



Australian Government

Department of Agriculture  
and Water Resources

ABARES



# Climate adjusted productivity on cropping farms

The slowdown and the rebound

Neal Hughes

Water and Climate section

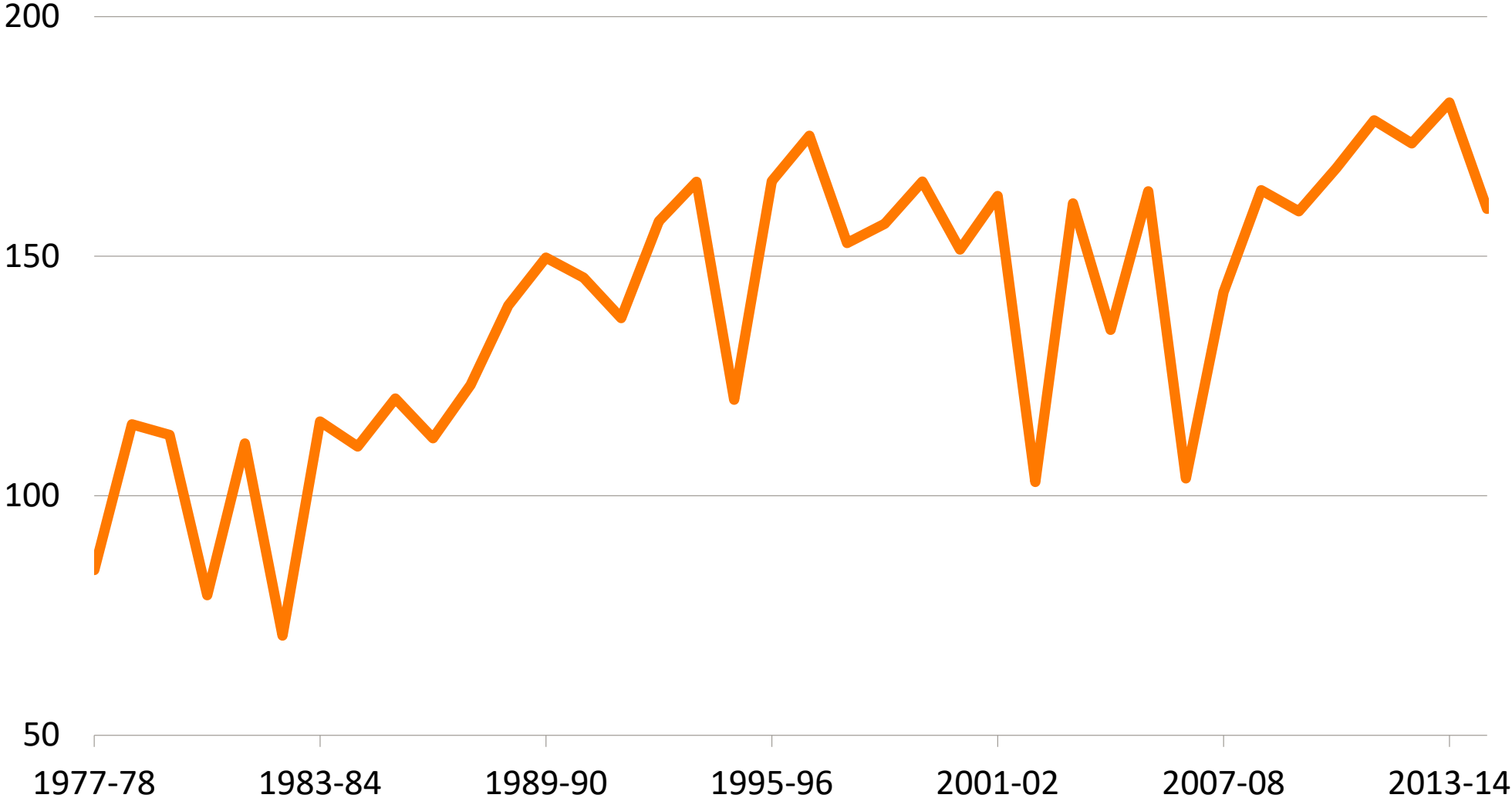
Australian Bureau of Agricultural  
and Resource Economics and Sciences

