

## On-site observations

Safe Winter Chill  
(weather station)

Correction variables  
(weather station)

*3D model generation*

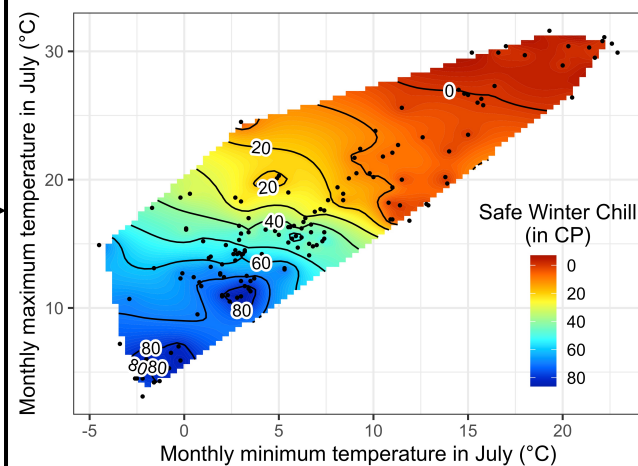
## Model

*ordinary kriging*

*ordinary kriging*

*feed the model*

### 3D correction model



*feed the model*

## Intermediate maps

Chill map  
(kriged)

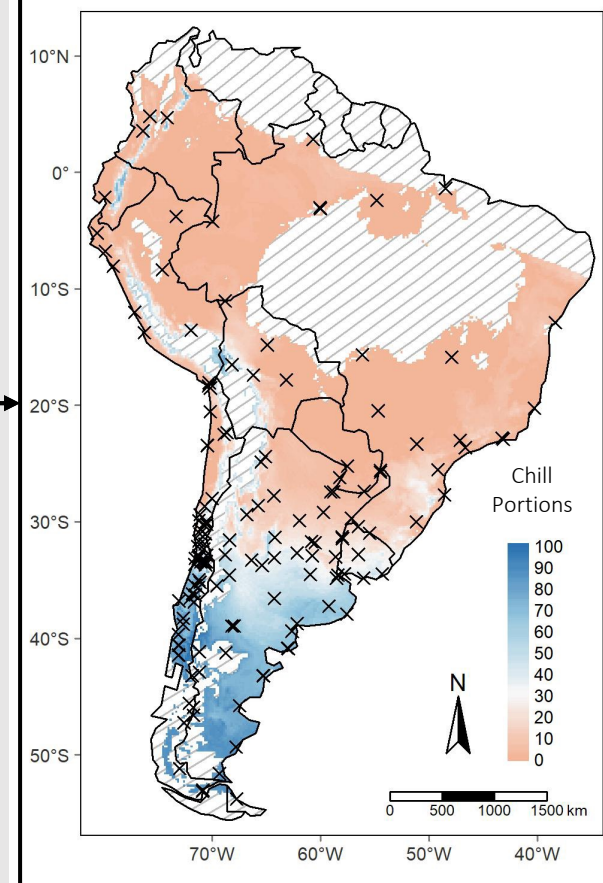
Correction variable maps  
(kriged)

