

# PRECIPITATION CASE DK

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Inhomogeneity in precipitation data is seen by looking at many years of data and comparison with other data sources. Overlap with change in gauge type and network.

This creates an increased degree of uncertainty in the use of corrected, gridded precipitation data for hydrological calculation

Uncertainty in precipitation data is 8-10%, but regionally greater.

# Modernisation of precipitation network

1989-2010  
Manuel måling



Hellmann

2011 - nu  
Automatisk måling



Rimco



Geonor

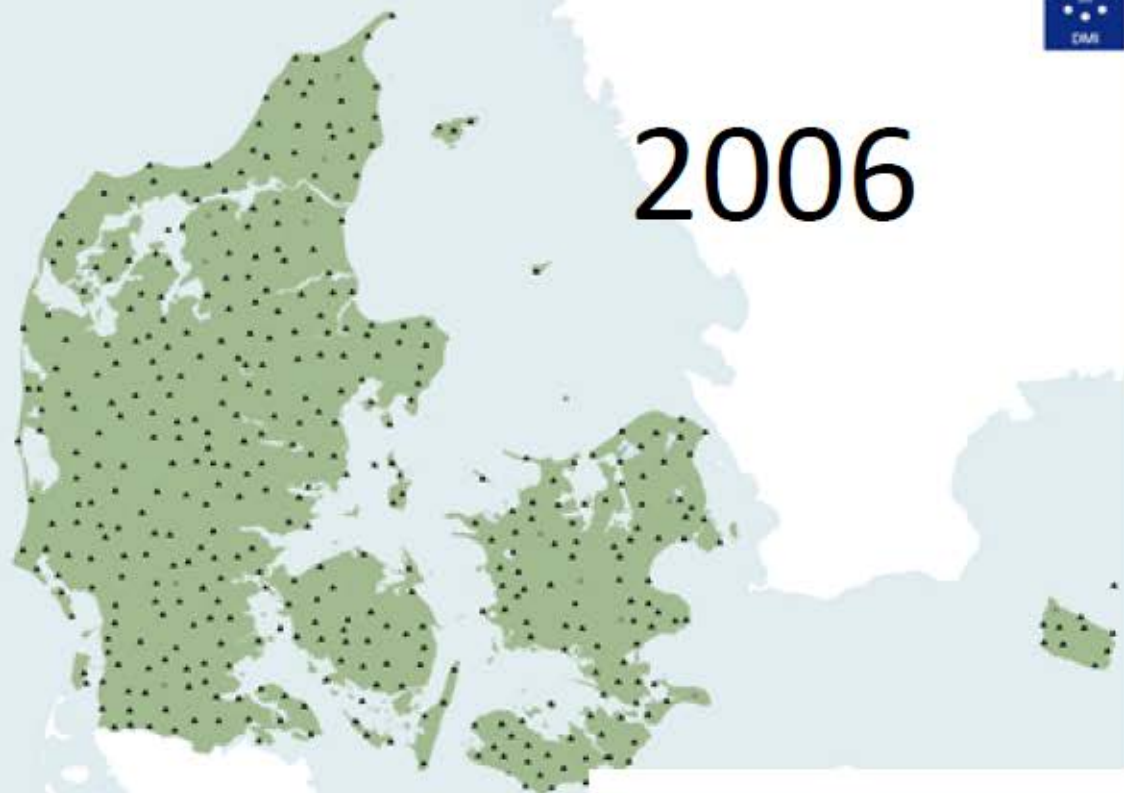


Pluvio

# Nedbørstationer



# 2006



Ver.: 20200818 1332

# Nedbørstationer

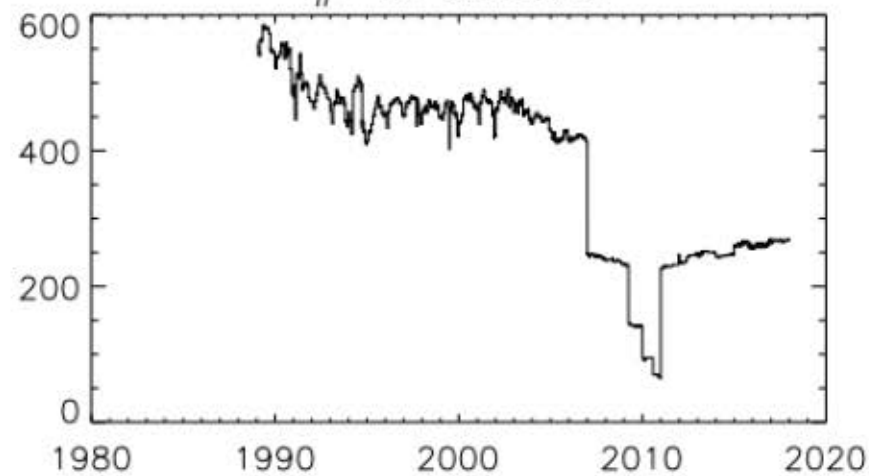


# 2012



01. februar 2012

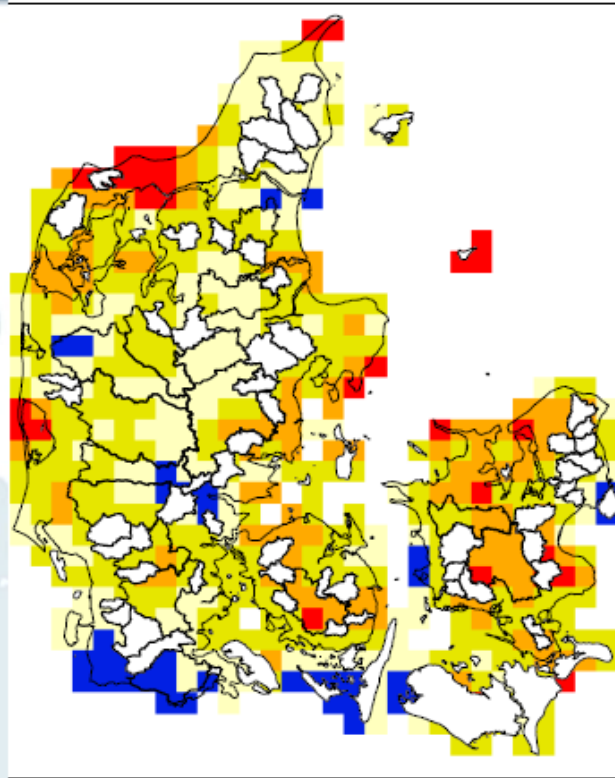
# of stations



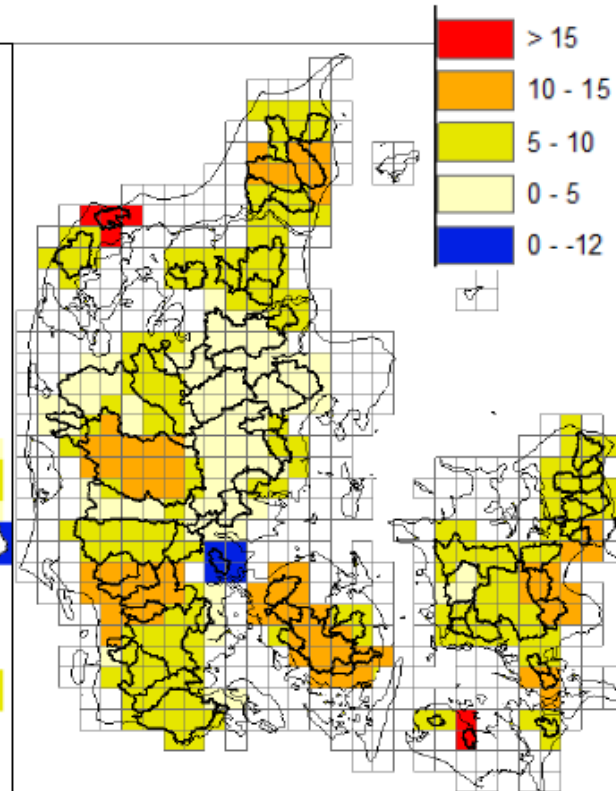
# How big is the inhomogeneity Comparison with independent datasets



