

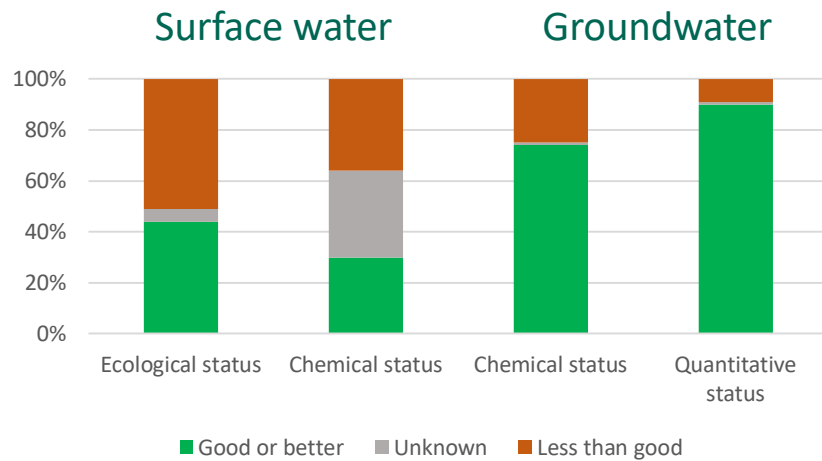
Water and agriculture - A zoom in on water use in the EU

Dr. Trine Christiansen & Dr. Nihat Zal | ENVI –AGRI Committee | 25 April 2023

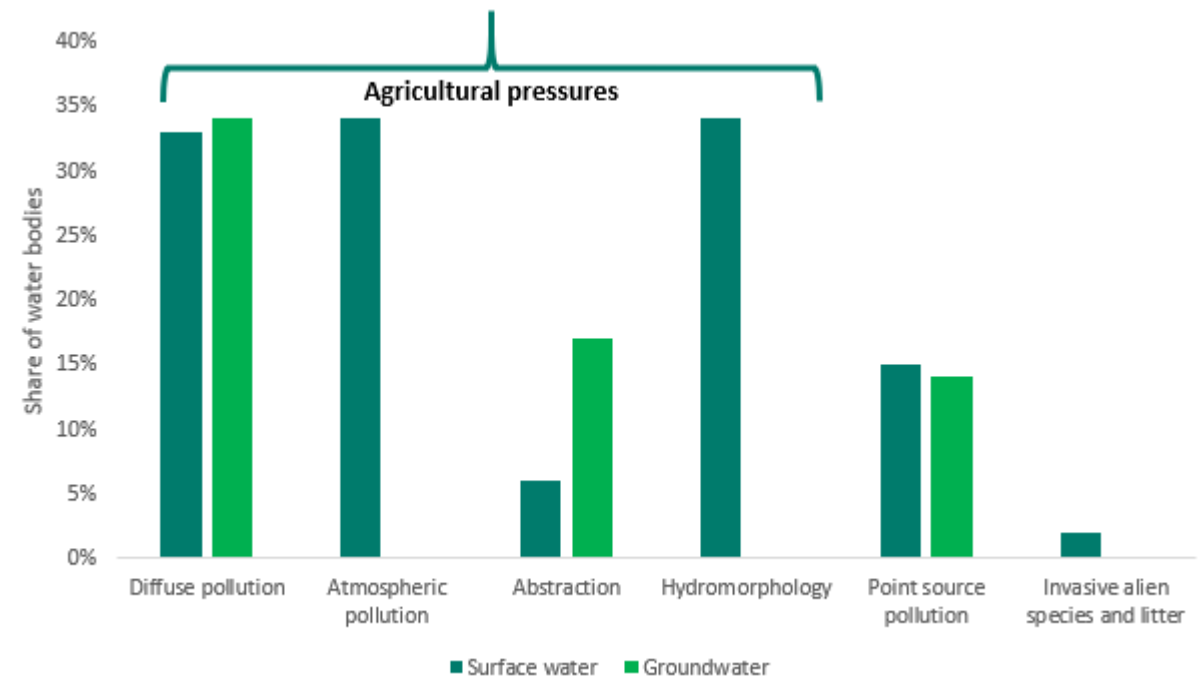
Water & Agriculture: towards sustainable solutions