7 - 8 March 2017

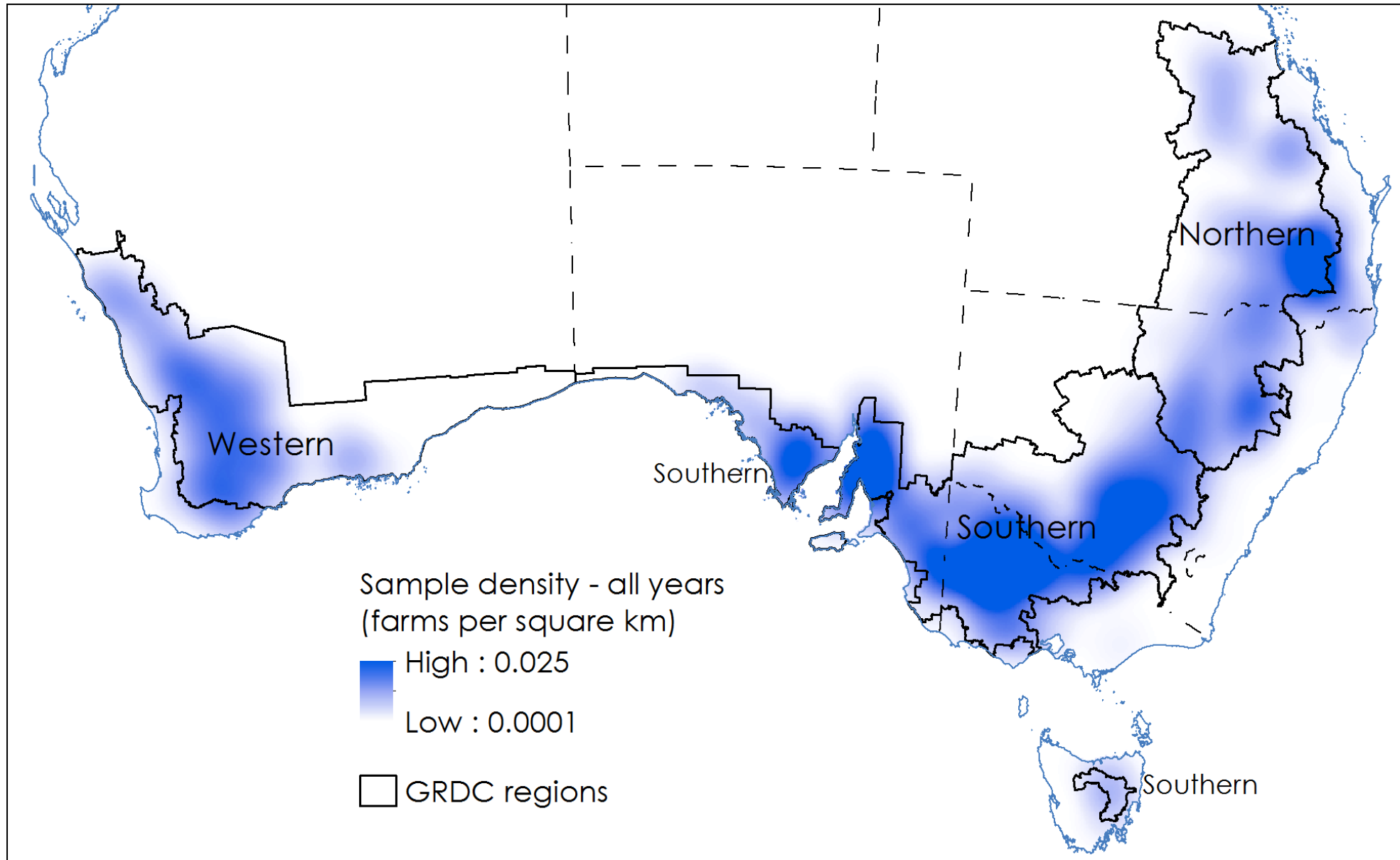


Research by the  
Australian Bureau of Agricultural and Resource Economics and Sciences

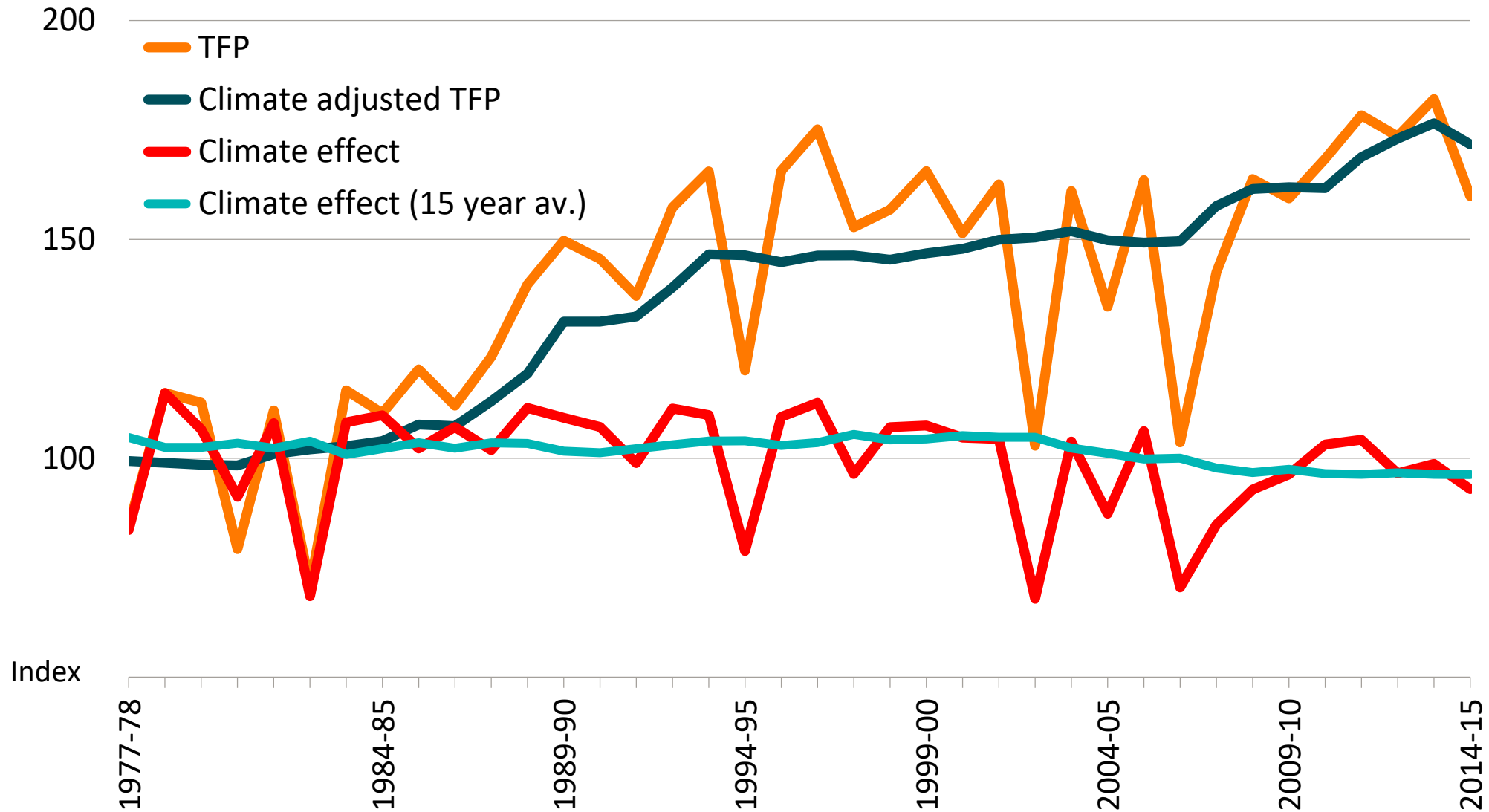
# Total Factor Productivity (TFP)



