



Australian Government
**Department of Agriculture
and Water Resources**
ABARES



Climate adjusted productivity on cropping farms: the slowdown and the rebound

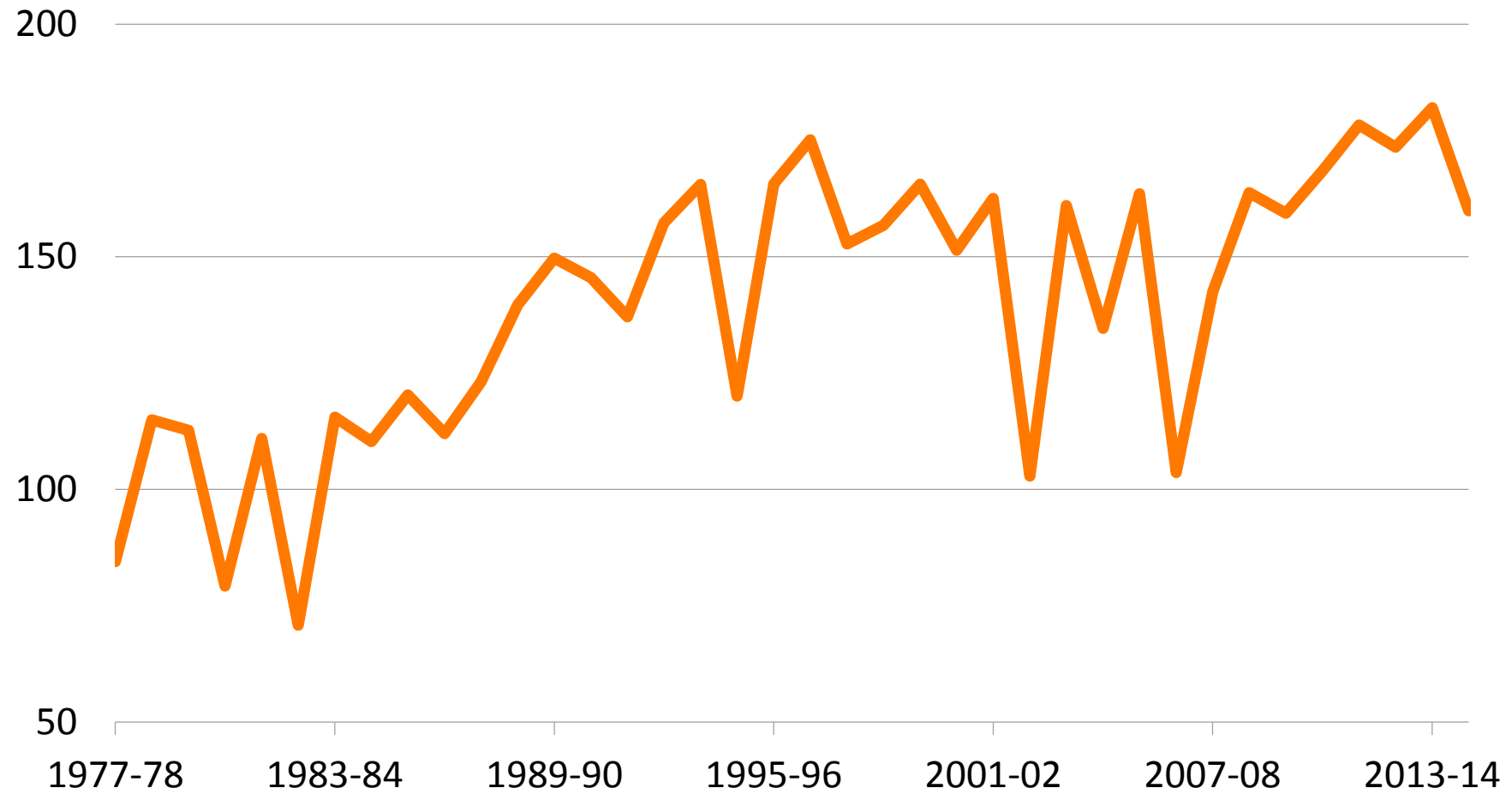
Neal Hughes
Water and Climate section
**Australian Bureau of Agricultural
and Resource Economics and Sciences**