Fordeling af  
nedbørsstationer,  
8/10 2020  
Kilde: DMI

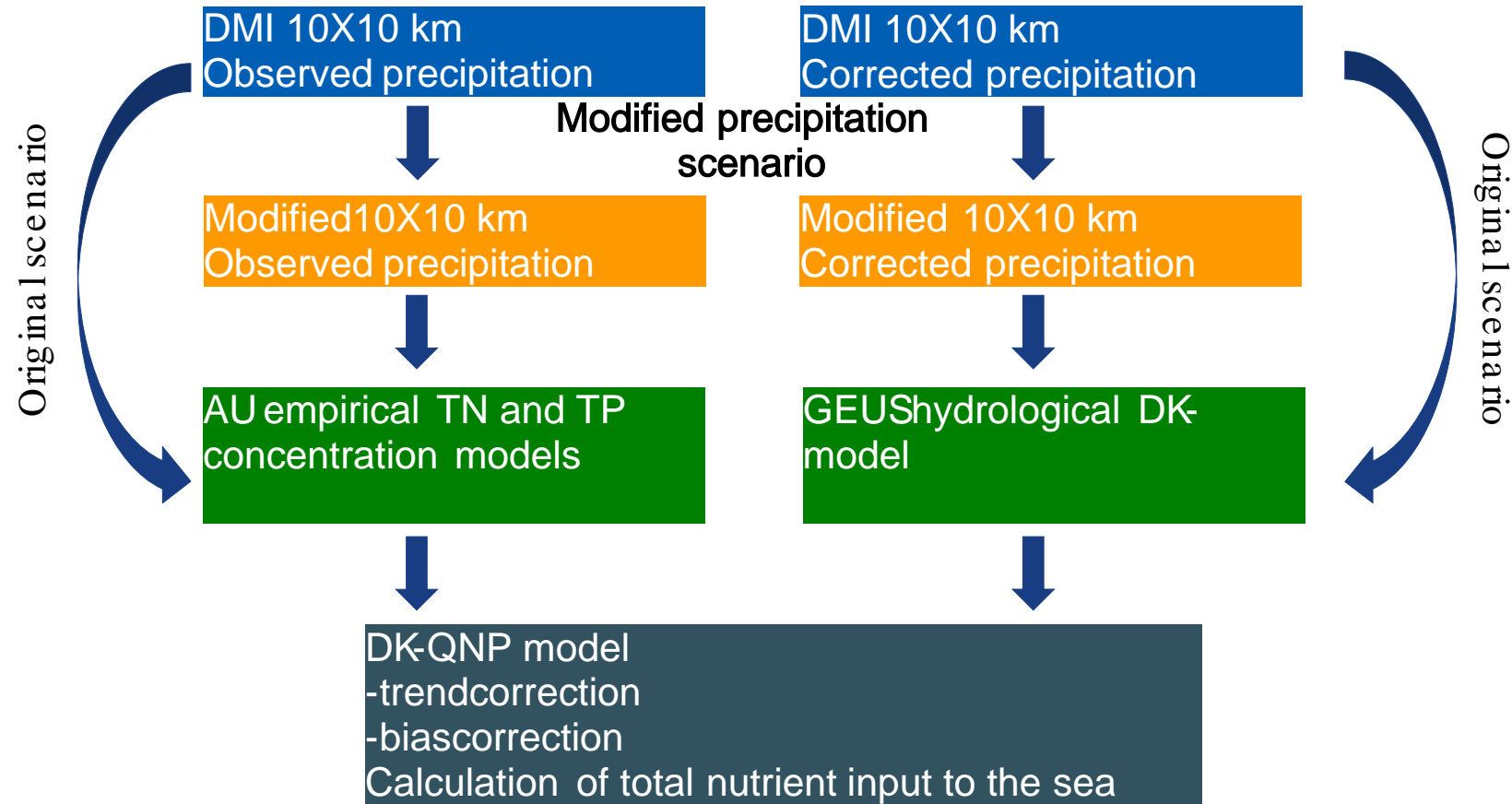


Sammenligning  
med ERA5  
(%, Korr-ERA,  
2011-2018 –  
1989-2010)  
Kilde: DMI



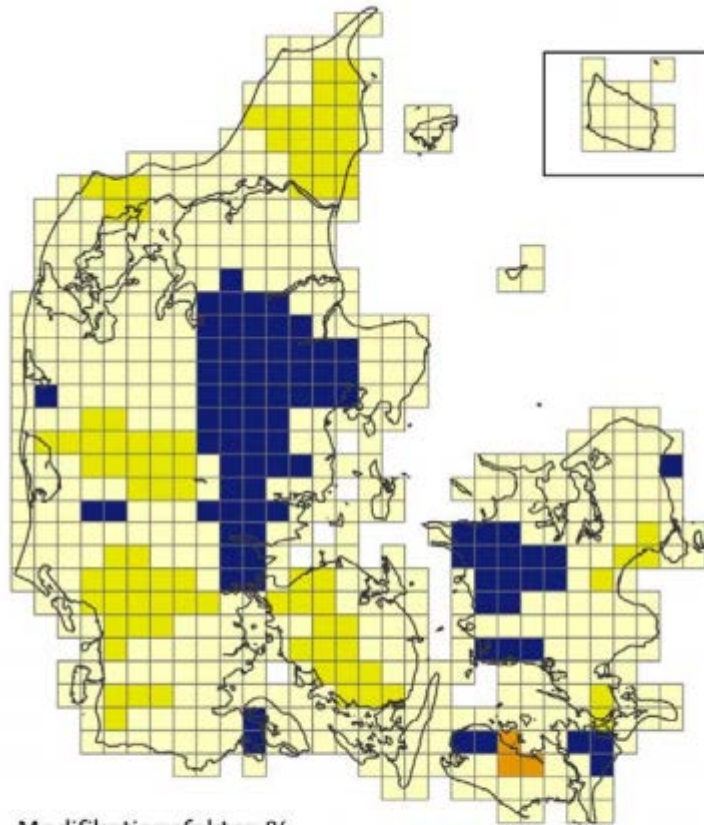
Sammenligning  
med afstrømning,  
bedst målte  
oplande  
(%, 2011-2019)  
Kilde: DCE og GEUS