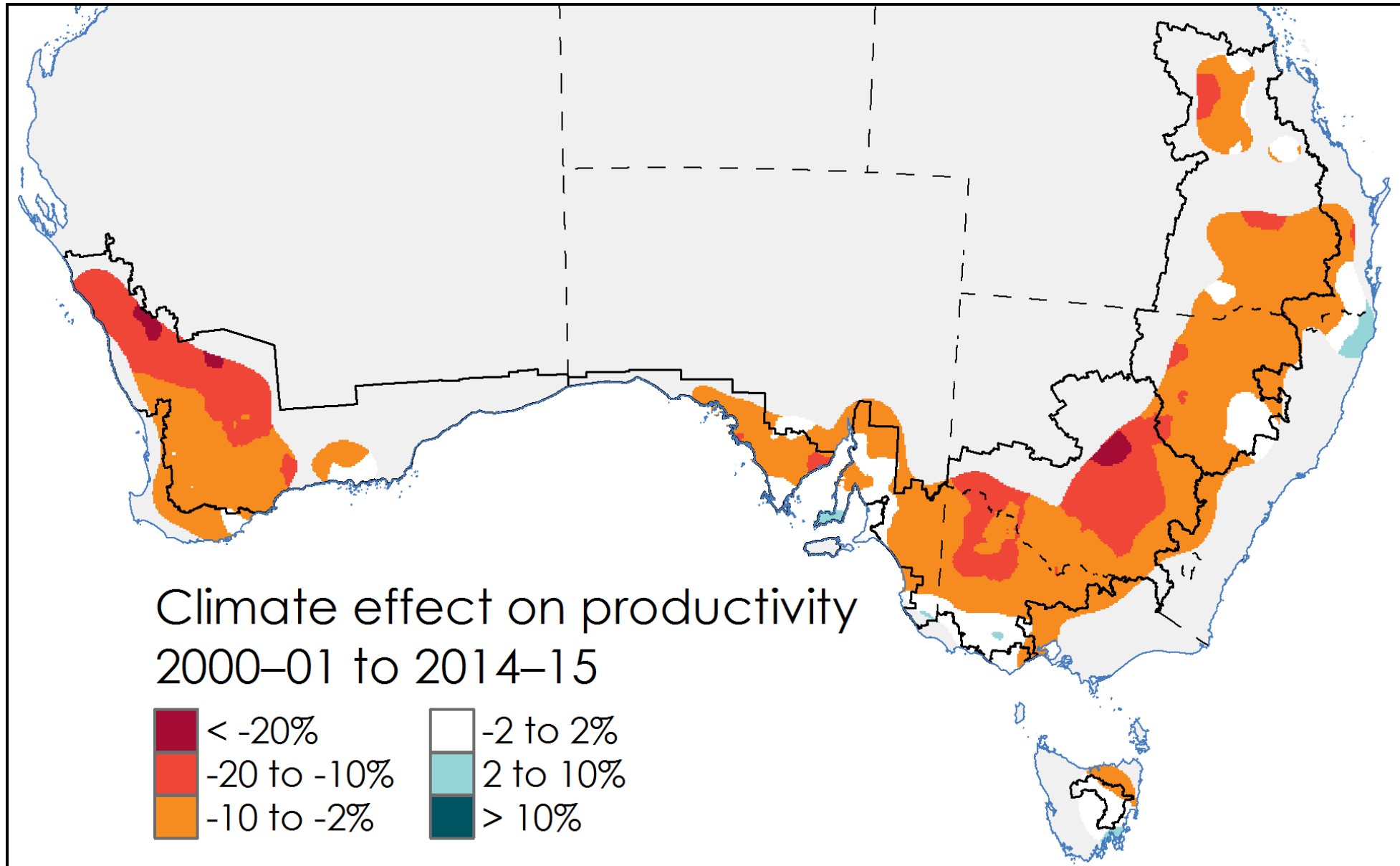
# A 'data-driven' approach



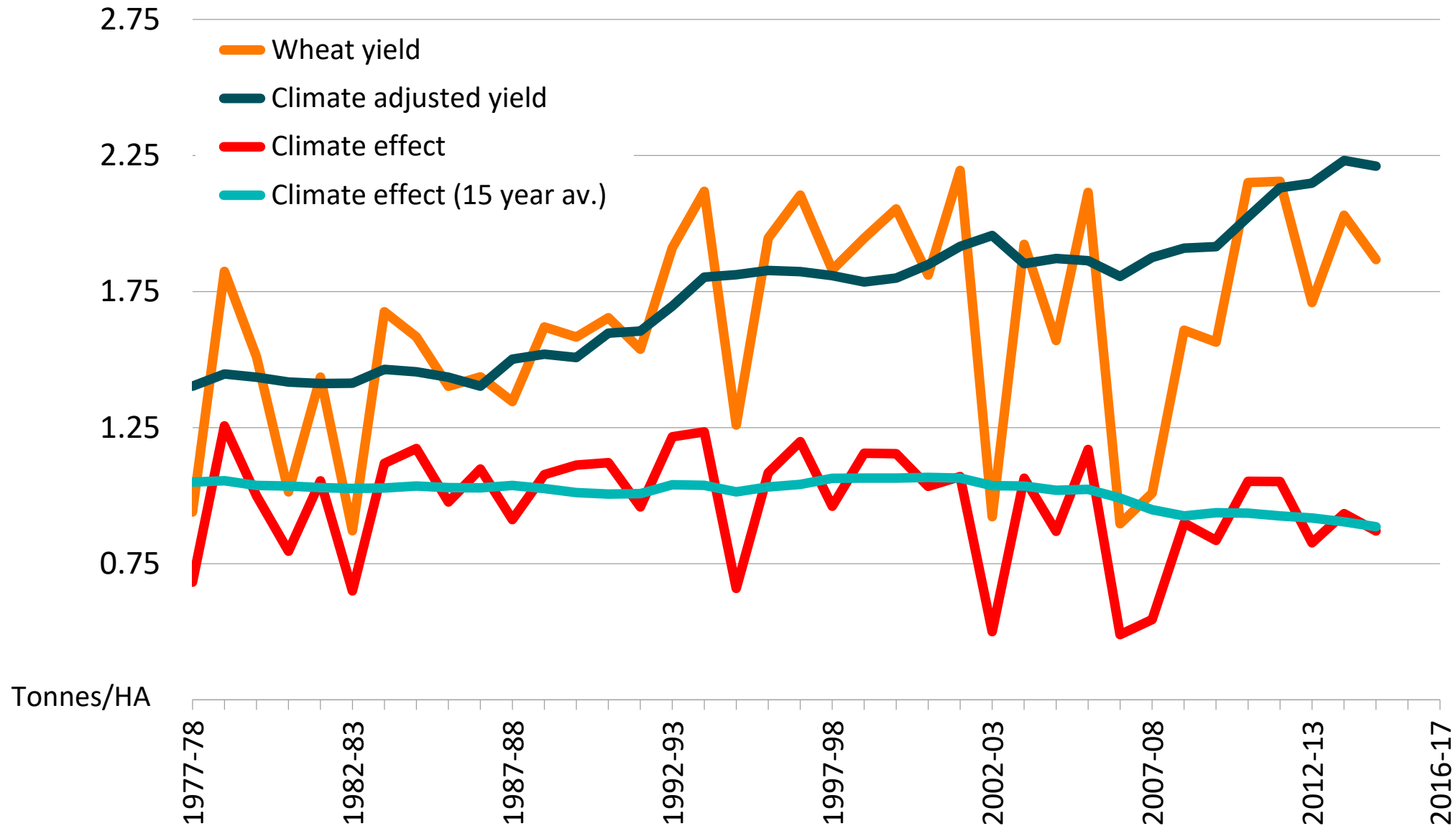
