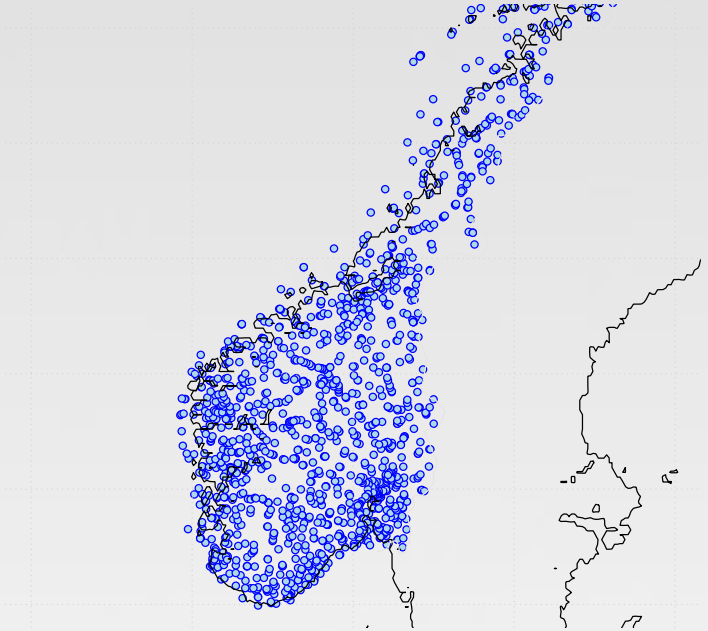
MIST-II project status
–
Q4 2014
–
ESD tool progress & Selecting weather stations

