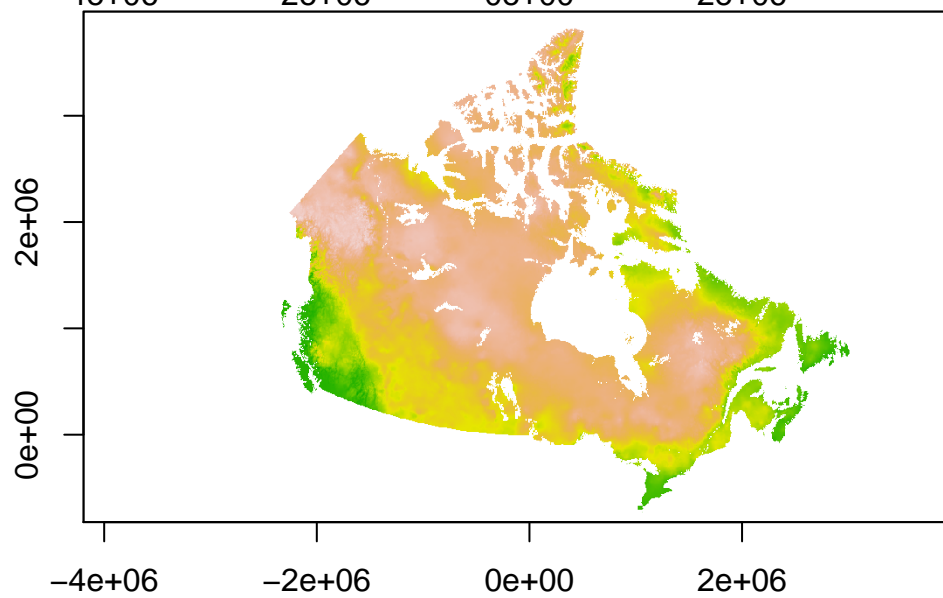
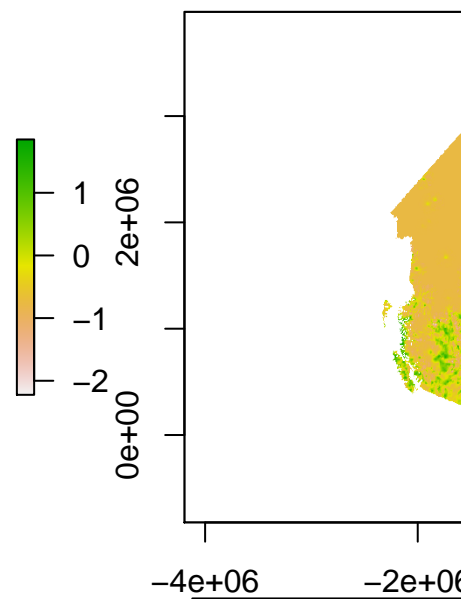
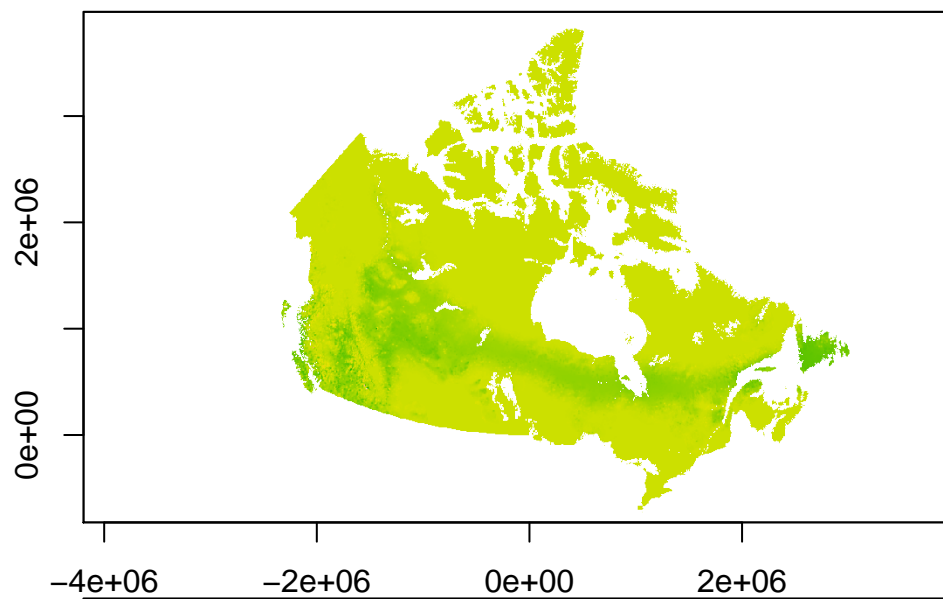
## Plot maps