# Climate adjusted productivity



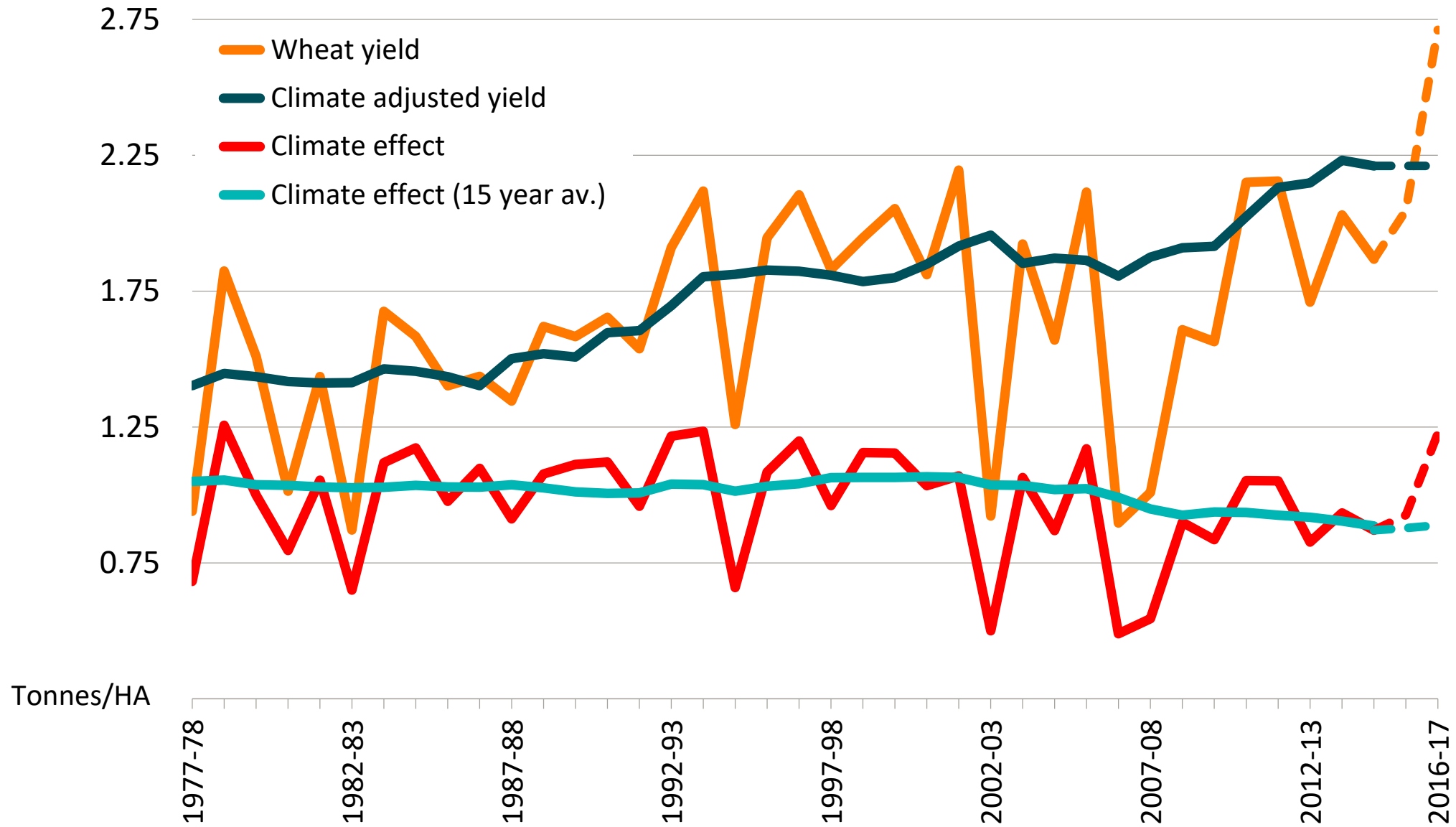
# Effect of climate on productivity since 2000-01