Results from Water Framework Directive assessments

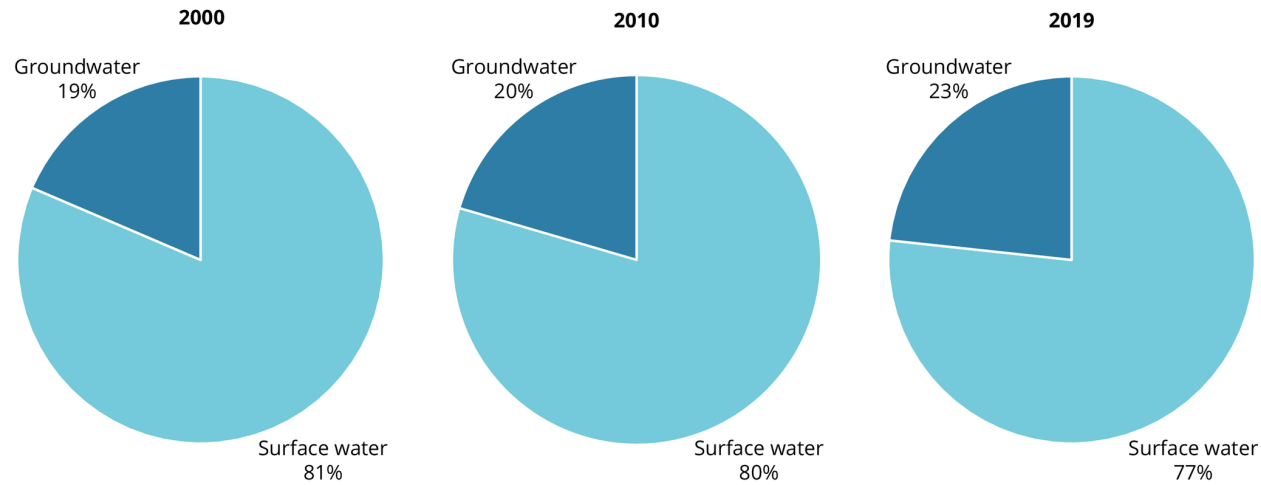


Should be 100% by 2027

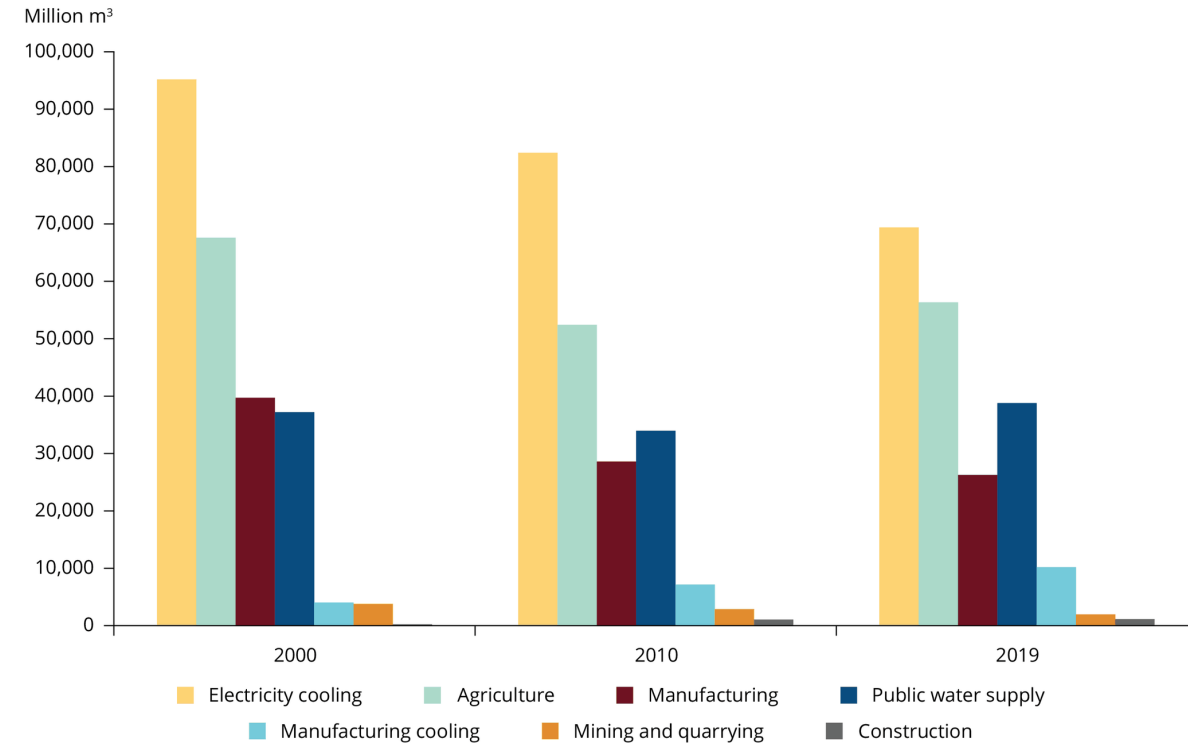


Water abstraction in Europe

Water abstraction by source