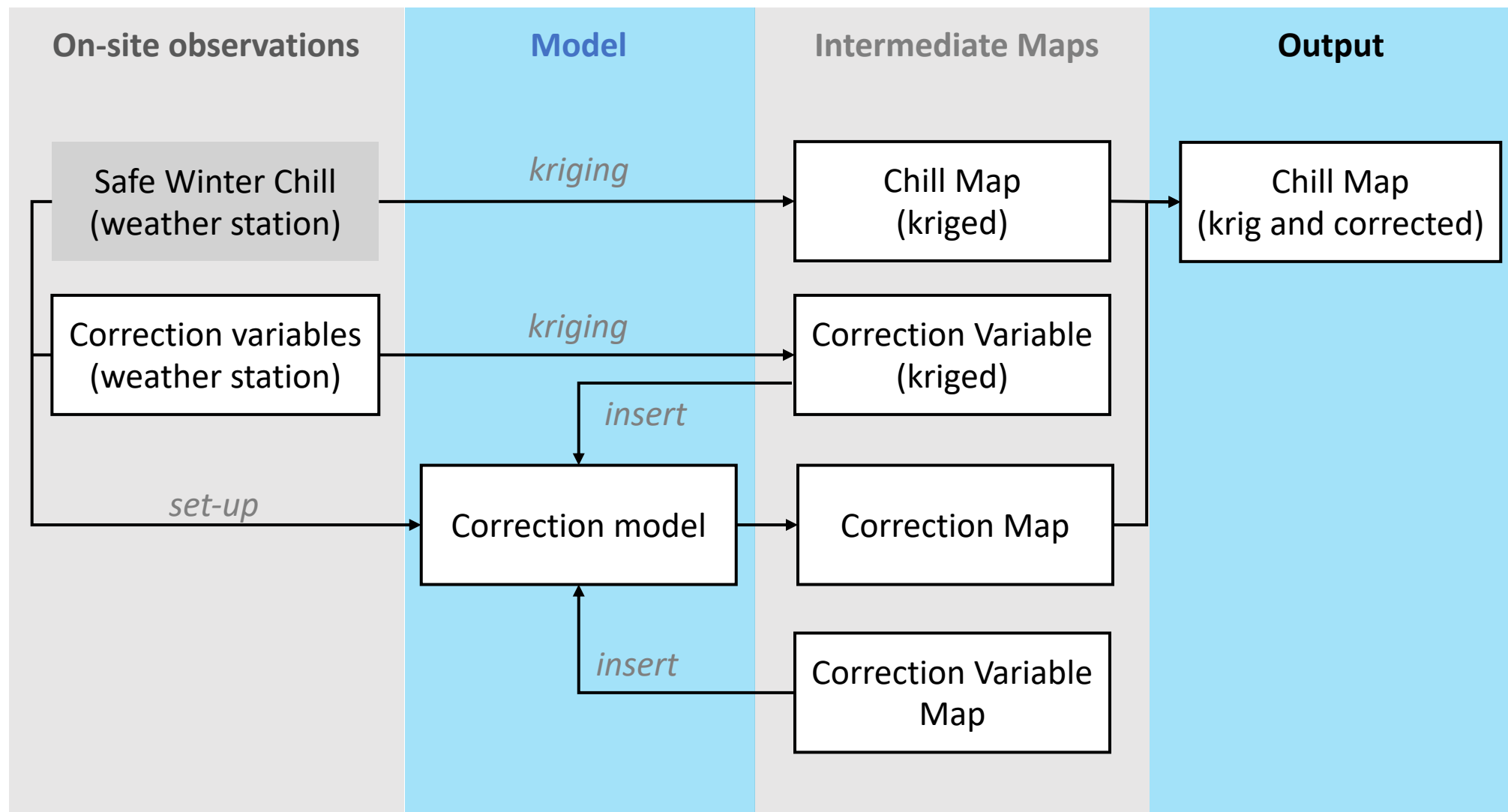
Correction map  
(WorldClim – on-site data)

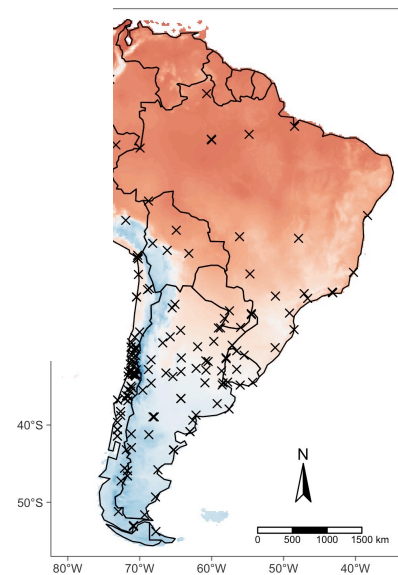
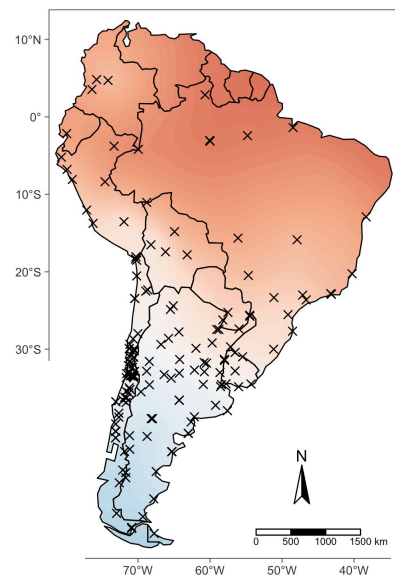
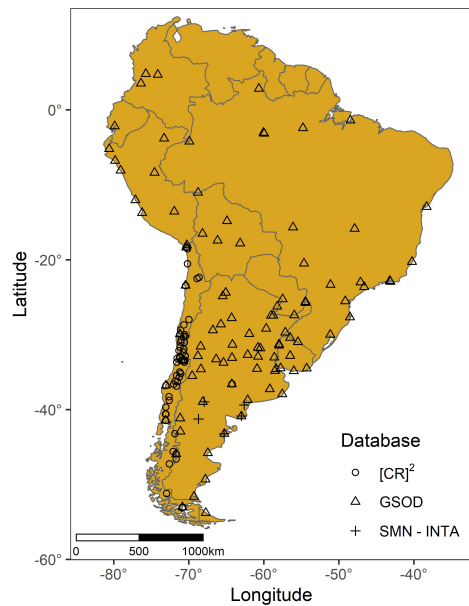
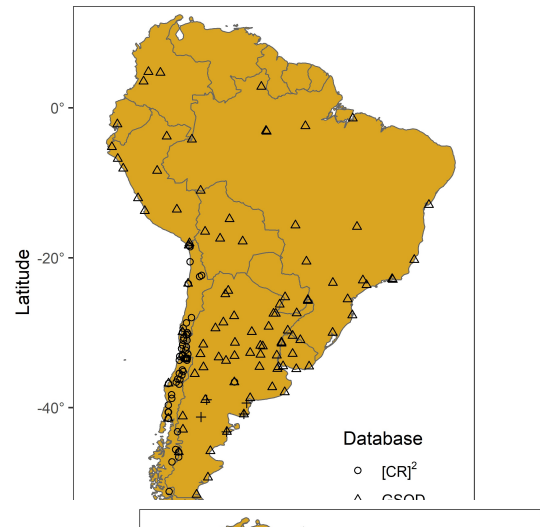
Correction variable map  
(WorldClim)