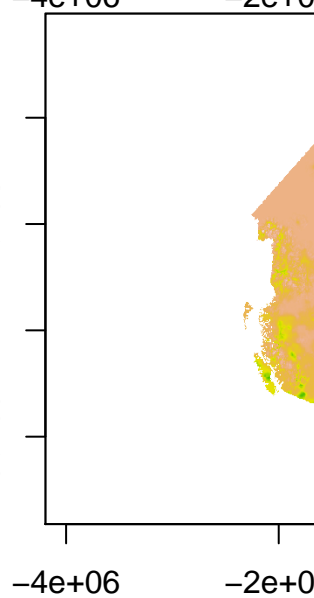
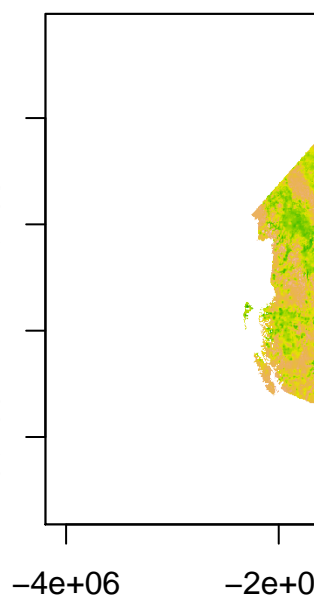
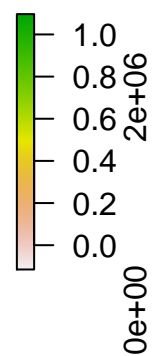
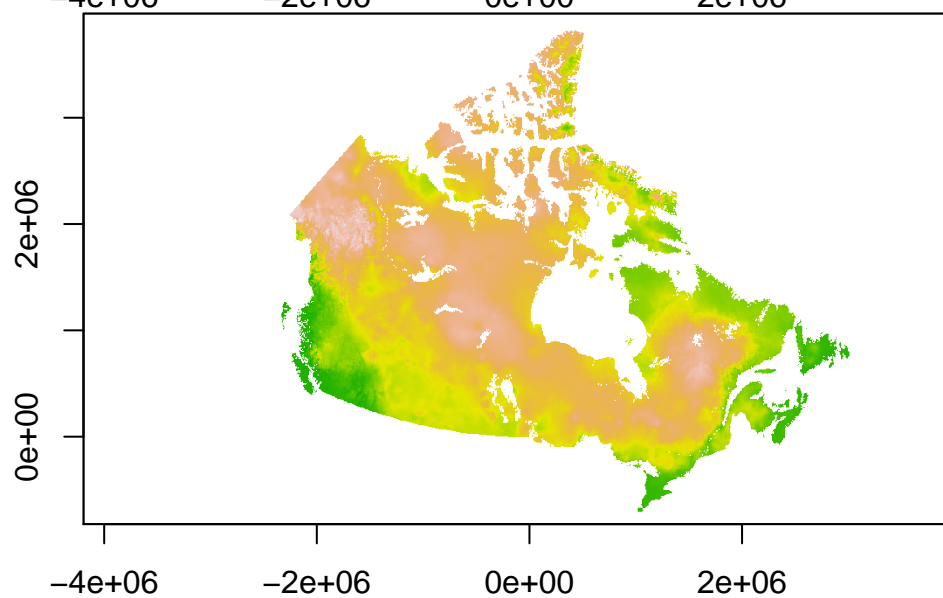