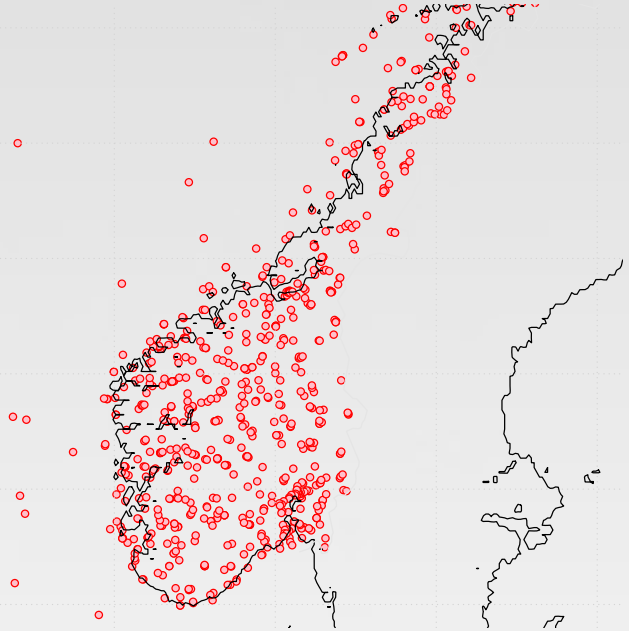
17-11-2014

Abdelkader Mezghani & Rasmus Benestad

- MET Norway
- abdelkaderm@met.no

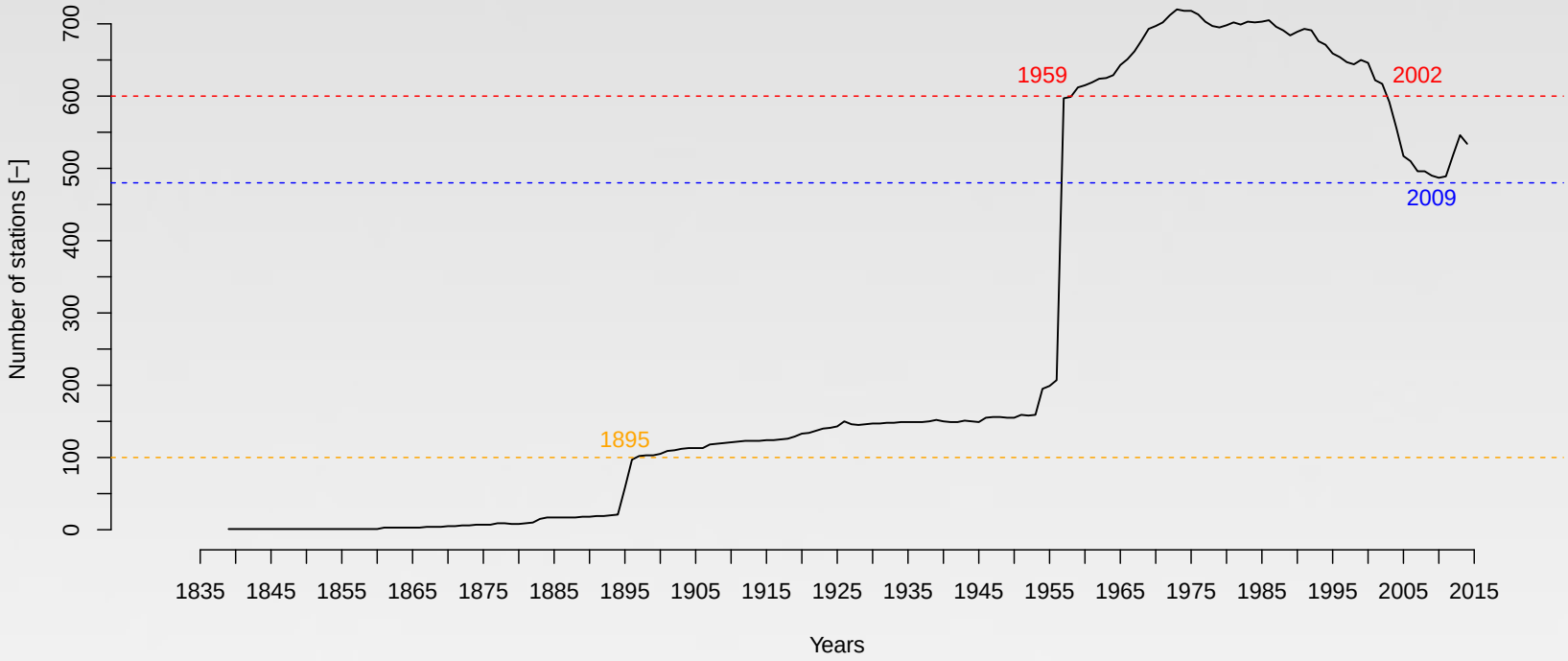


Daily Precipitation network from the MET Norway dataset (1637)



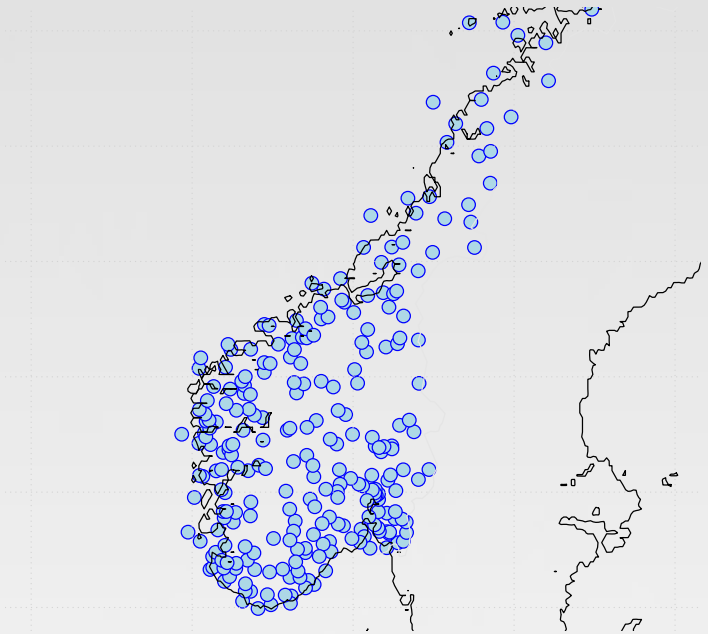
Daily Temperature network from the MET Norway dataset (840)

- Available daily weather stations
- Network density is higher for precipitation
- Both show a good spatial coverage

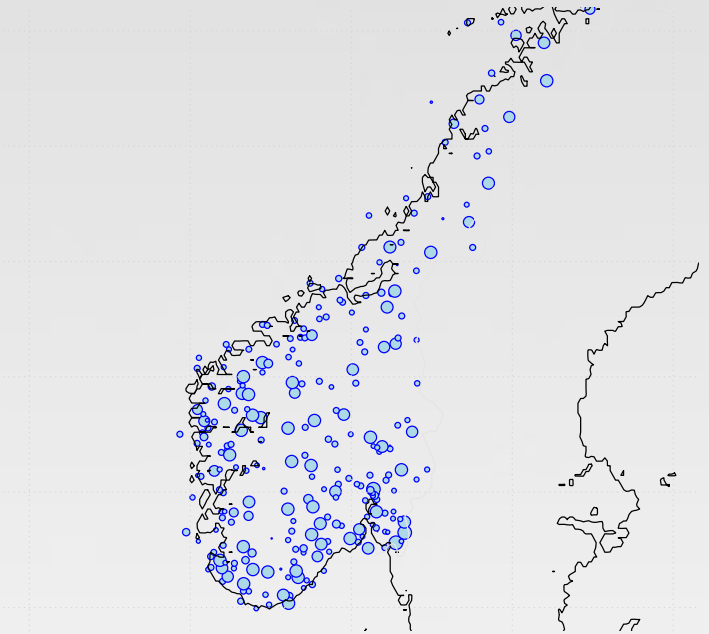


Selecting weather stations

- 1300 daily weather stations
- 1959 - 2002 seems to be the most suitable period
- can be extended to 2009