## Output

### Safe Winter Chill map



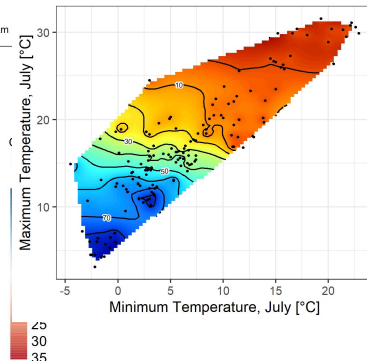




Krigged Mean Temperature  
in July (°C)

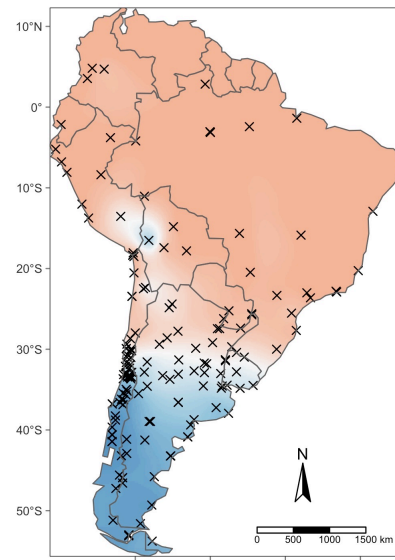
-15  
-10  
-5  
0  
5  
10  
15  
20  
25  
30  
35

rcp45\_2050\_optimistic



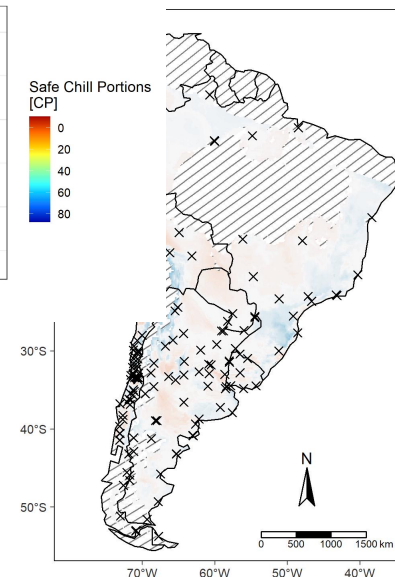
Safe Chill Portions  
[CP]

0  
20  
40  
60  
80



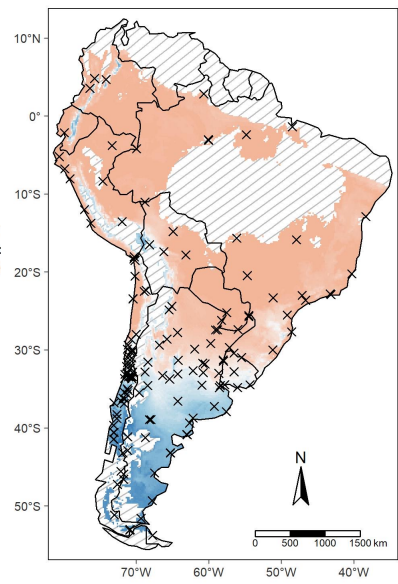
observed\_SWC  
Safe Winter Chill  
(Chill Portions)  
Uncorrected

0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
100



scen\_2017  
Correction to  
winter chill

90  
80  
70  
60  
50  
40  
30  
20  
10  
0  
-10  
-20  
-30  
-40  
-50



rcp45\_2050\_int  
Safe Winter Chill  
(Chill Portions)  
Corrected for Temperature

100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

1. Chill observation → produce kriged map of chill
2. Map of correction variable → extract information only for the weather stations location → kriged correction variable
3. (Compare kriged and original map of correction variable)
4. Set up model of chill explained by correction variable
5. Insert values of kriged and original map of correction variable in model. Difference of the model output is the chill which is correction map
6. Adjust kriged chill by correction map