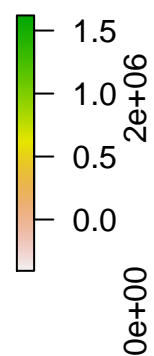
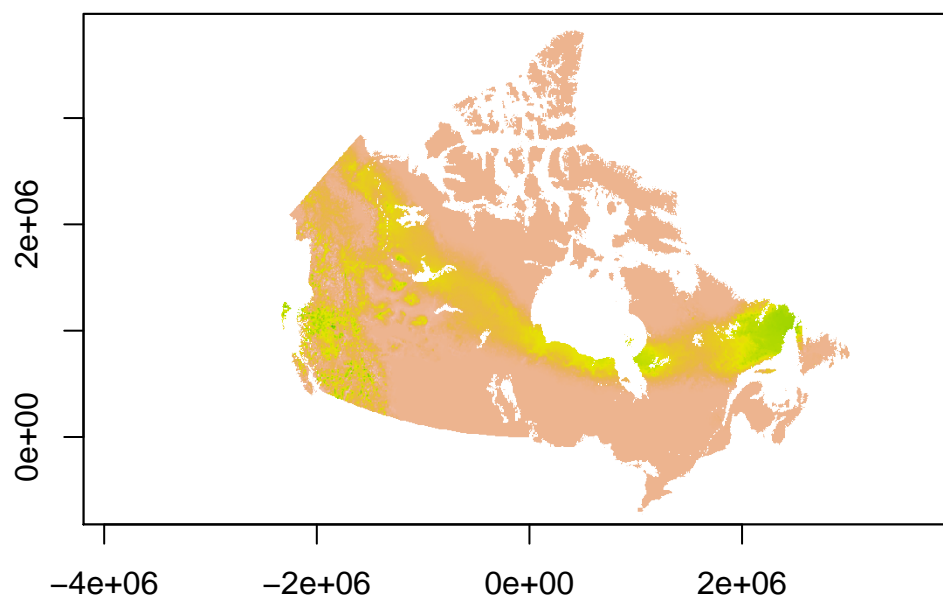


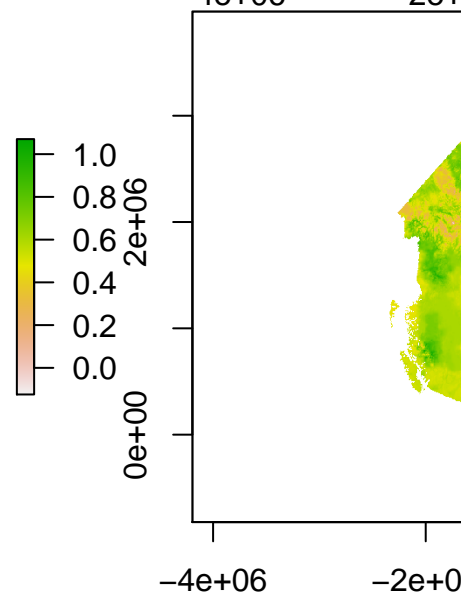
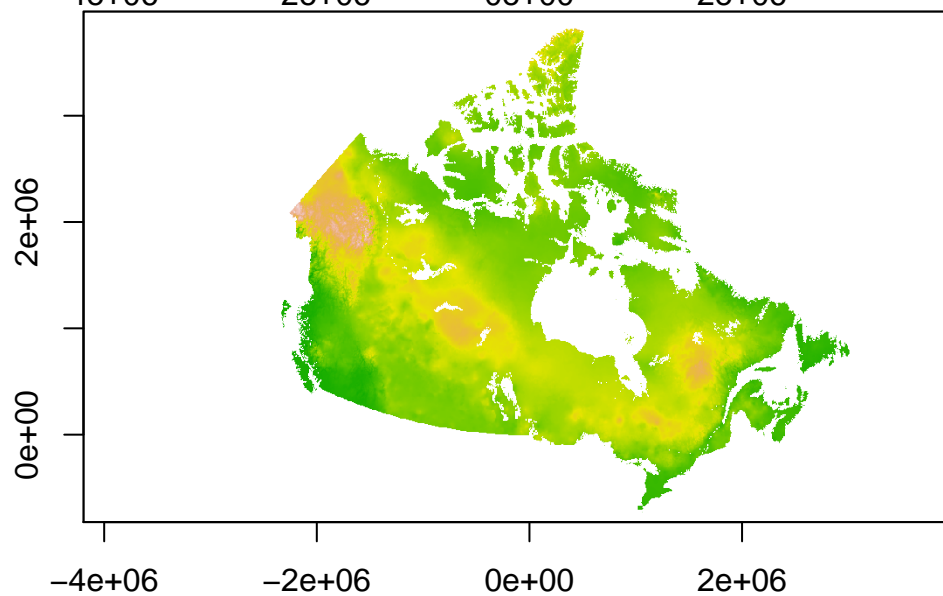