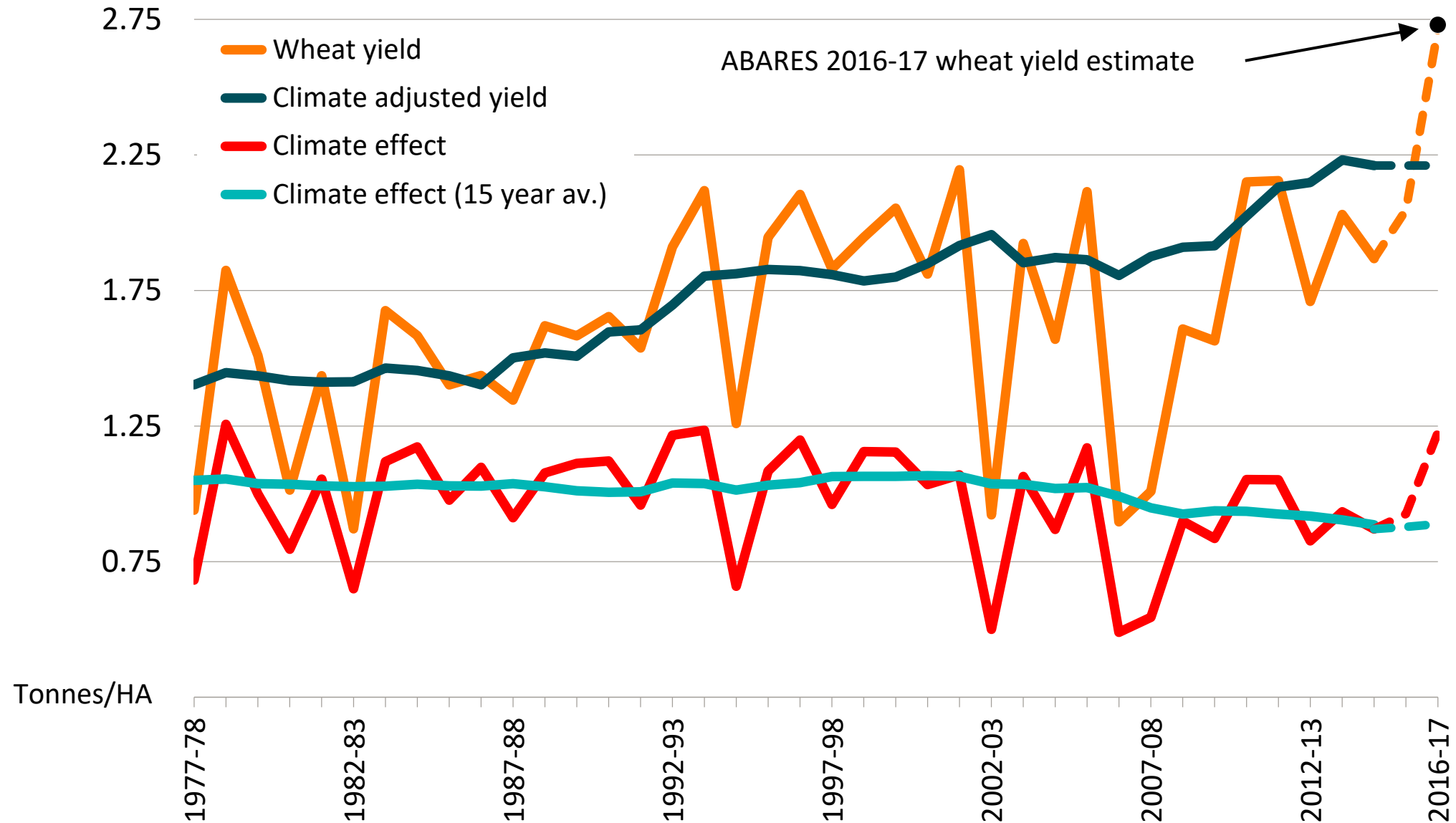
# Climate adjusted wheat yields



# Climate adjusted wheat yields

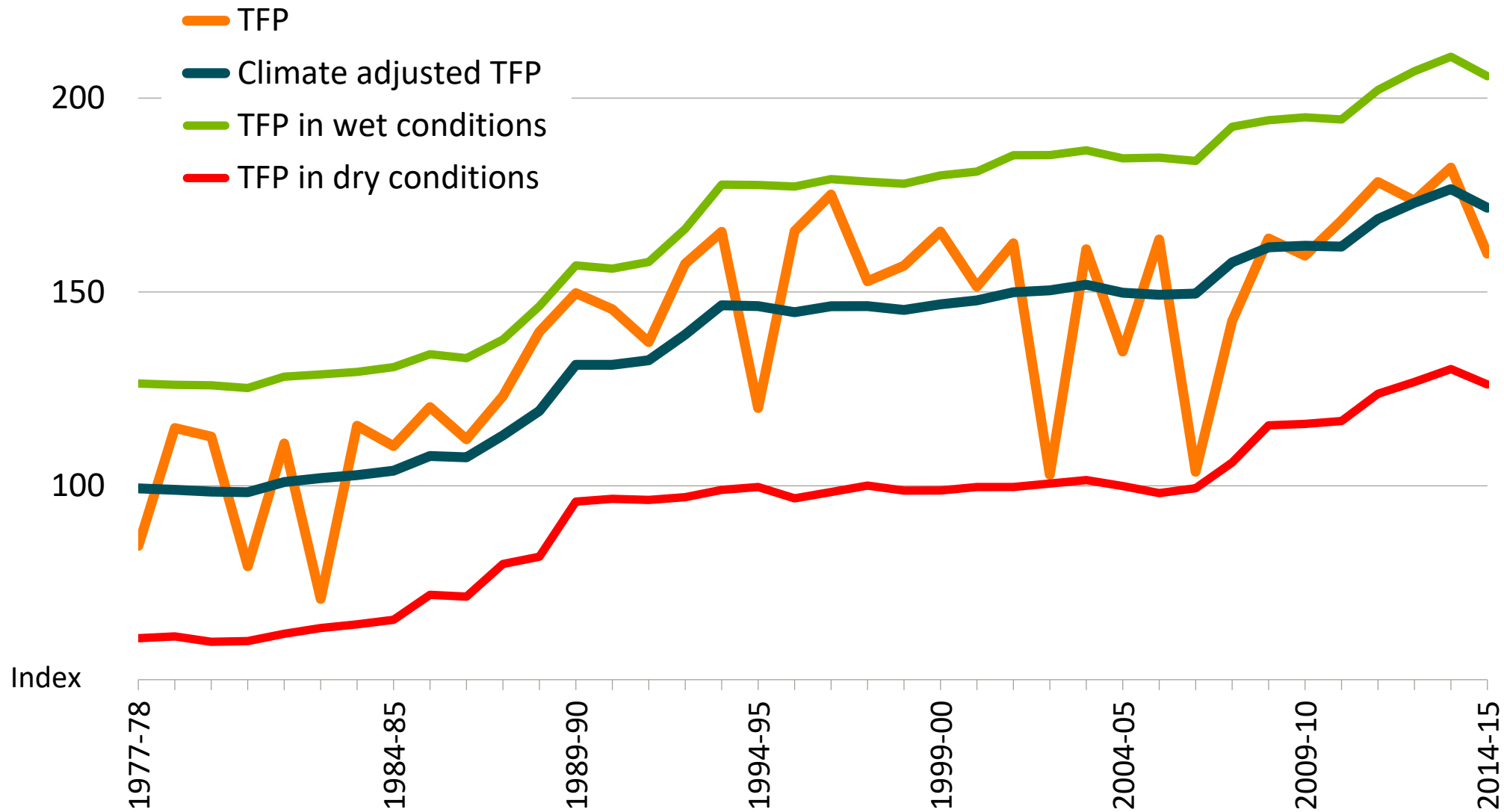


# Climate adjusted wheat yields

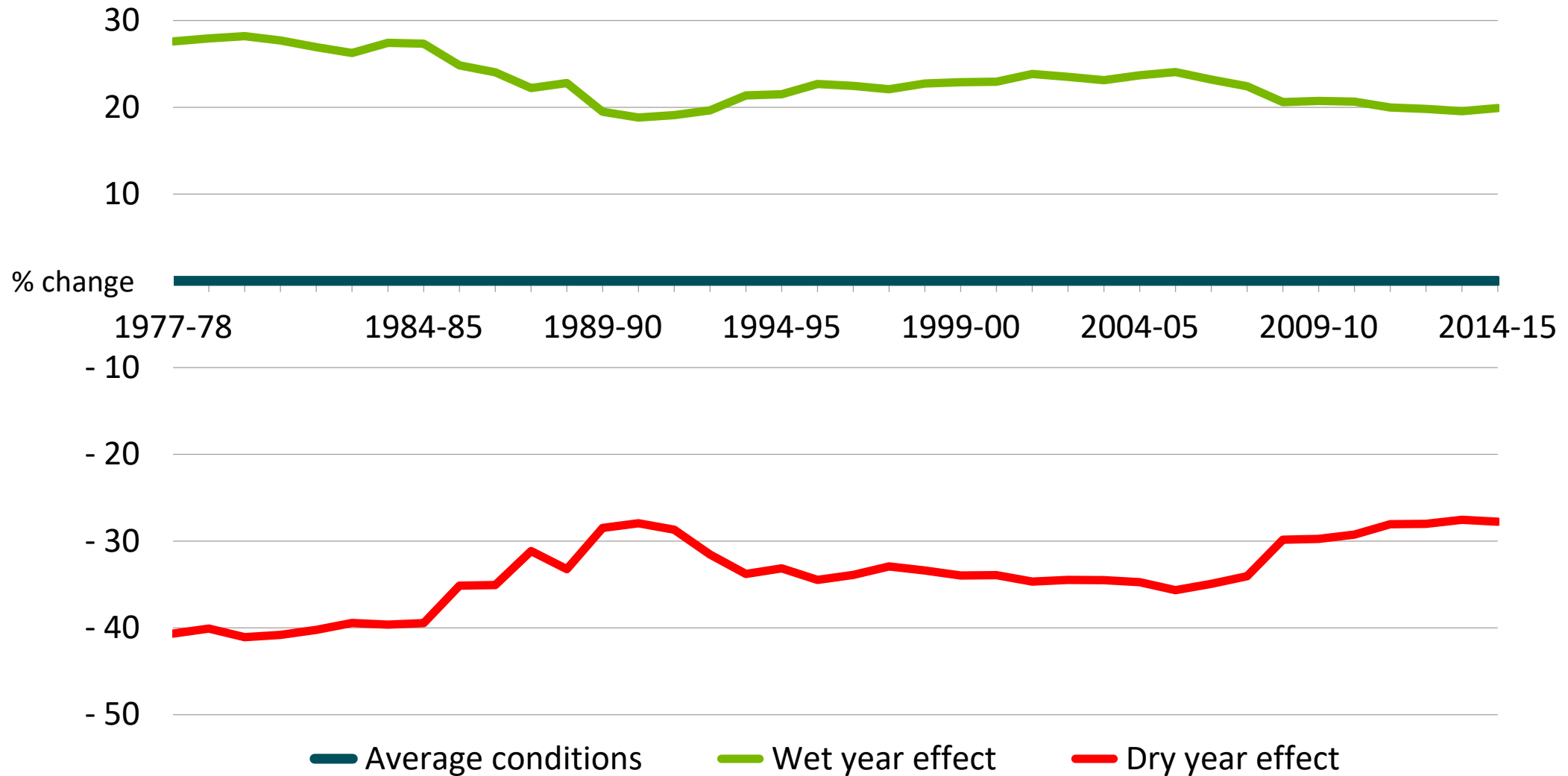




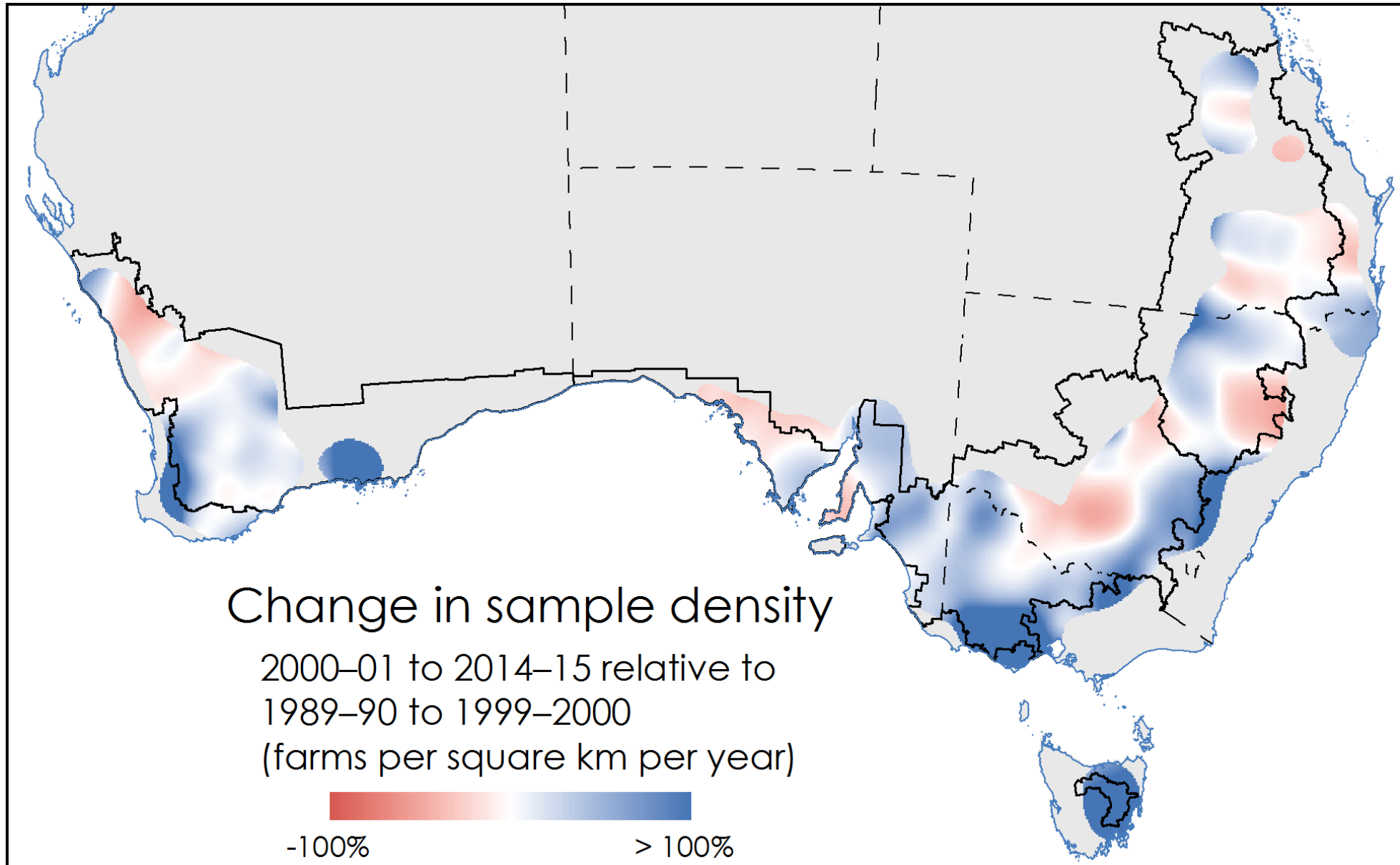