Water abstraction by sector

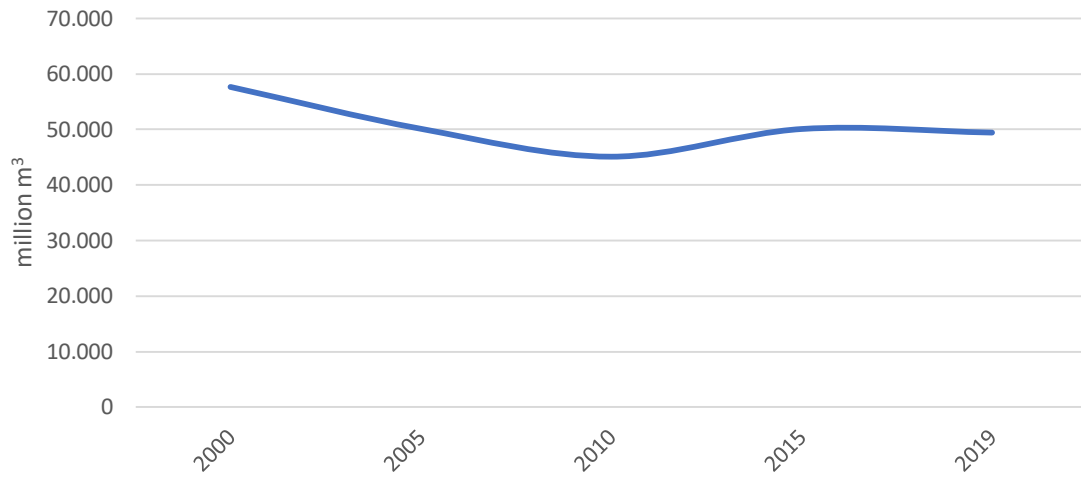


Calculation based on 27 EU Member States, 2000-2019

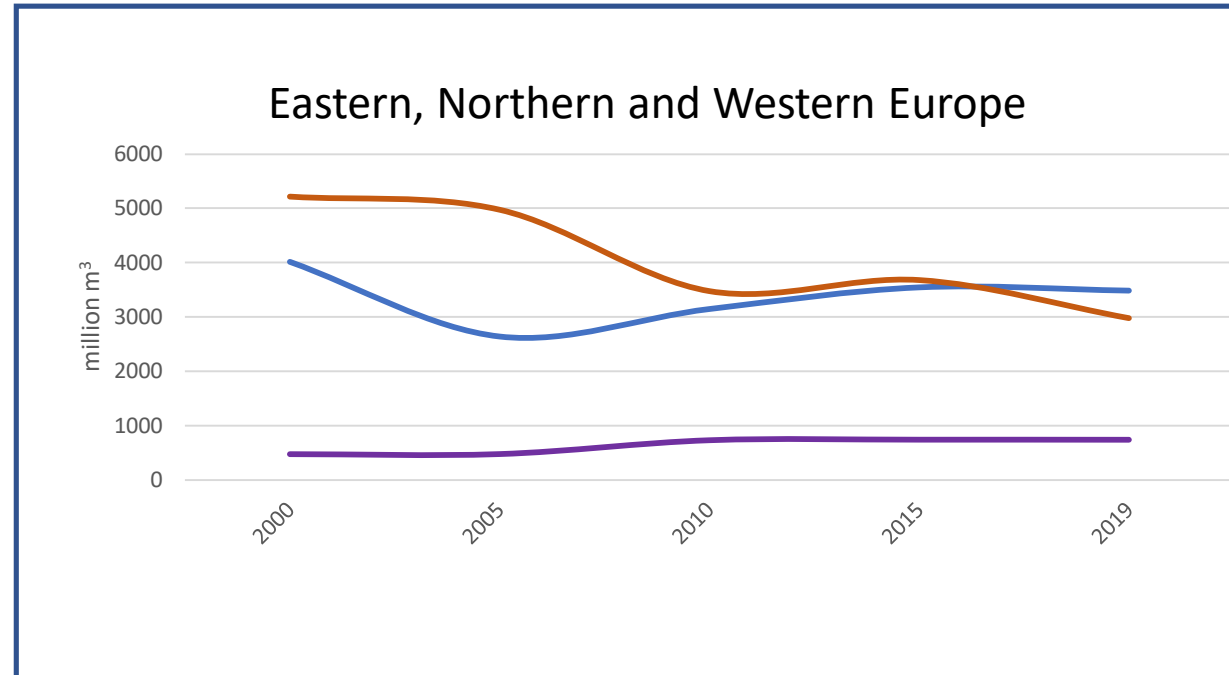
<https://www.eea.europa.eu/ims/water-abstraction-by-source-and>