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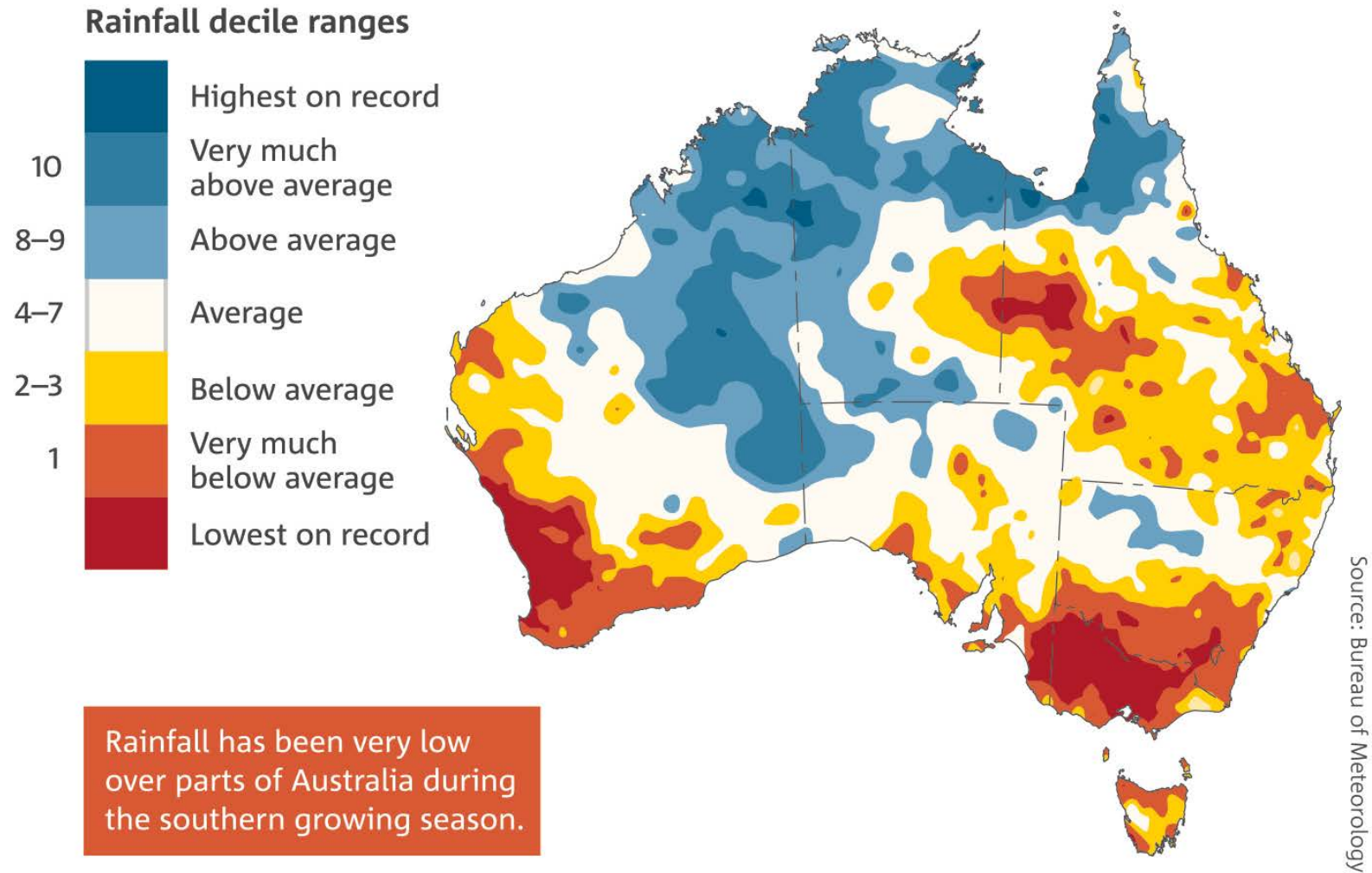


Research by the
Australian Bureau of Agricultural and Resource Economics and Sciences

Total Factor Productivity (TFP)