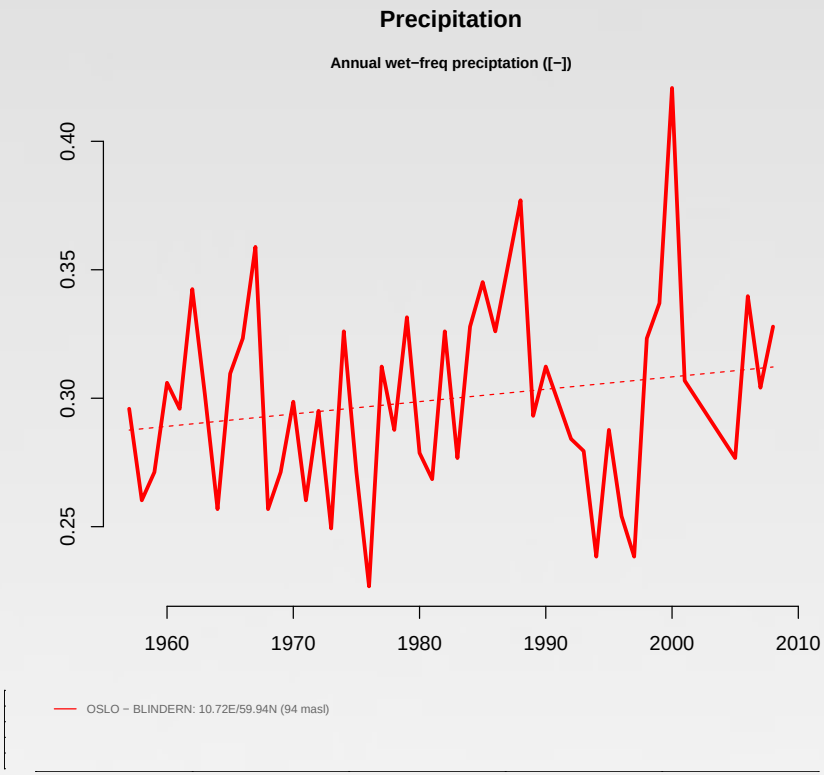


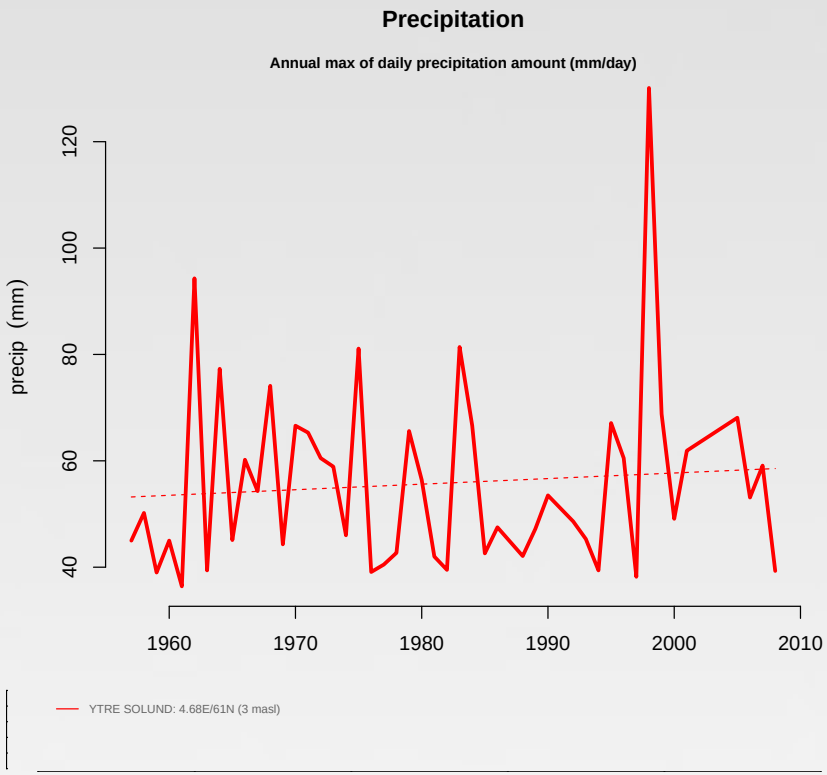
Precipitation network from the MET Norway dataset



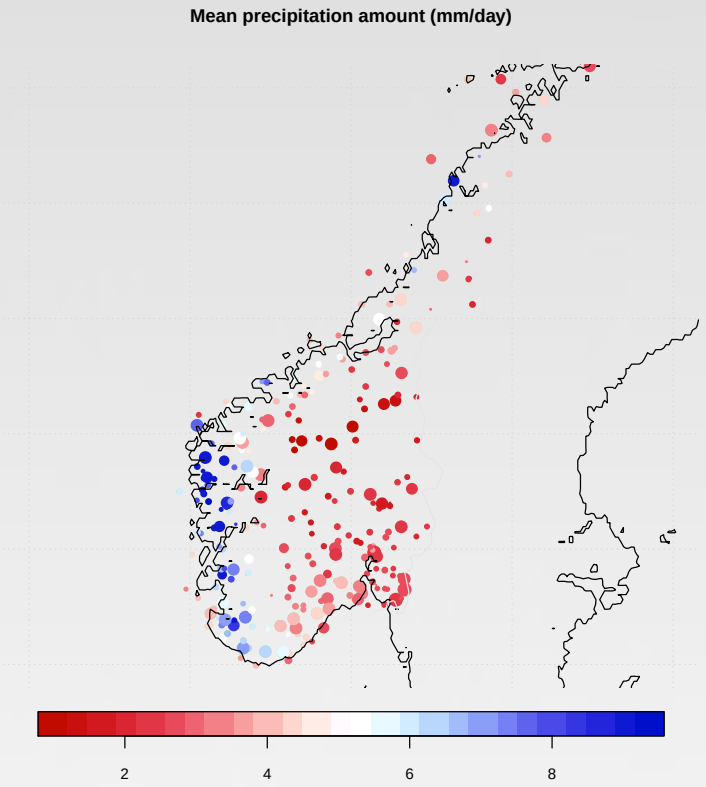
Precipitation network from the MET Norway dataset