Temporal change in water abstraction for agriculture by regions

Southern Europe

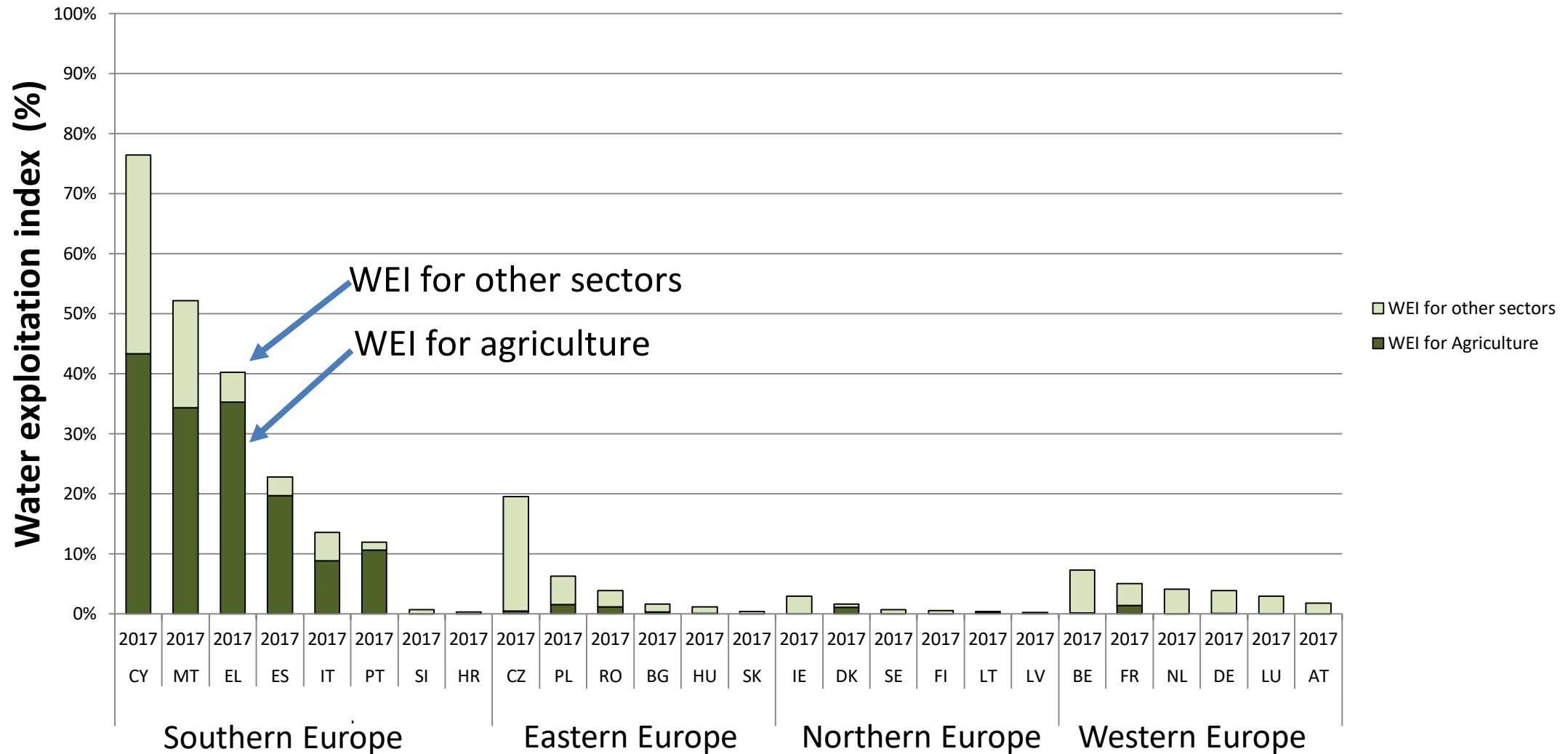


Eastern, Northern and Western Europe



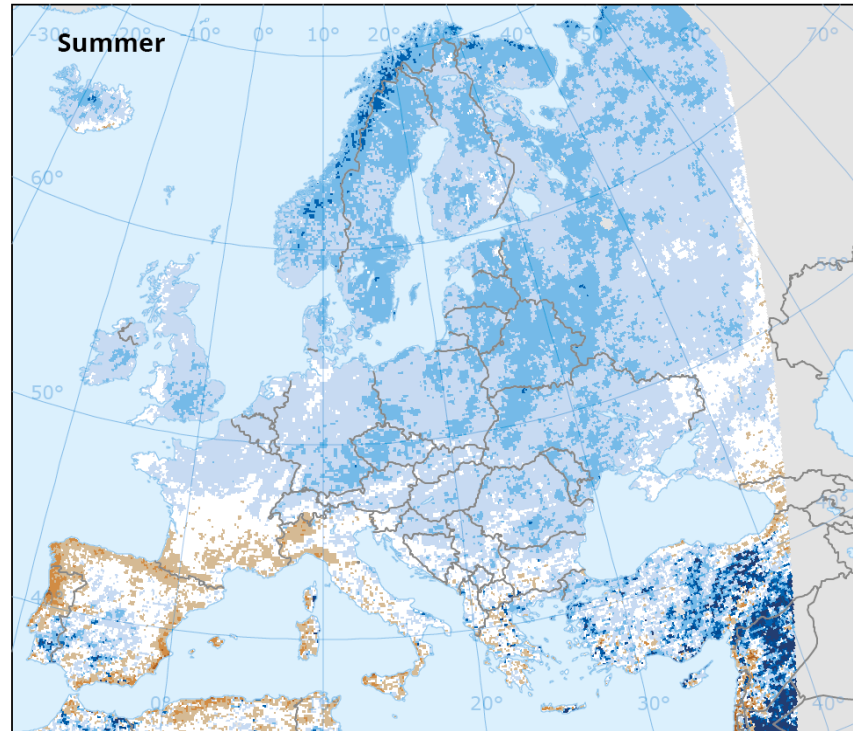
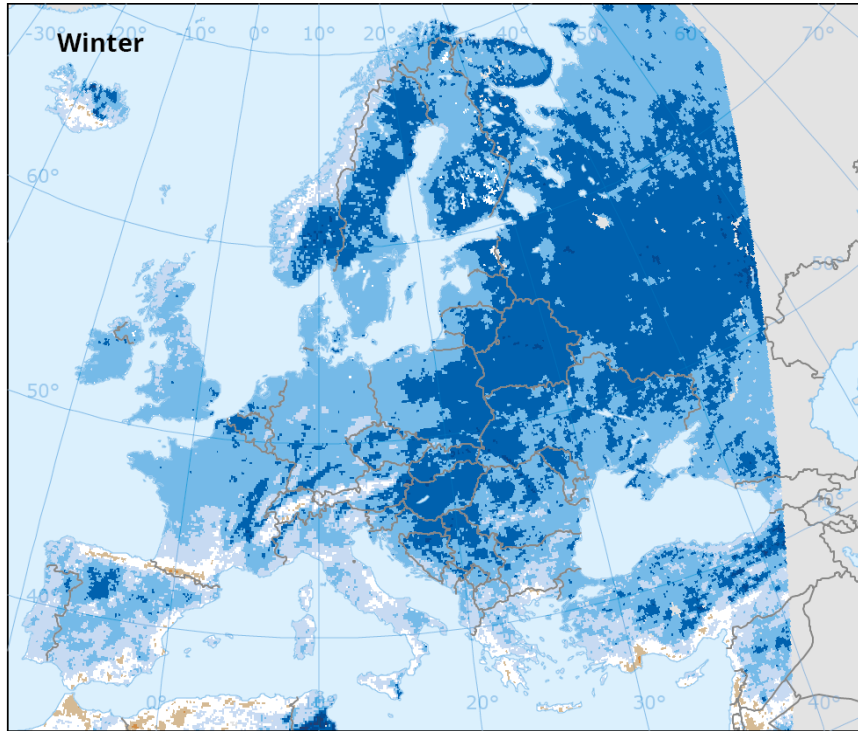
Water exploitation index for agriculture and other sectors (2017)

Water stress affects surface water in 20 % of the European territory and 30 % of the European population on average every year

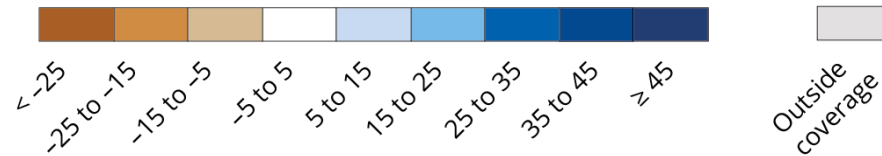


• More flooding and droughts

Winter and summer heavy rain (projected change for 2080s, high emissions scenario)



