

MIST-II project status

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Q4 2014

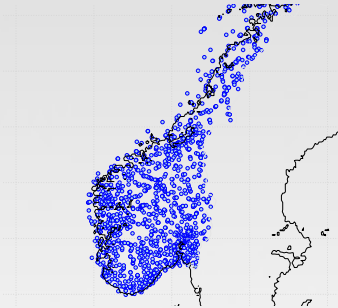
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ESD tool progress & Selecting weather stations

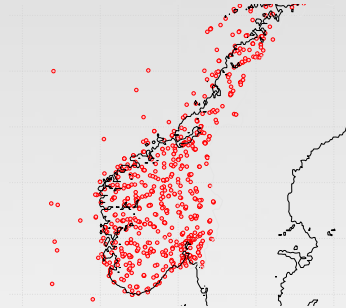
17-11-2014

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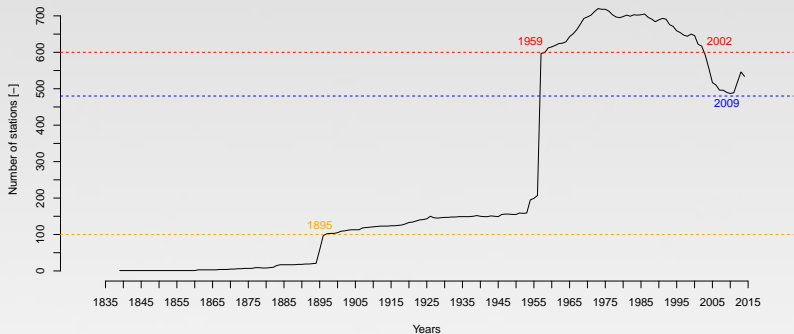


Daily Precipitation network from the MET Norway dataset (1637)



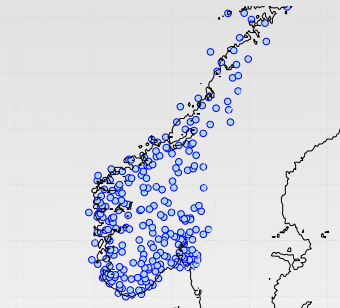
Daily Temperature network from the MET Norway dataset (840)

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

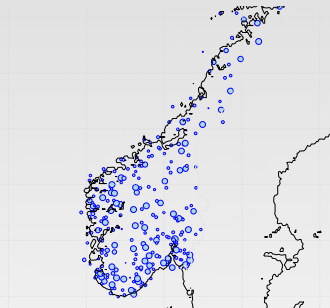


Selecting weather stations

- 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

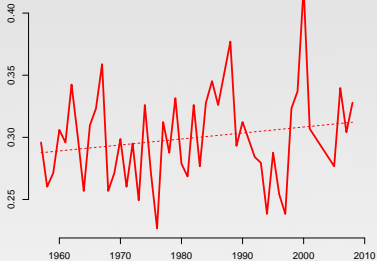


Precipitation network from the MET Norway dataset

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

Precipitation

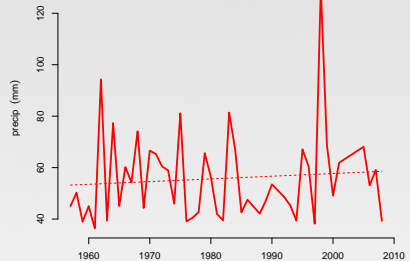
Annual wet-freq precipitation ([l-])



— OSLO - BLINDERN: 10.72E/59.94N (34 met)

Precipitation

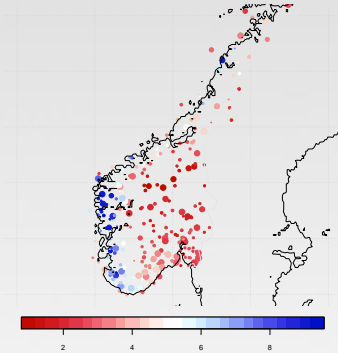
Annual max of daily precipitation amount (mm/day)



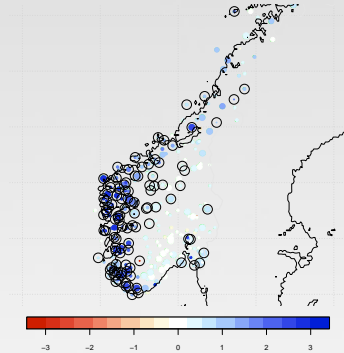
— YTRE SOLUND: 4.68E/61N (3 met)

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

Mean precipitation amount (mm/day)

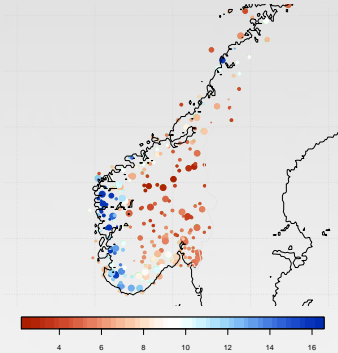


Trends in annual mean of daily precipitation amount (mm/decade)

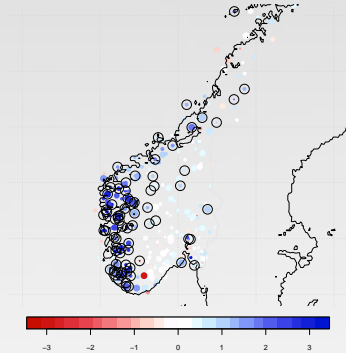


- ranges between 1.5mm and 10mm
- Overall positive trend values
- Significant trend in South-Western Norway !