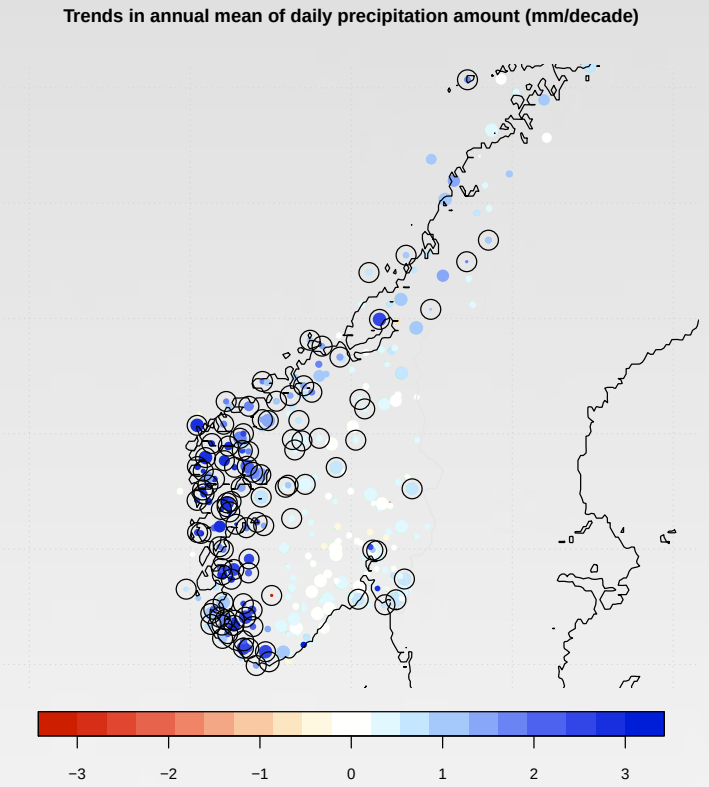
- Available daily weather stations covering the period 1959 - 2009
- Missing data !
- Good spatial distribution



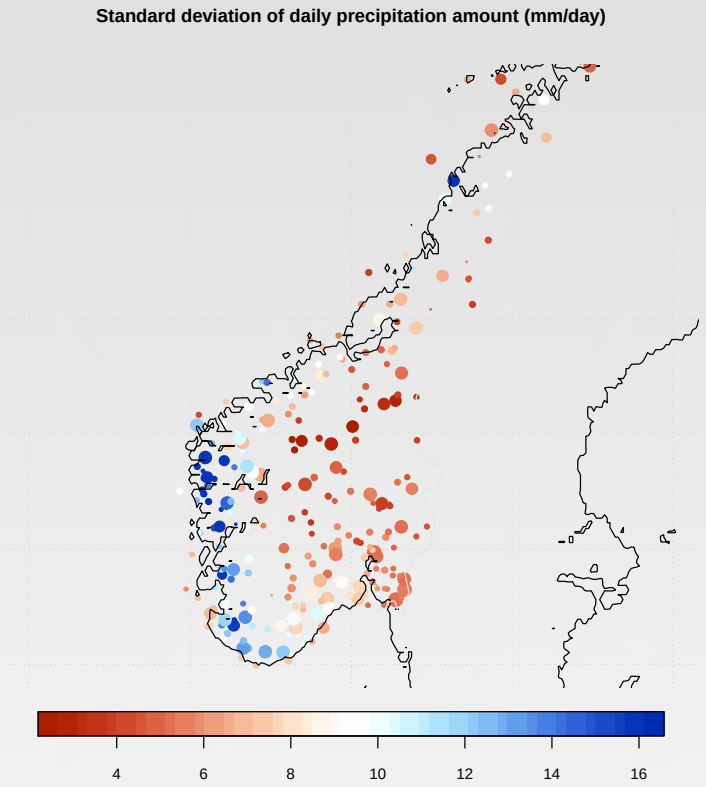


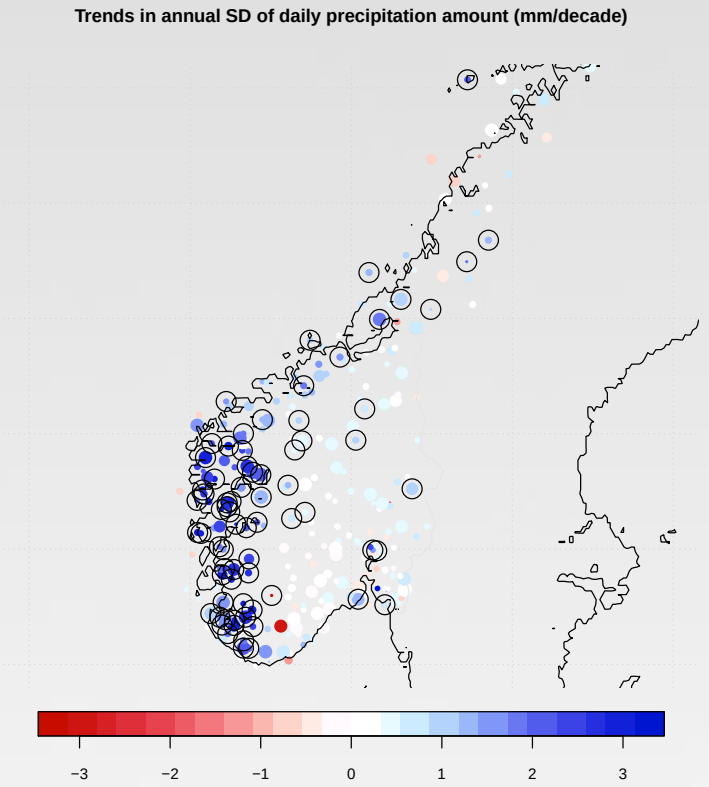
- Statistics - e.g. wet-day frequency or annual maximum values
- year-to-year variations
- Linear trend in annual values



