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Hydrology and Earth System Sciences Discussions

Interactive comment on "Changes in Köppen-Geiger climate types under a future climate for Australia: hydrological implications" *by* R. S. Crosbie et al.

R. S. Crosbie et al.

russell.crosbie@csiro.au

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Firstly we would like to thank Anonymous Referee #1 for their kind words and useful suggestions. Our responses to their comments are below.

Technical corrections:

Reviewer #1: The sentence "The majority of annual cropping : : :" on page 7424, beginning at line number 28, reads a bit bumpy and should be reformulated.

Response: This sentence has been rewritten: The majority of annual cropping is under-

taken in Temperate (C) or BSk climate types, under the current distribution of cropping zones there is nowhere in Australia where there is annual vegetation under the BWh climate type.

Reviewer #1: The colouring of the different climate classes in the pictures 1, 2, 4 and 7 does not allow an optical differentiation of some climate classes, especially Aw and Dfb look very similar. This begs the question, why not the original colour scheme of Köppen and Geiger was used?

Response: We agree that the blue colours used for both Aw and Dfb are similar. We used the Köppen-Geiger classification scheme as amended by (Peel et al., 2007) and as we used their criteria we also used their colour scheme. In RGB colour format, Aw is 70,170,250 and Dfb is 55,200,255. These two climate types are separated by several thousand kilometers and people familiar with the climate and geography of Australia would not confuse them. The text of the manuscript will be amended to make it very clear that the Aw climate type only appears across the north of the continent and Dfb only occurs in the south-east.

Reviewer #1: The two left images in figure 5 should be switched as they fit better to the context of the explanations on page 7421.

Response: This is a good suggestion; it will be done in the next version of the manuscript.

Peel, M.C., Finlayson, B.L. and McMahon, T.A., 2007. Updated world map of the Köppen-Geiger climate classification. Hydrology and Earth System Sciences, 11(5): 1633-1644.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 7415, 2012.