Heavy winter and summer precipitation change (%)

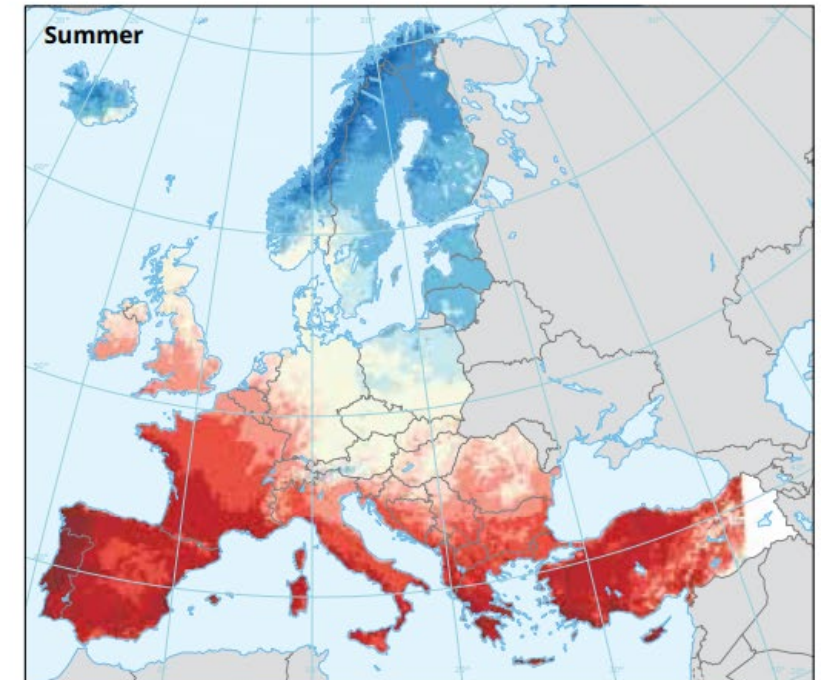
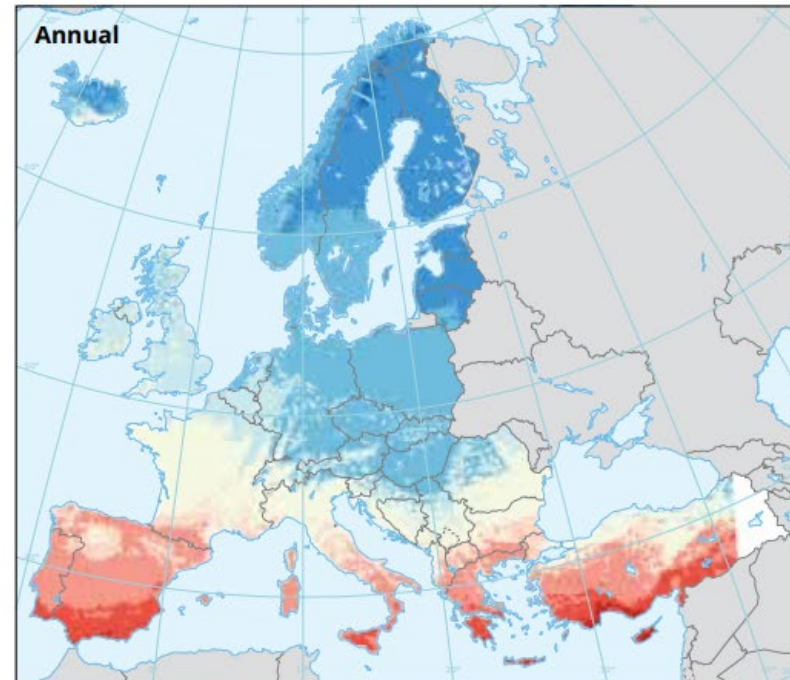
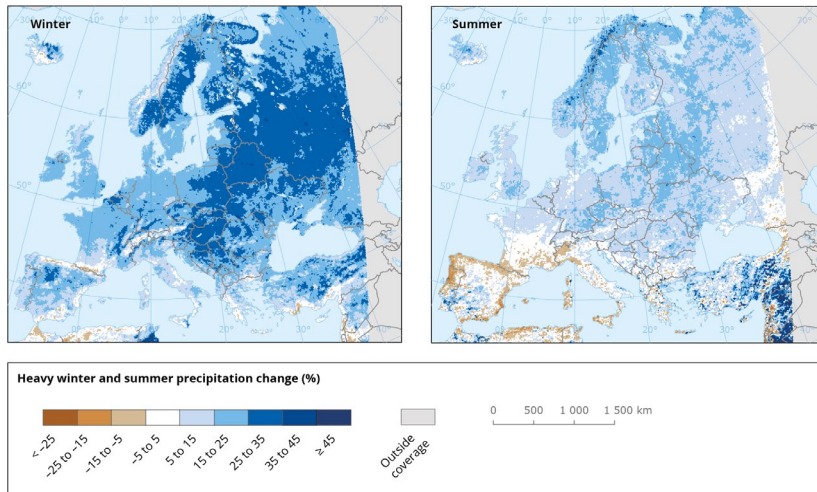