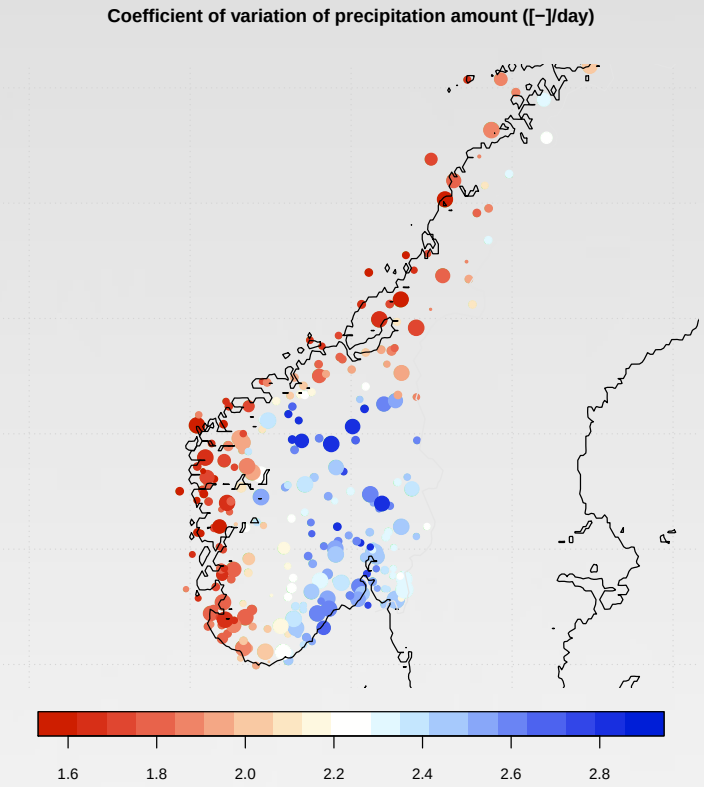


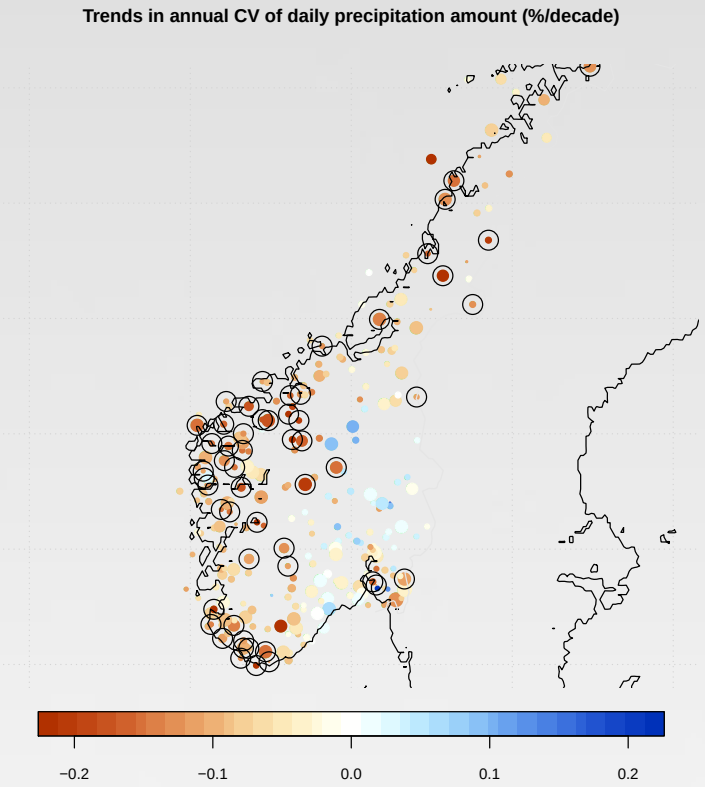
- ranges between 1.5mm and 10mm
- Overall positive trend values
- Significant trend in South-Western Norway !