# Data flow and scenarios

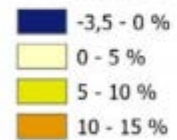


# Modification of precipitation for scenario

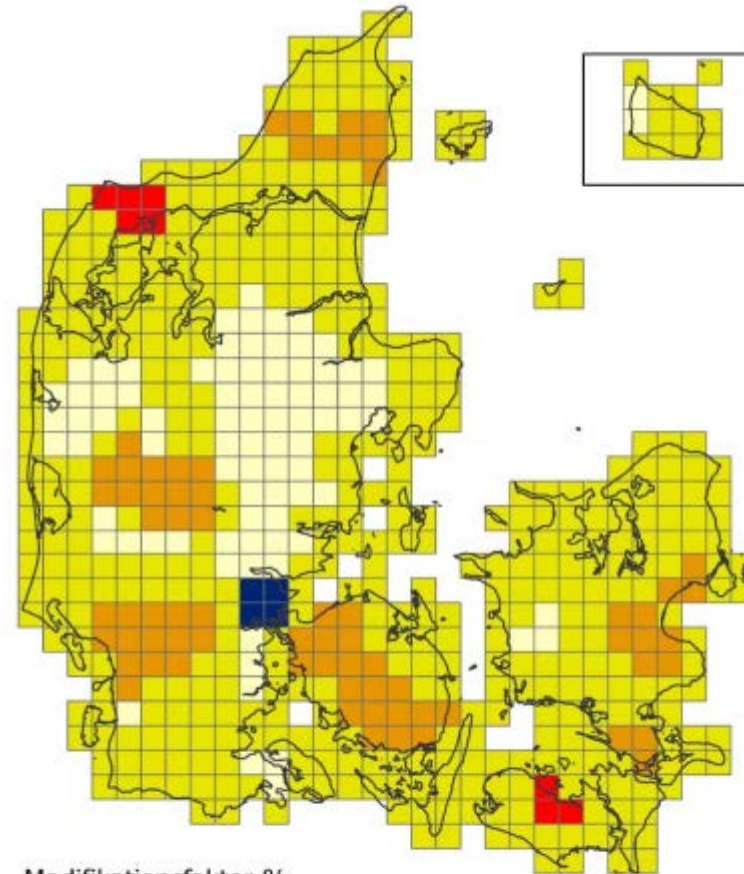
## Observed precipitation



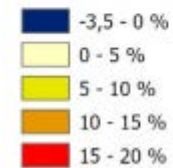
Modifikationsfaktor %



## Corrected precipitation

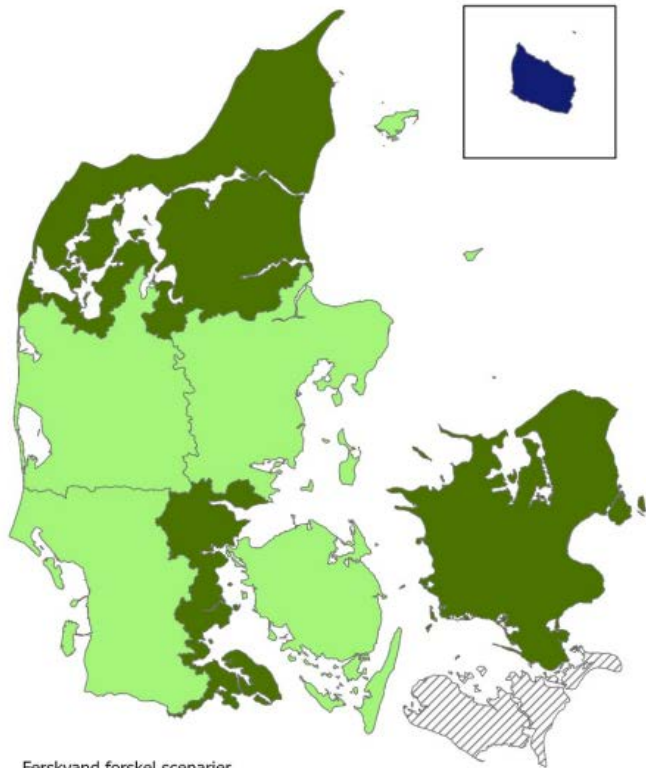


Modifikationsfaktor %



# Change in load to the sea from original scenario to modified scenario

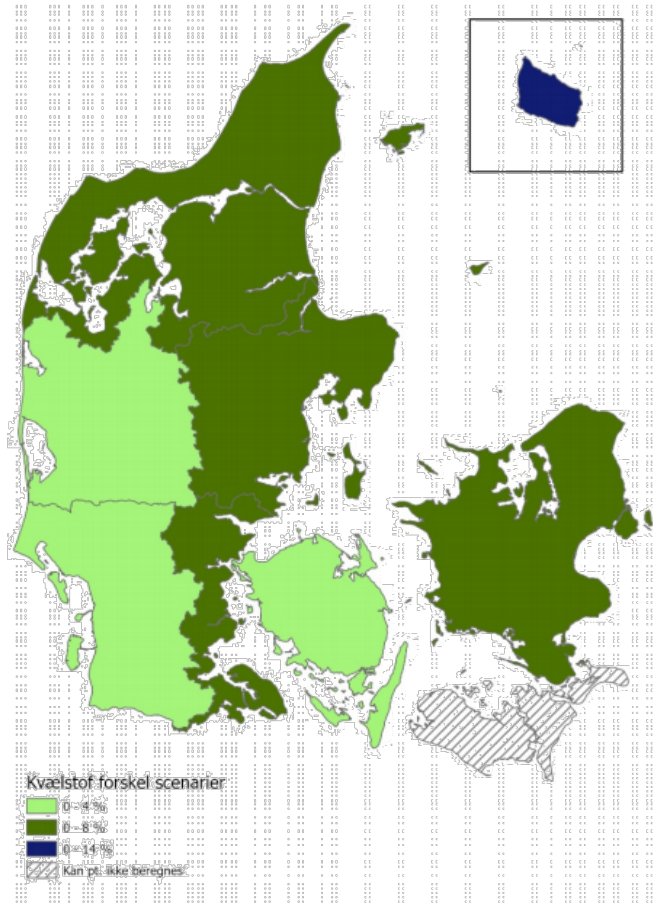