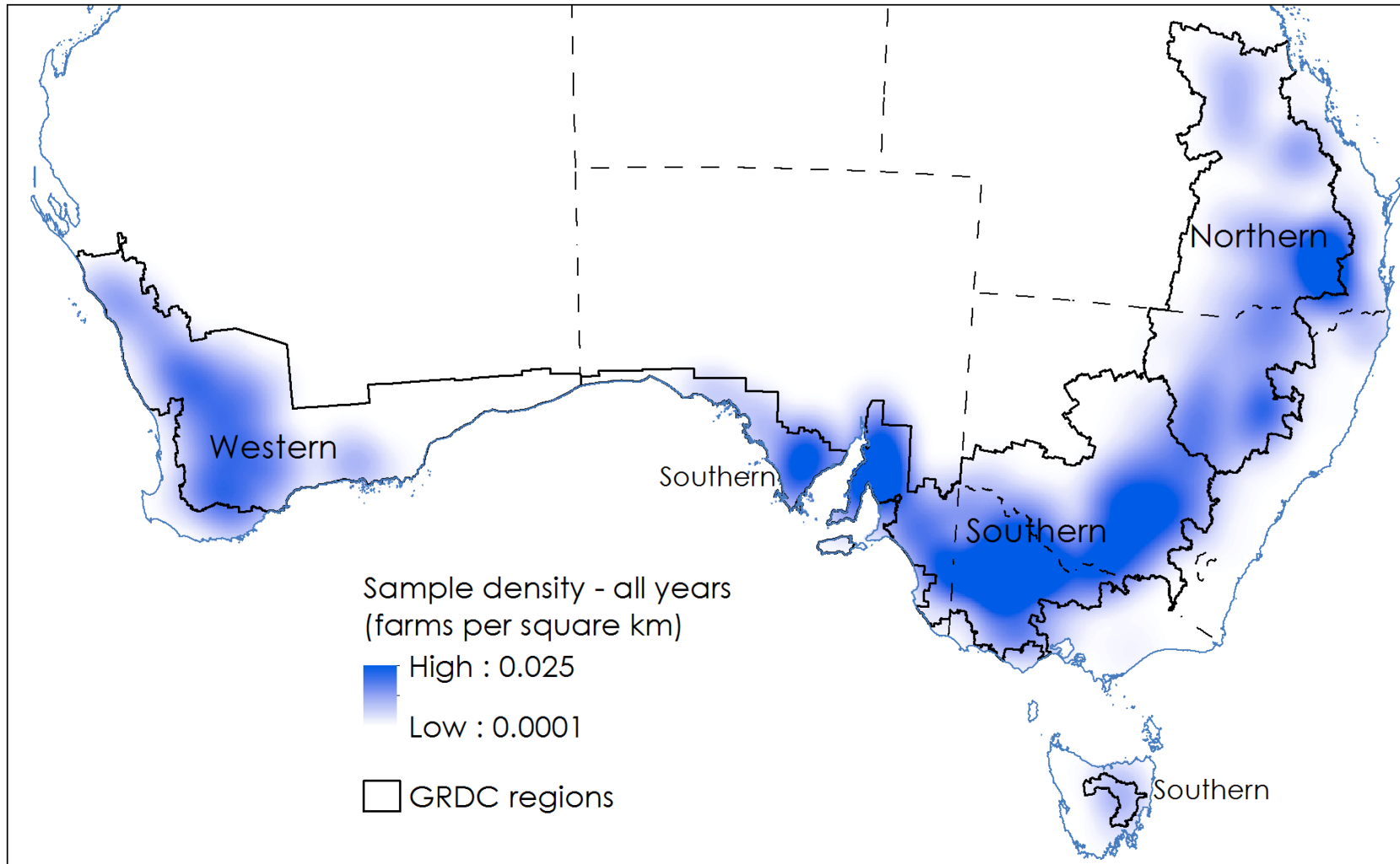


Climate change

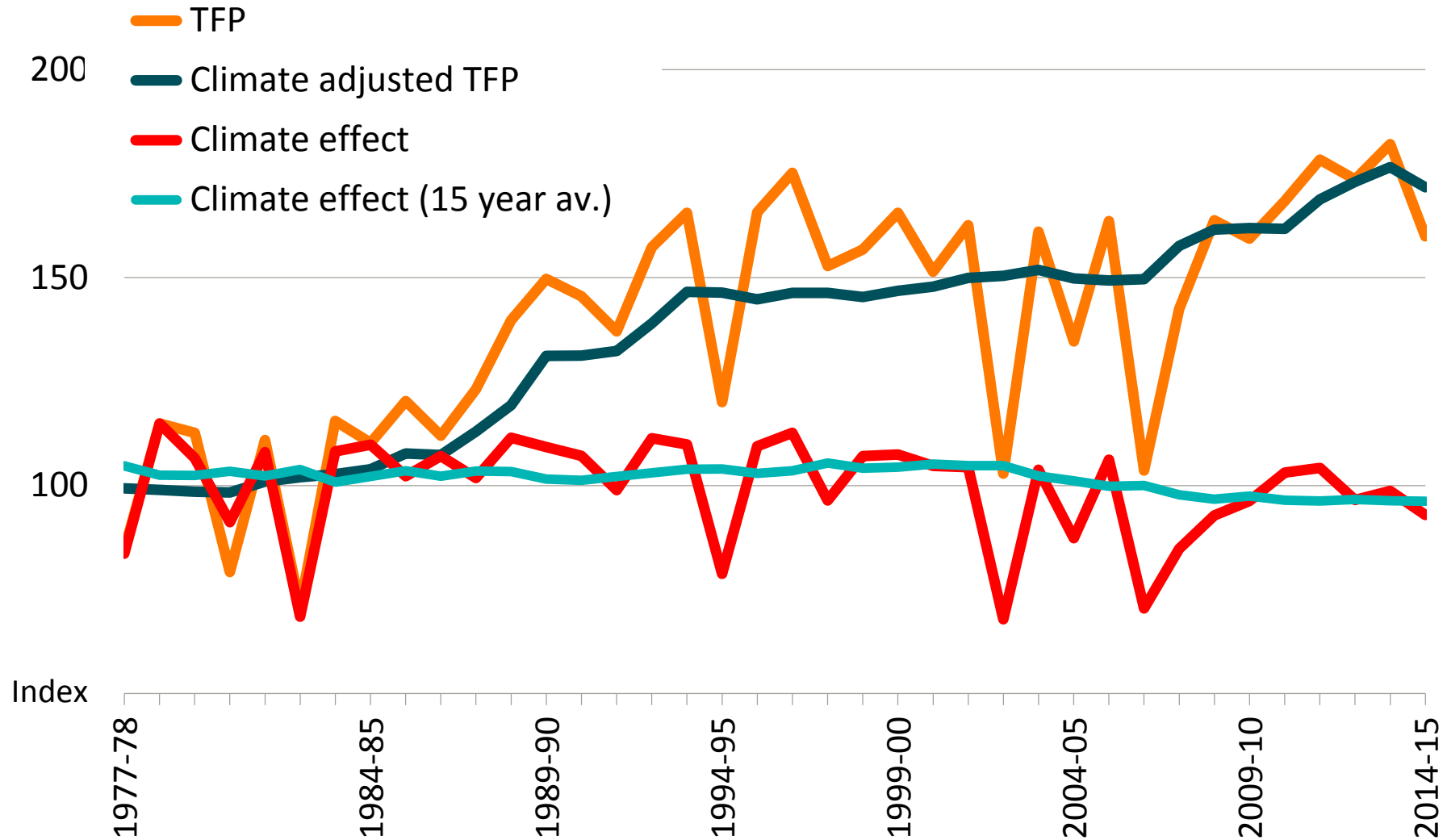


Southern growing season (April–October) rainfall deciles for the last 20 years (1996–2015). A decile map shows where rainfall is above average, average or below average for the recent period, in comparison with the entire rainfall record from 1900.