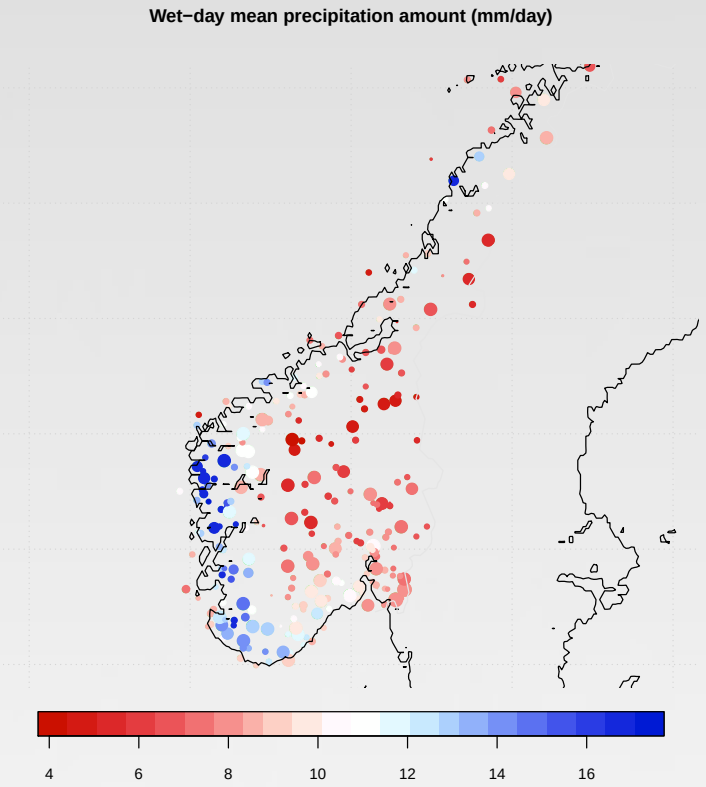


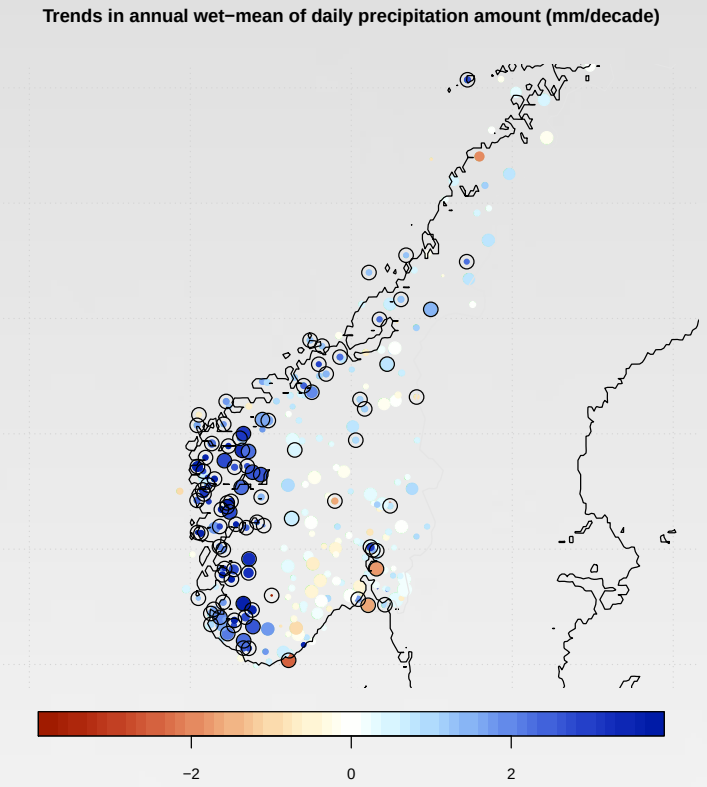
- ranges between 2mm and 16mm.
- Overall positive trend values
- Significant trend in South-Western Norway !