0 500 1 000 1 500 km

• More flooding and droughts

Annual and summer rain (projected change for the period 2071-2100)

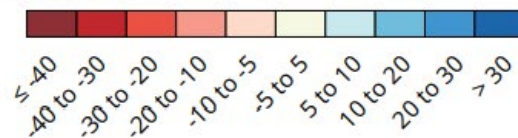
Winter and summer heavy rain (projected change for 2080s, high emissions scenario)



Reference data: ©ESRI

Projected change in annual (left) and summer (right) precipitation, 2071-2100

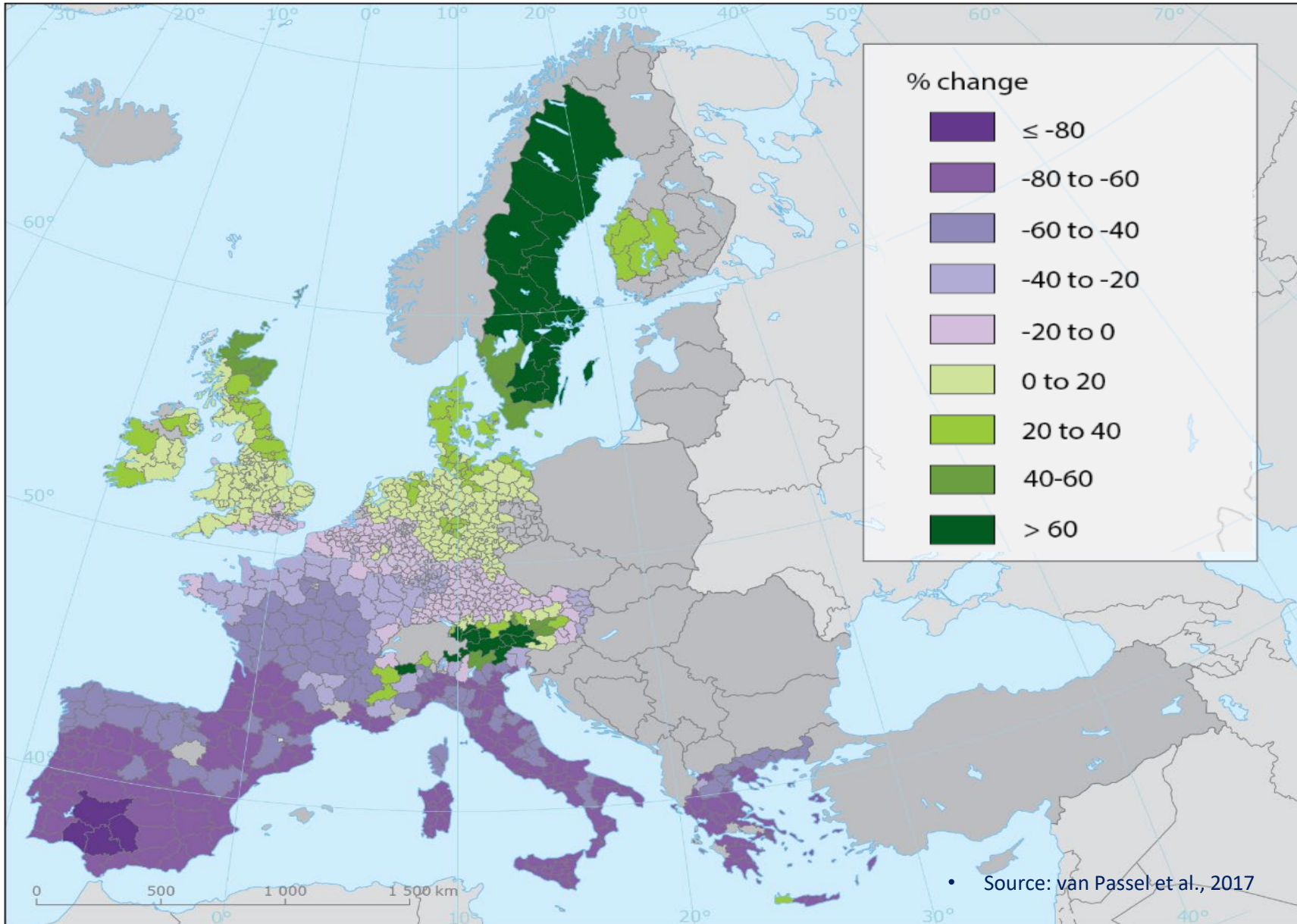
Percentage



No data
Outside coverage

0 500 1 000 1 500 km

Projected change in farmland value by 2100



Solutions

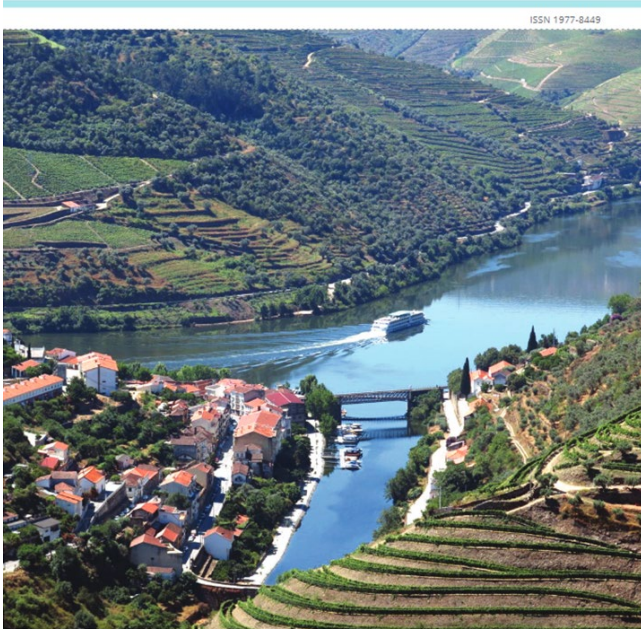
To reduce the impacts, there is a need to

- Increase water efficiency in irrigation and reduce water demand of agriculture and energy sectors
- Improve water cooling techniques
- Water savings in public sector