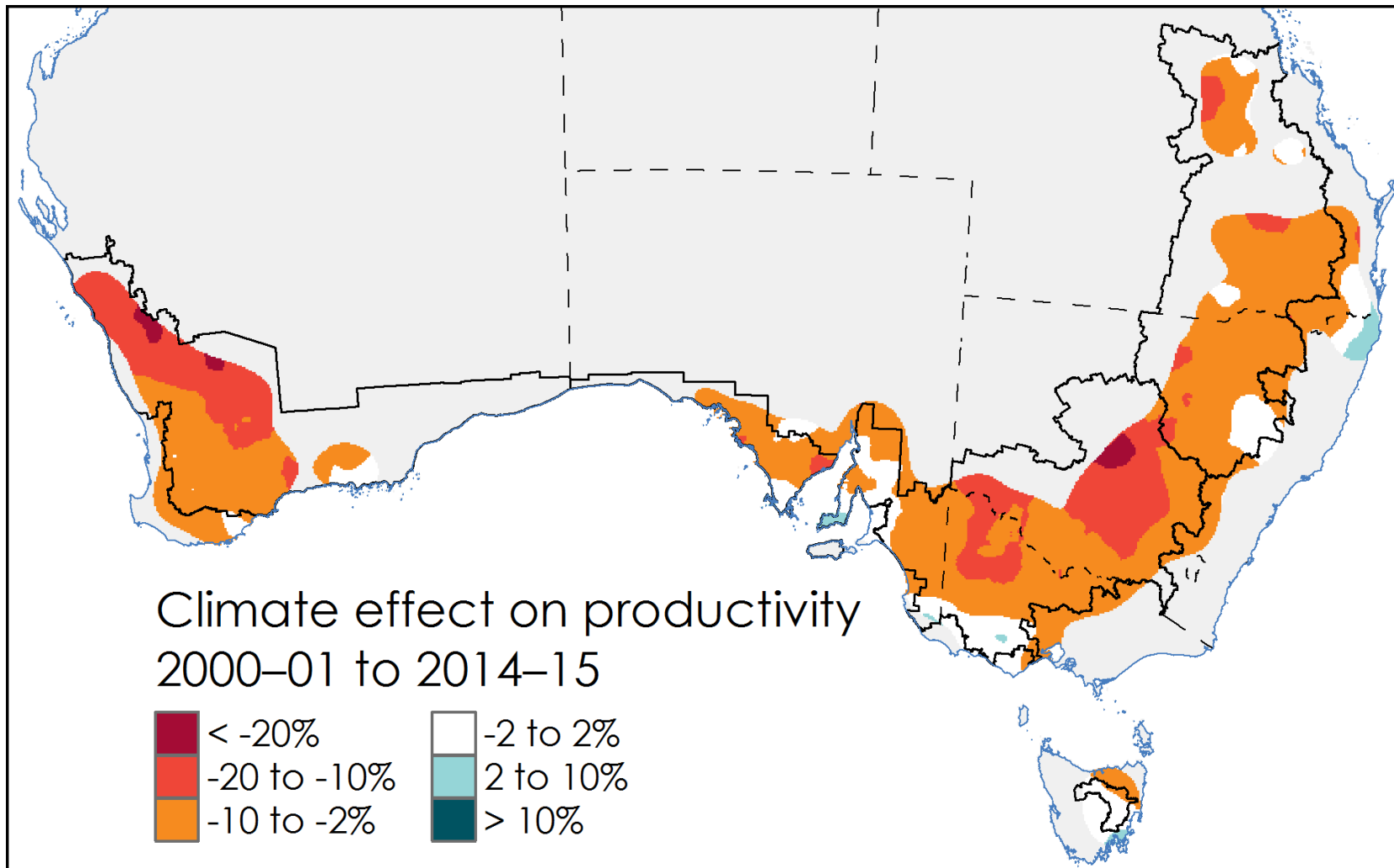
A 'data-driven' approach



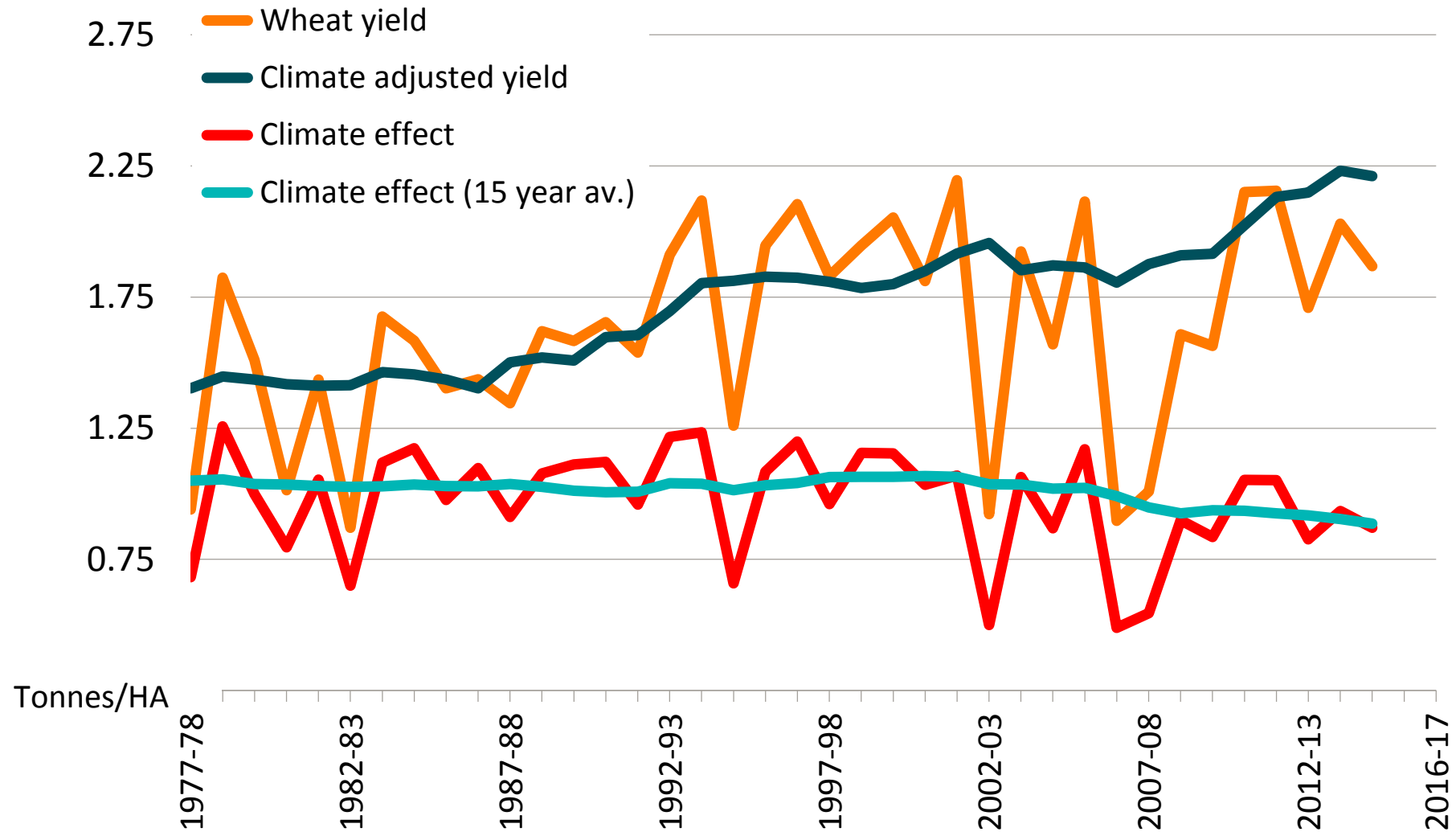