# Farm sensitivity to climate



# Farm sensitivity to climate



# Change in ABARES farm sample, 2000s vs 1990s



# Key points

- Cropping farm productivity ground to a halt in the mid 1990s
- Productivity has rebounded strongly over the last 10 years
  
- Climate change is affecting cropping farm productivity
- Farmers are adapting



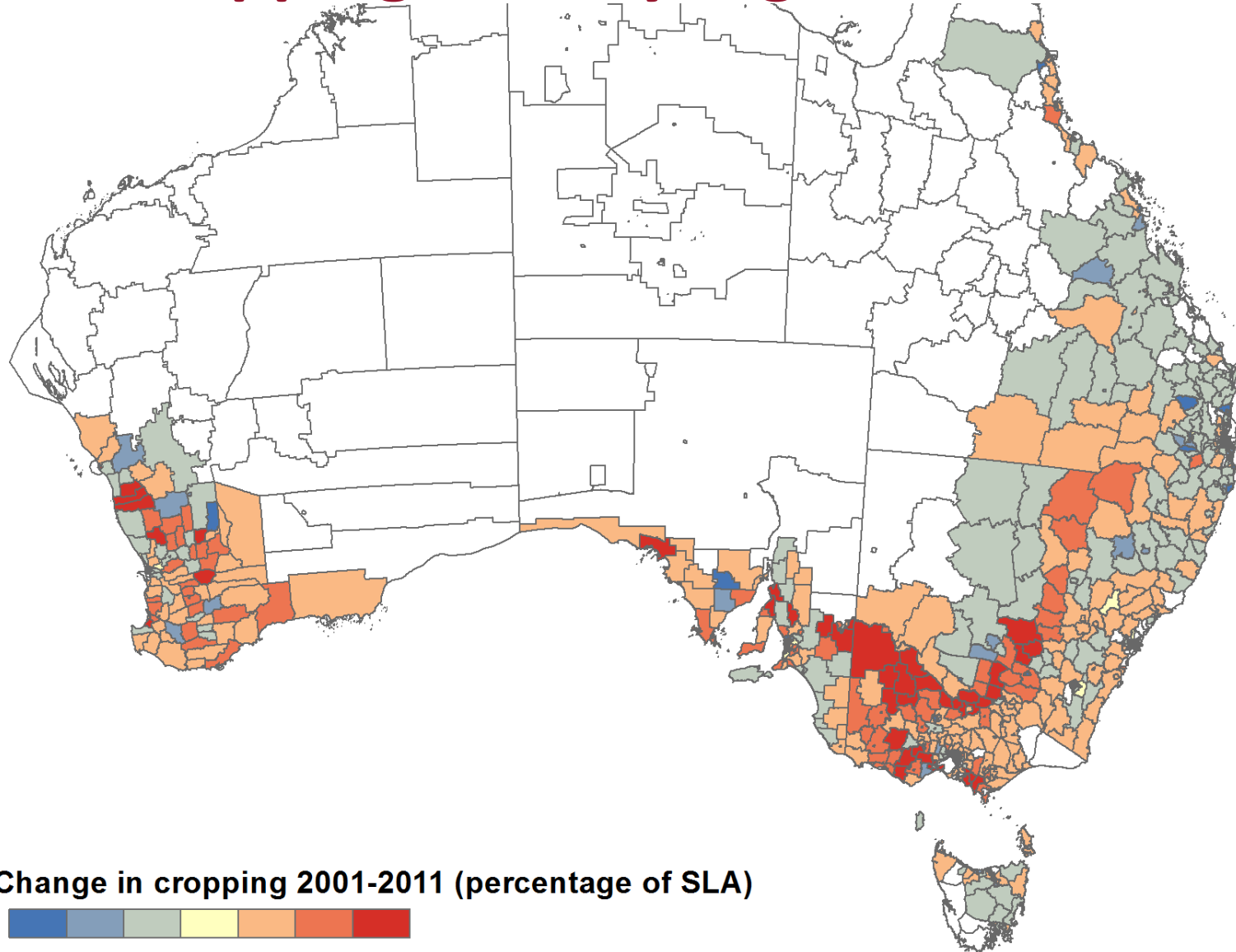
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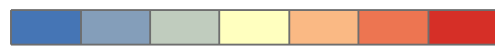
[agriculture.gov.au/abares](http://agriculture.gov.au/abares)