Standard deviation of daily precipitation amount (mm/day)

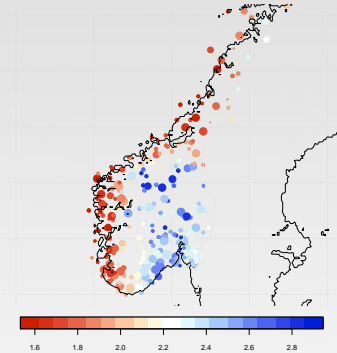


Trends in annual SD of daily precipitation amount (mm/decade)

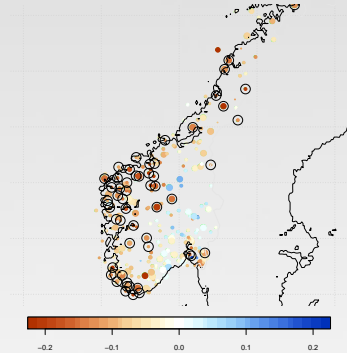


- ranges between 2mm and 16mm.
- Overall positive trend values
- Significant trend in South-Western Norway !

Coefficient of variation of precipitation amount ([-]/day)

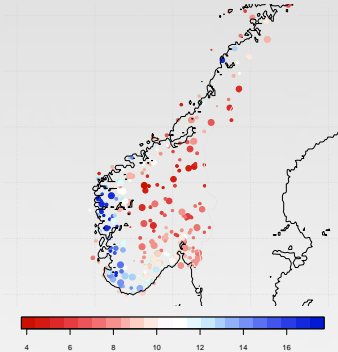


Trends in annual CV of daily precipitation amount (%/decade)

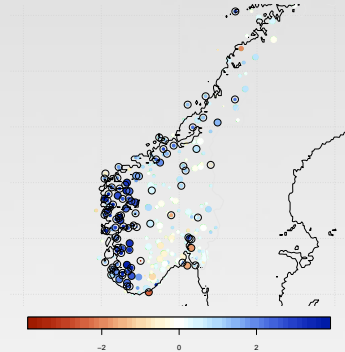


- ranges between 1.5 and 2.9 [-]
- overall negative trend, few locations with positive trend
- Coastal stations are showing significant negative trend

Wet-day mean precipitation amount (mm/day)

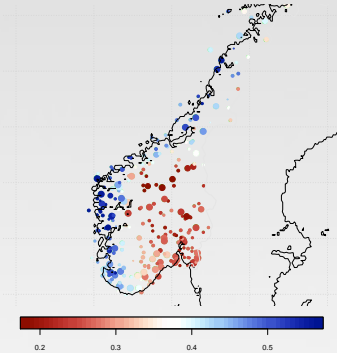


Trends in annual wet-mean of daily precipitation amount (mm/decade)

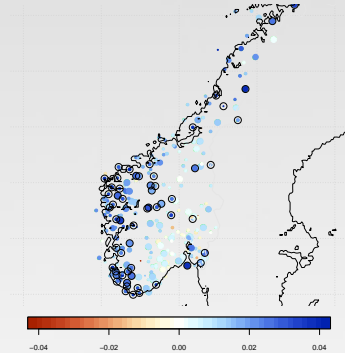


- ranges between 4mm - 17mm
- overall positive trend, few locations with negative trends,
- Significant trends in South-Western Norway.

Wet-day precipitation frequency (mm/day)

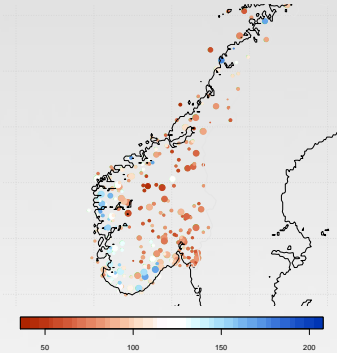


Trends in annual wet-freq of daily precipitation amount (mm/decade)

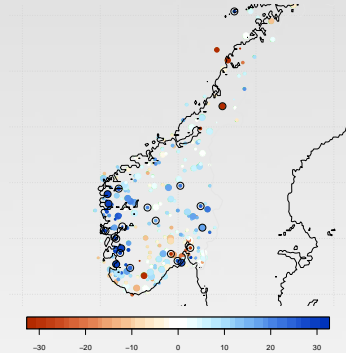


- ranges between 0.15 and 0.6
- Overall positive trend
- Coastal stations are showing significant trend, also, few inland locations

Maximum daily precipitation amount (mm/day)



Trends in annual max of daily precipitation amount (mm/decade)



- 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

The image features a map of Japan with a large blue circle overlaid on it. The circle contains the text 'THANK YOU' in white capital letters. The map shows the main islands of Japan, with a grid of latitude and longitude lines. There are several blue circles of varying sizes scattered across the map, particularly concentrated in the southern part of the country. The background is white with a light gray grid.