Climate adjusted productivity



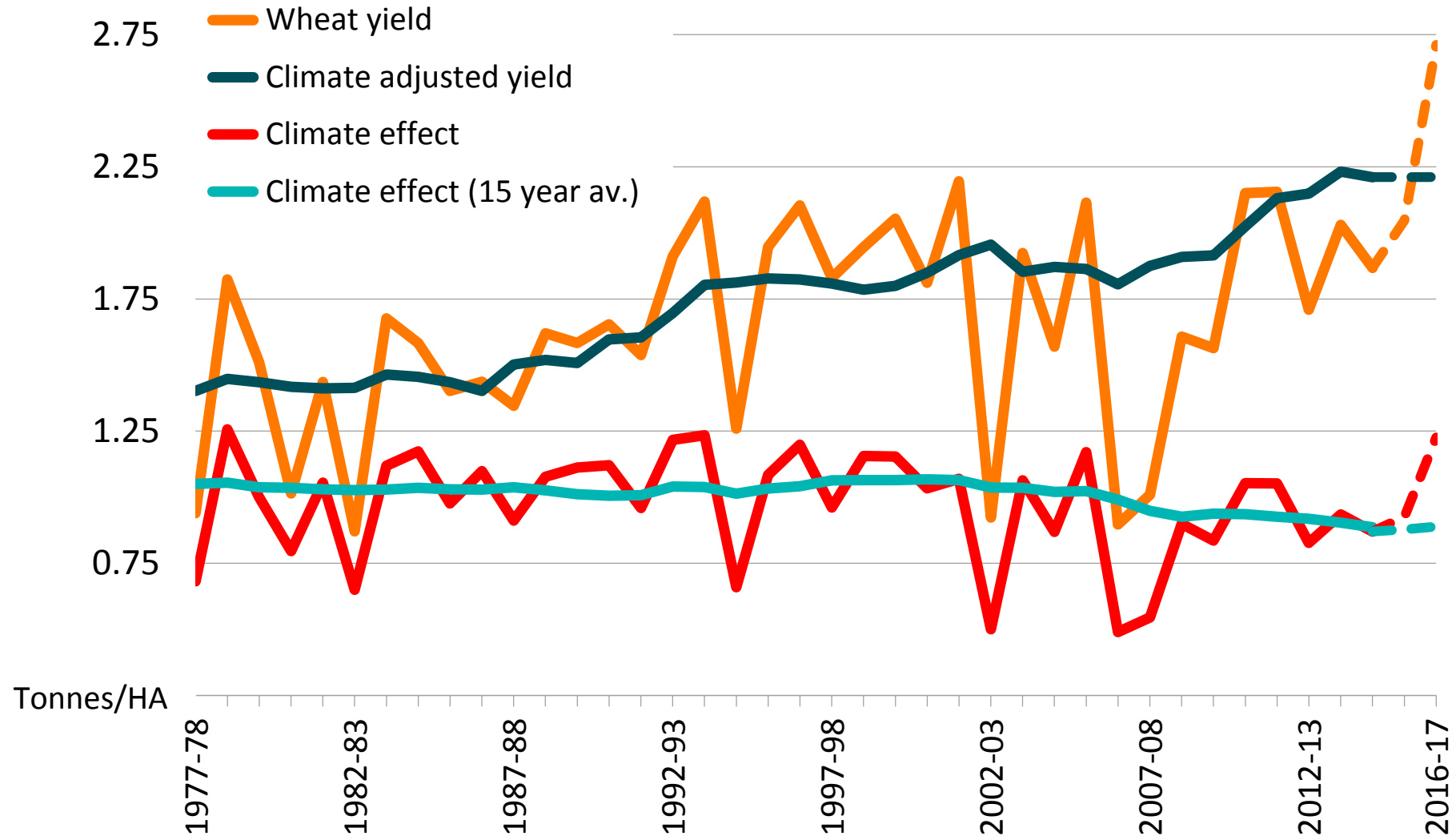
Effect of climate on productivity since 2000-01