- Shift to drought resistant crops
- Re-use treated waste water
- Secure environmental flows
- Raise awareness of the necessity of these measures

Thank you very much for listening!

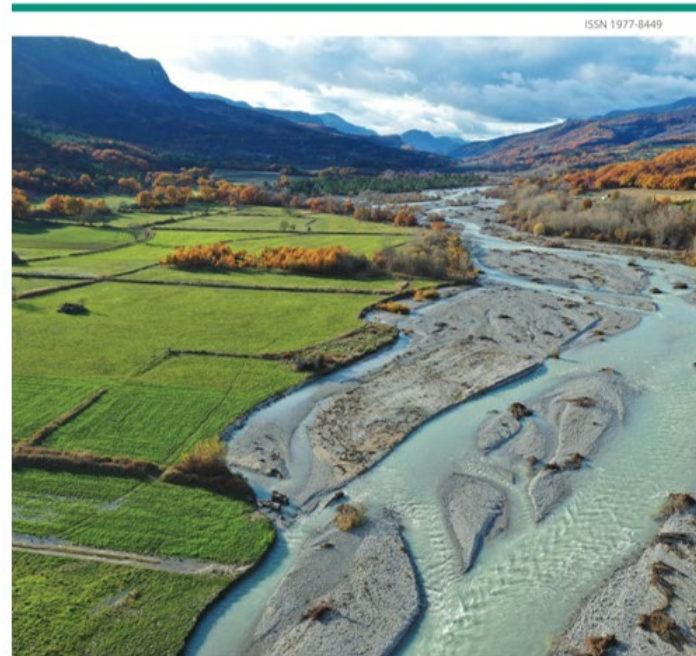
EEA Report | No 7/2018

European waters Assessment of status and pressures 2018



EEA Report | No 17/2020

Water and agriculture: towards sustainable solutions



European Environment Agency 

EEA Report | No 12/2021

Water resources across Europe — confronting water stress: an updated assessment



European Environment Agency



<https://www.eea.europa.eu/publications/state-of-water>

<https://www.eea.europa.eu/publications/water-and-agriculture-towards-sustainable-solutions>

<https://www.eea.europa.eu/publications/water-resources-across-europe-confronting>