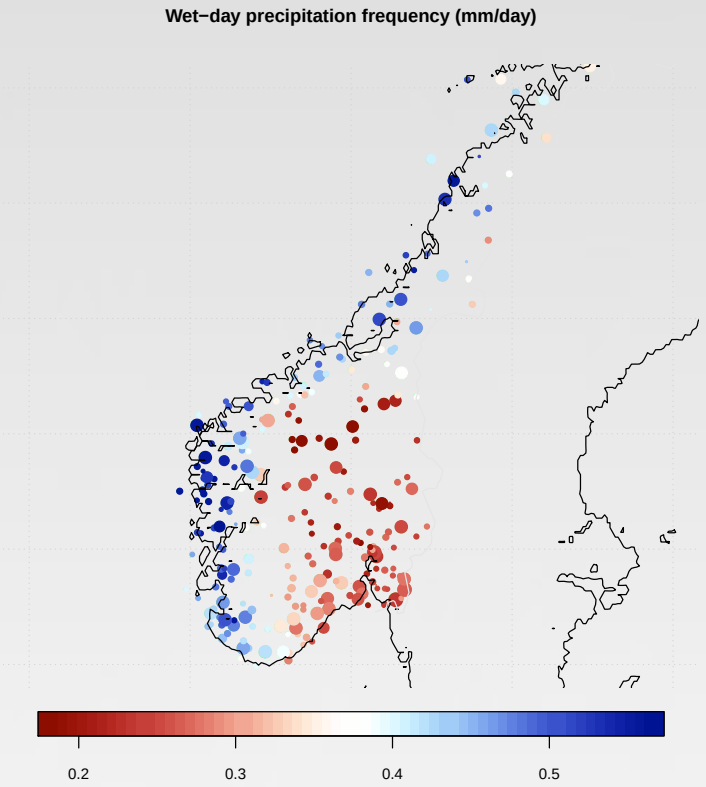


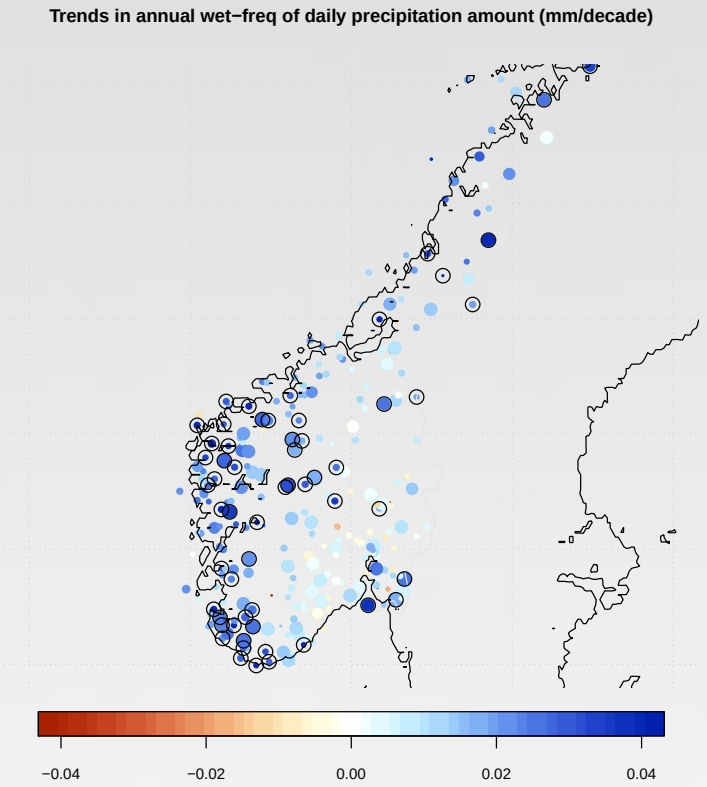
- ranges between 1.5 and 2.9 [-]
- overall negative trend, few locations with positive trend
- Coastal stations are showing significant negative trend



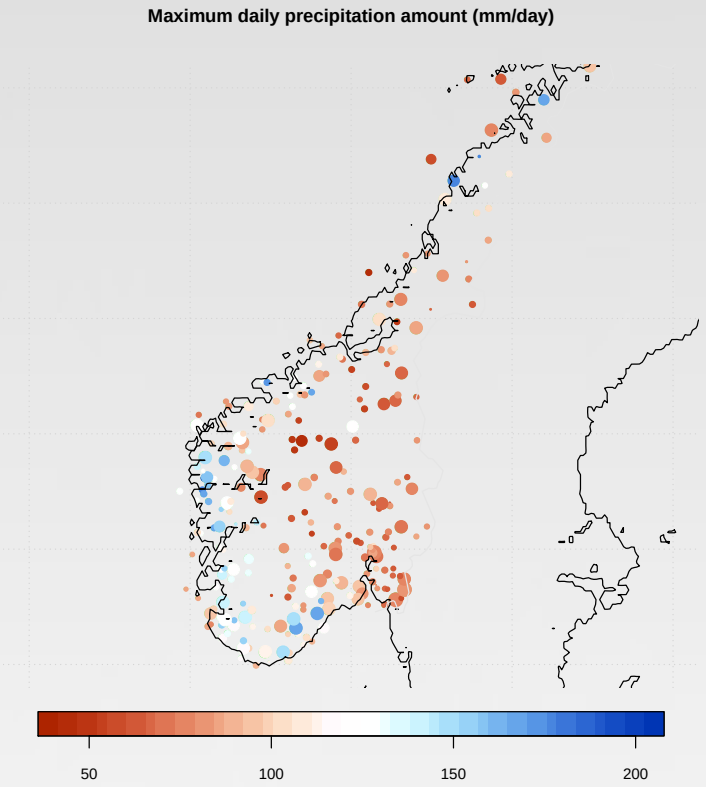


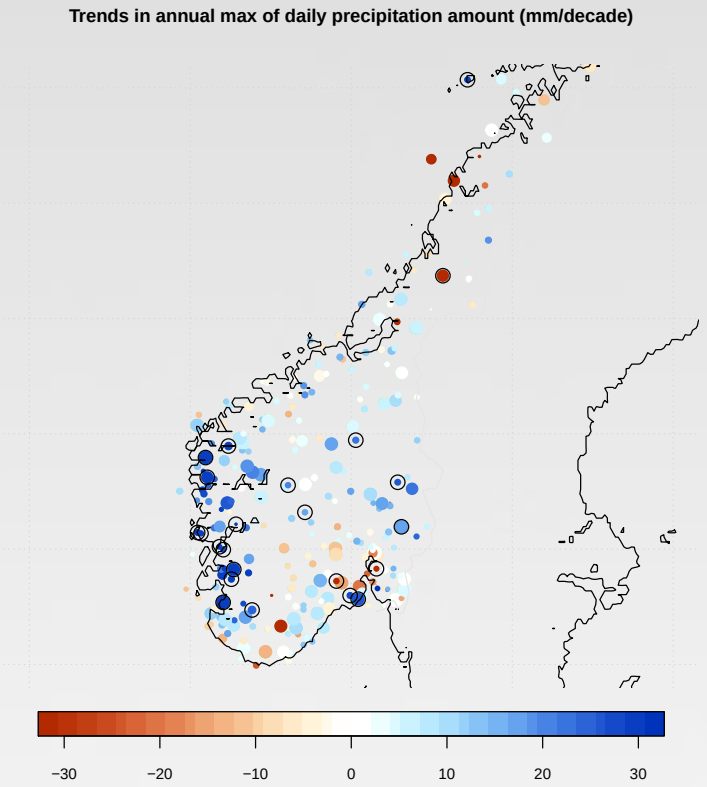
- ranges between 4mm - 17mm
- overall positive trend, few locations with negative trends,
- Significant trends in South-Western Norway.