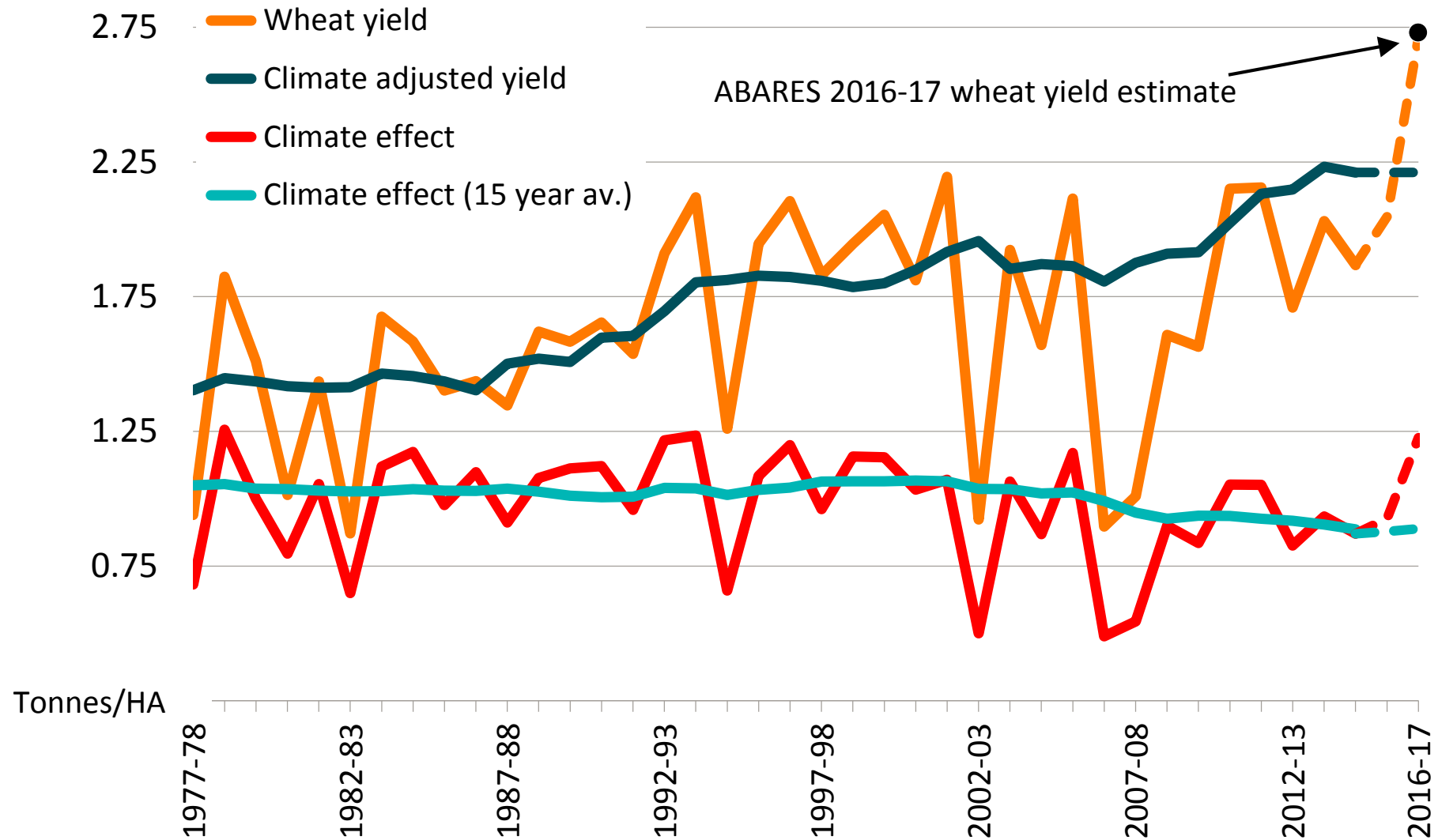
Climate adjusted wheat yields



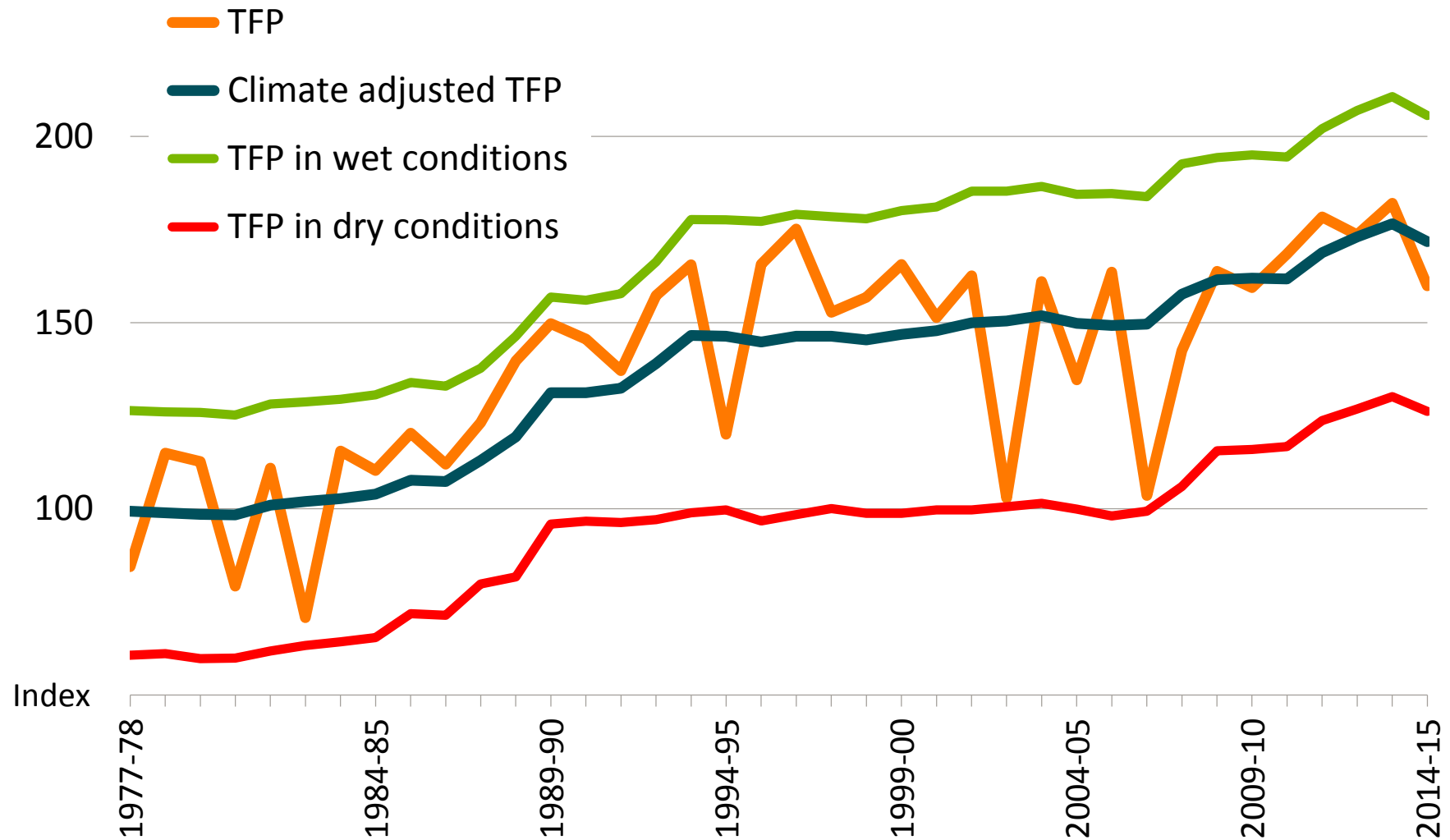
Climate adjusted wheat yields