# Change in cropping area by region 2001 to 2011

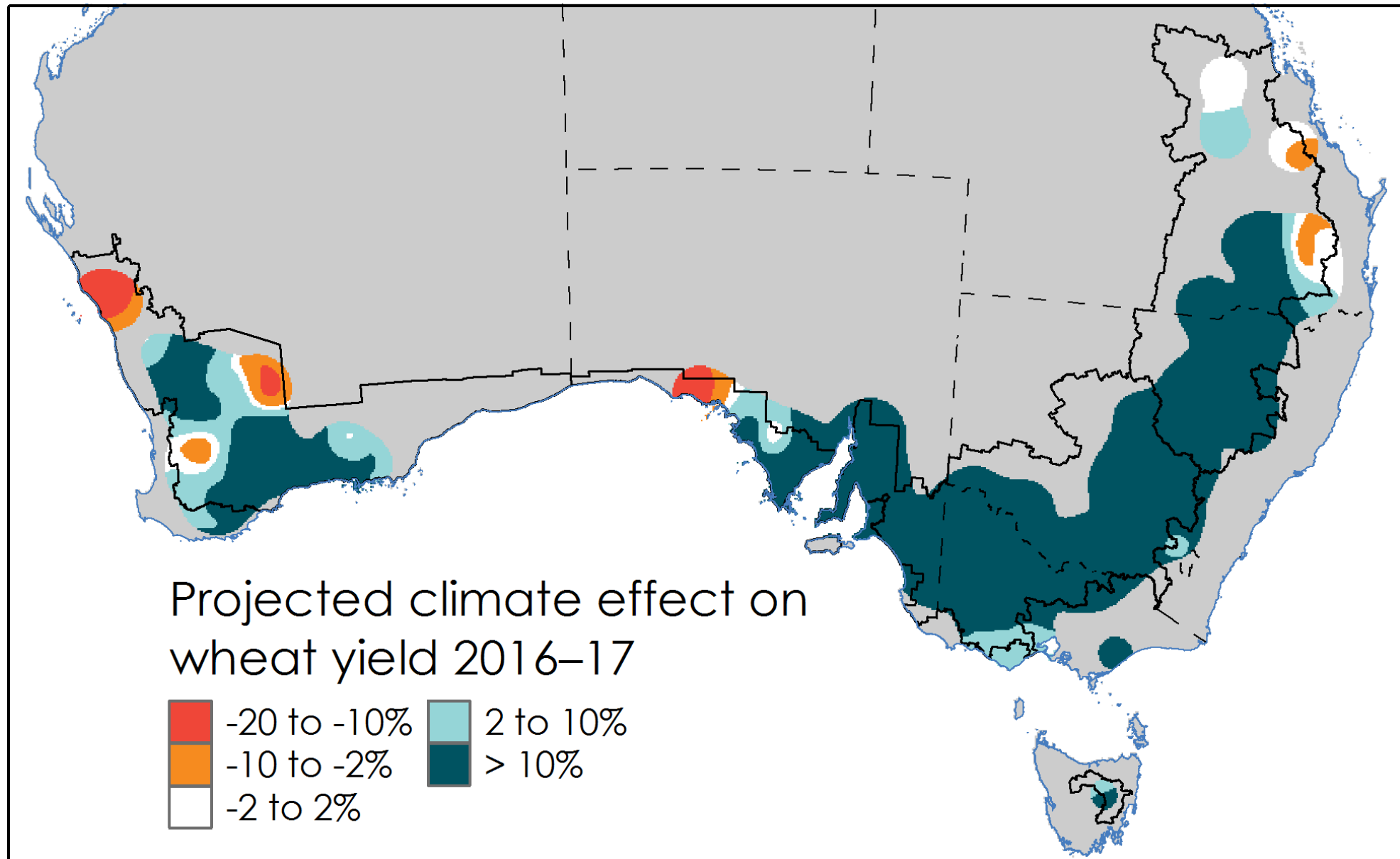


Change in cropping 2001-2011 (percentage of SLA)



< -10%  
-10 - -5%  
-5 - 0%  
0 - 5%  
5 - 10%  
> 10%

# Effect of climate on wheat yields – 2016-17



# Predicted wheat yields – 2016-17