- ranges between 0.15 and 0.6
- Overall positive trend
- Coastal stations are showing significant trend, also, few inland locations





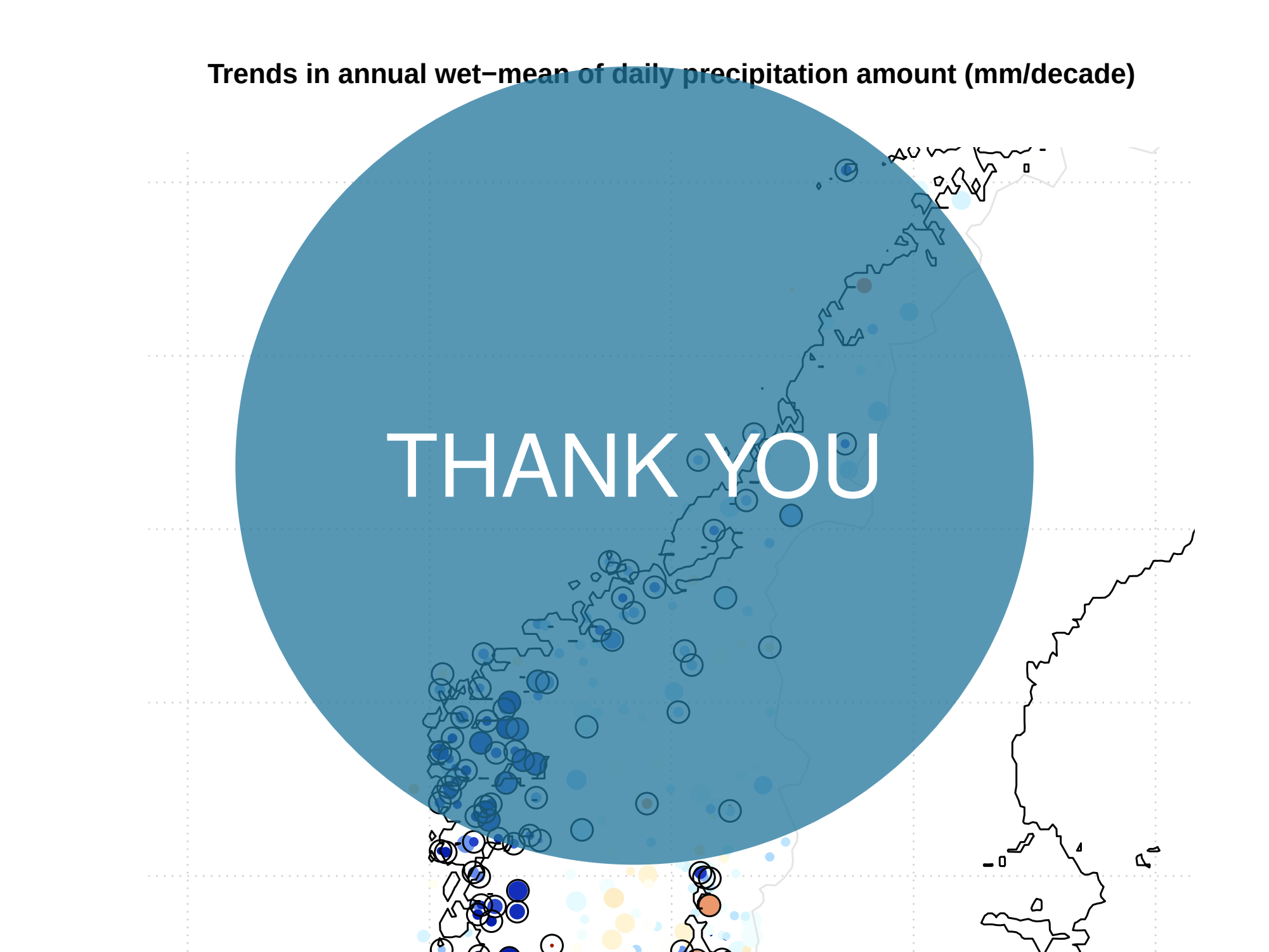
- ranges between 40mm and 220mm
- Overall positive trend, few locations showing negative trend
- few locations showing significant trend

Main points

1. Mostly positive trend in all precipitation statistics
2. Few locations showing negative trends but are not significant
3. South-Western Norway is the more interesting area to focus on

Next plans ...

- Release version 1 of the ESD tool
- Extend the work to study daily temperature statistics
- Include weather stations in Sweden to the analysis based on GHCND and ECAD datasets
- Analyze the downscaled CMIP5 results


Trends in annual wet−mean of daily precipitation amount (mm/decade)
THANK YOU