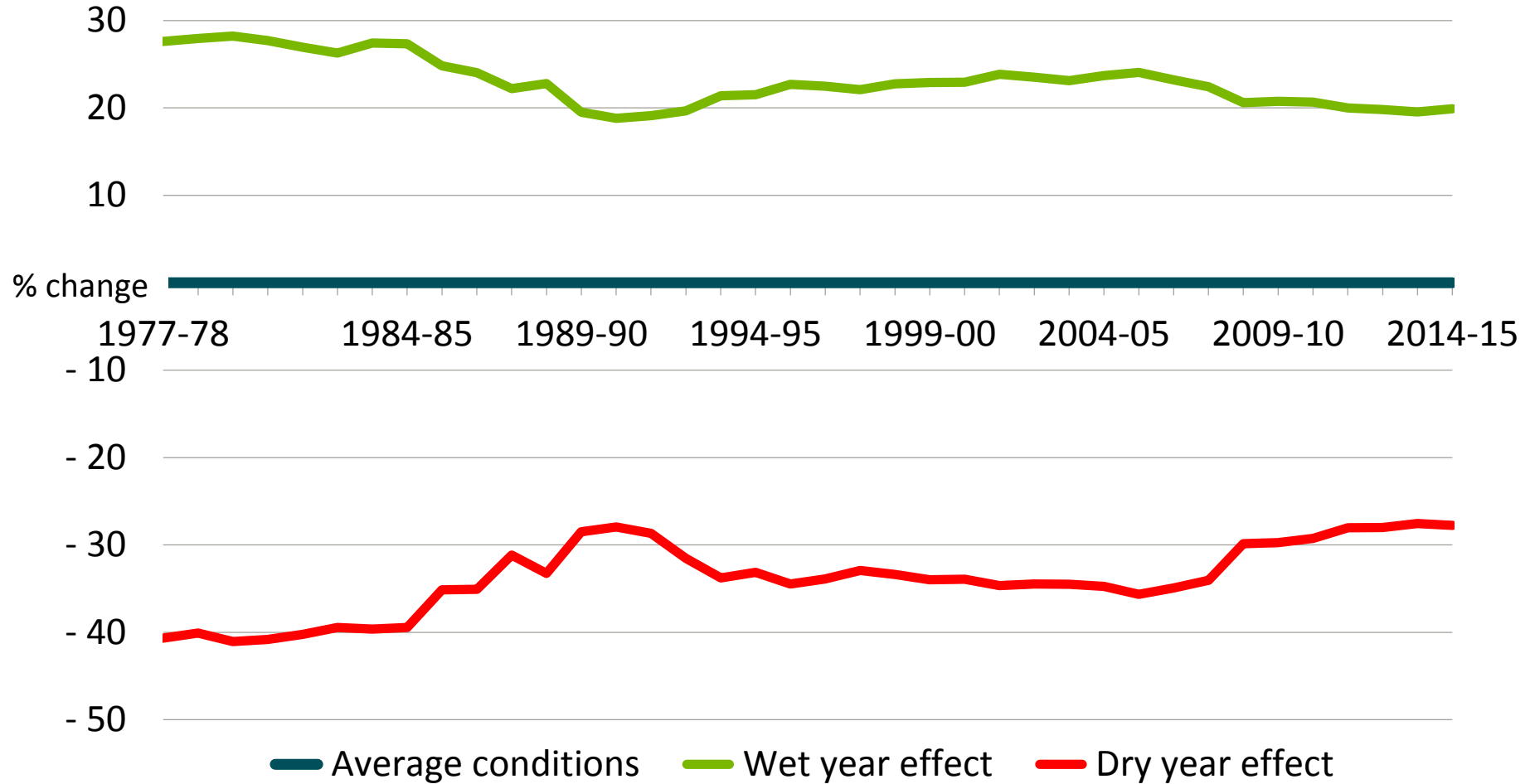
Climate adjusted wheat yields



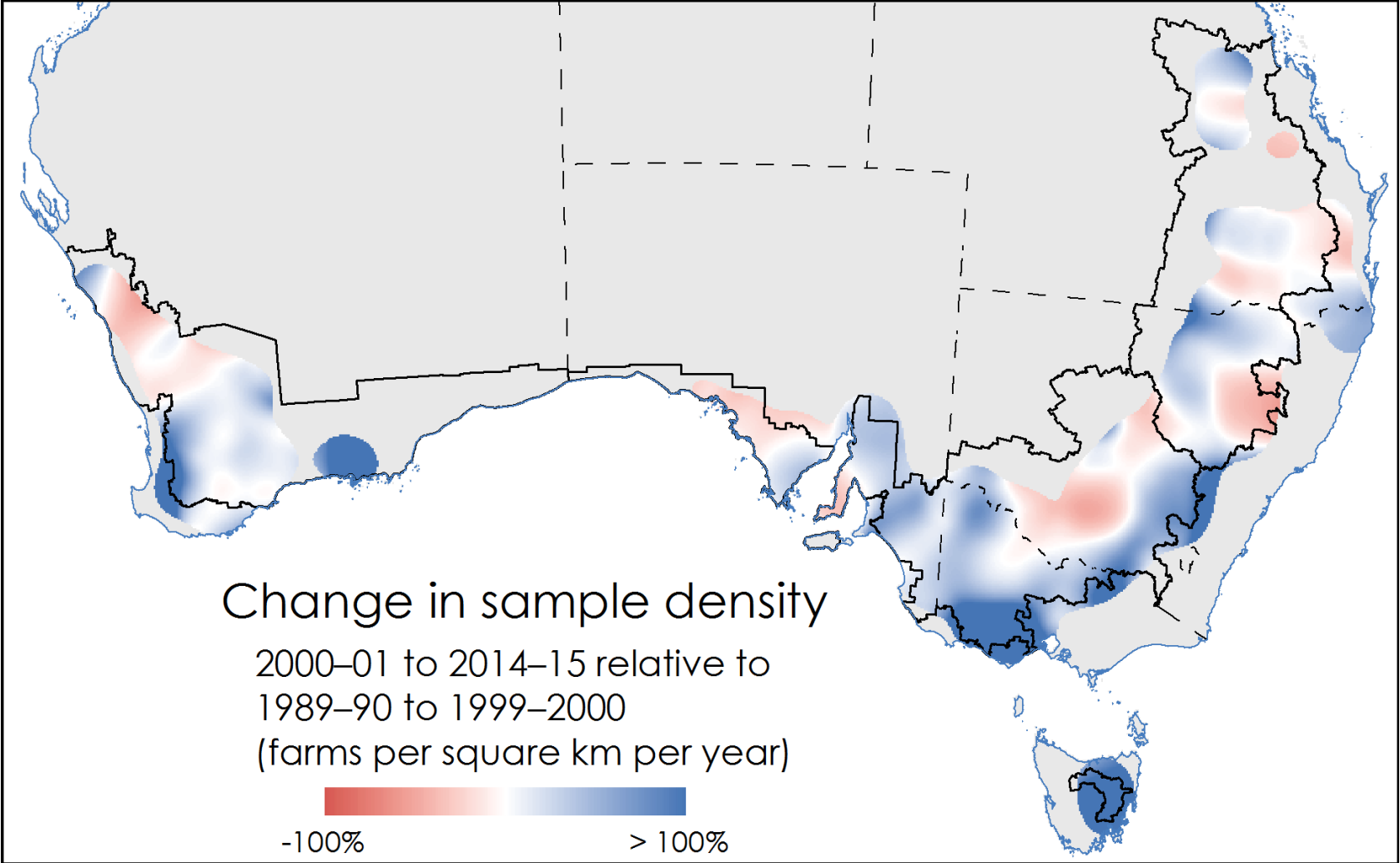
Farm sensitivity to climate



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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