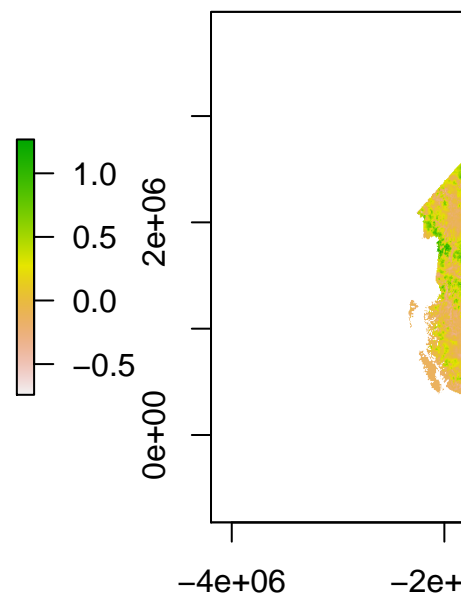
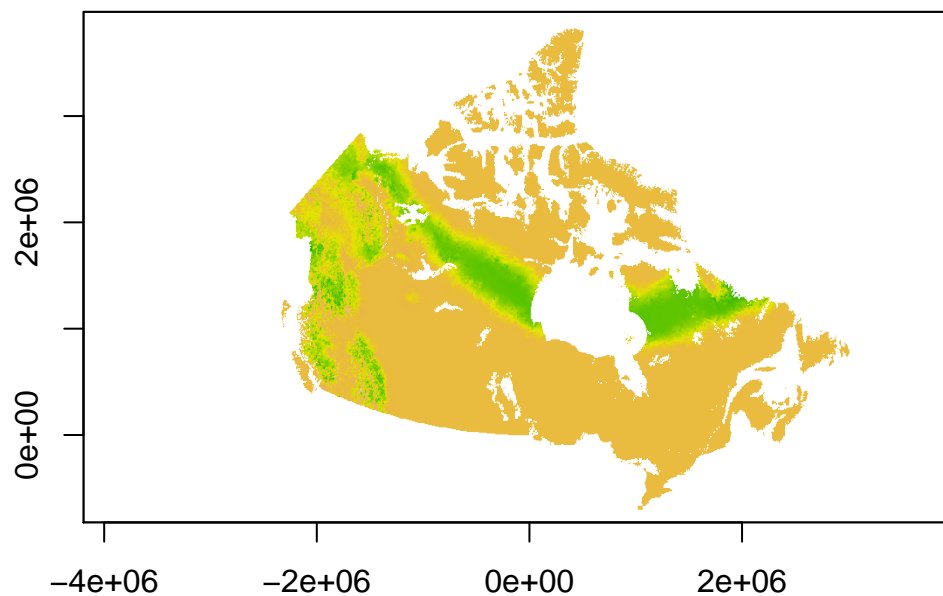












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