## Freshwater runoff



Ferskvand forskel scenarier

- 0 - 4 %
- 0 - 8 %
- 0 - 14 %
- Kan pt. ikke beregnes

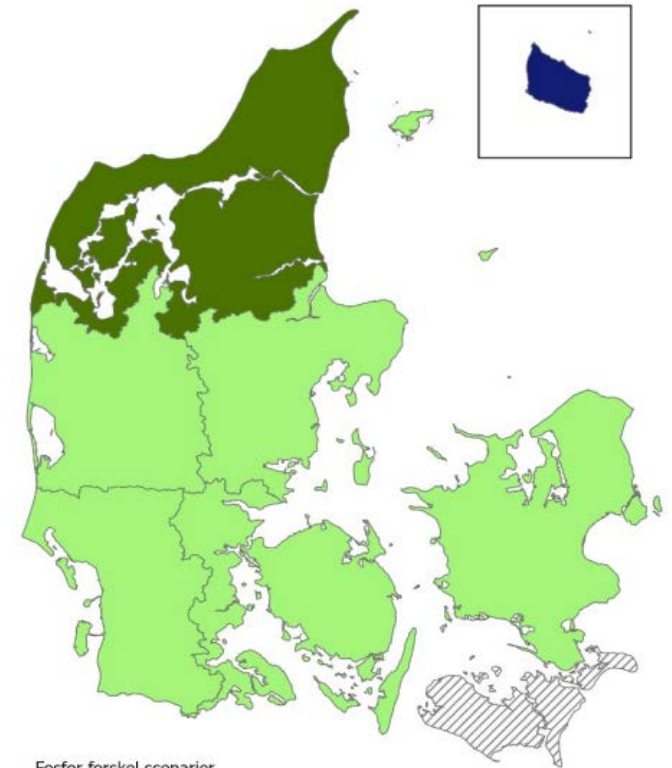
## Nitrogen



Kvælstof forskel scenarier

- 0 - 4 %
- 0 - 8 %
- 0 - 14 %
- Kan pt. ikke beregnes

## Phosphorus



Fosfor forskel scenarier

- 0 - 4 %
- 0 - 8 %
- 0 - 14 %
- Kan pt. ikke beregnes





AARHUS  
UNIVERSITET