Correction to: Model uncertainties in climate change impacts on Sahel precipitation in ensembles of CMIP5 and CMIP6 simulations

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The original version of the article contained errors in the Figs. 1 and 2 captions and captions of the Figs. 1 and 2 were swapped and below are the corrected captions.

Fig. 1 Multi-model mean precipitation biases in JAS for a set of **a** 29 CMIP5 simulations and **b** 11 CMIP6 simulations. Biases (shadings) are computed as the difference between the JAS mean historical simulations (period 1979–1999) minus the JAS mean observed precipitation (period 1979–1999; GPCC). On **a** and **b** the red contours indicate the climatological JAS observed precipitation (from 0 to 16 mm day⁻¹, every 2 mm day⁻¹). Stippling indicate that at least 70% of the models agree on the sign of the multi-model mean bias. Probability density function as obtained from a set of 3 million of randomly computed ensemble of 11 CMIP5 **c** multi-model mean bias and **d** inter-model bias spread for the western Sahel precipitation (black line) and the central Sahel precipitation (red line). On panels **c** and **d**, the vertical lines indicate the multi-model mean bias and the inter-model spread in precipitation biases, as obtained from the set of 11 CMIP6 simulations.

Fig. 2 a CMIP5 multi-model mean change in precipitation as obtained by the difference between the period 2060–2099

(rcp8.5 emission scenario) minus the period 1960–1999 (historical emission scenario), for JAS. The red contours show the multi-mean mean historical precipitation (from 0 to 16 mm day⁻¹, every 2 mm day⁻¹). **b** same as **a** but for the CMIP6 multi-model mean precipitation and with the historical and ssp585 emission scenarios. Stippling indicates that at least 70% of the models agree on the sign of the multi-mode mean precipitation change. Inter-model spread in precipitation change (colour) with the inter-model spread in historical precipitation (contour) for the **c** CMIP5 and **d** CMIP6 simulations. Stippling indicates that uncertainty due to model formulation account for at least 80% of the total uncertainty (see the text for further information). **e** Change in precipitation for each model over the Western [10N–20N; 20W–5W; “W”] and the central [10N–20N; 5W–20E; “C”] Sahel (see the boxes on the panel **a**). The grey shading indicates the inter-model standard deviation and the cross the multi-model mean average in precipitation change. CMIP5 simulations (“5”) are represented by a filled circle while CMIP6 simulations (“6”) are represented by an empty square. **f** Probability density function as obtained from a set of 3 million of randomly computed ensemble of 11 CMIP5 multi-model mean precipitation change for the western Sahel precipitation (black line) and the central Sahel precipitation (red line). The vertical lines indicate the multi-model mean precipitation change as obtained from the set of 11 CMIP6 simulations.

In the caption of Fig. 6 the overbars are difficult to read. Below is a corrected caption

Fig. 6 Inter-model spread in precipitation change (mm day⁻¹) when removing the uncertainties that are due to **a** ΔP_{therm} (i.e. $\Delta P = \Delta P_{therm} + \Delta P_{shift} + \Delta P_{weak} + \Delta P_{cross}$), to **b** ΔP_{weak} (i.e. $\Delta P = \Delta P_{therm} + \Delta P_{shift} + \Delta P_{weak} + \Delta P_{cross}$), to **c** ΔP_{shift} (i.e. $\Delta P = \Delta P_{therm} + \Delta P_{shift} + \Delta P_{weak} + \Delta P_{cross}$) and to **d** ΔP_{cross} (i.e. $\Delta P = \Delta P_{therm} + \Delta P_{shift} + \Delta P_{weak} + \Delta P_{cross}$). ΔP is computed for each model and the overbar indicates

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the multi-model mean. Results are given in colour for the CMIP5 ensemble and in contours for the CMIP6 ensemble.

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In the conclusion, there is a typo in the formula, that is:

$$\Delta P = \Delta P_{therm} + \Delta P_{weak} + \Delta P_{cross} + multi\ model\ mean\ \Delta P_{shift}.$$