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Precipitation change scenario and their relation with moisture transport and convergence projections in southern south America

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PRECIPITATION CHANGE SCENARIOS AND THEIR RELATION WITH MOISTURE TRANSPORT AND CONVERGENCE PROJECTIONS IN SOUTHERN SOUTH AMERICA

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Objective: Analyze the possible relationship between future summer precipitation scenarios in southern South America with future projections of moisture transport and convergence.

Data:

- GCMs selected: CCCMA-CGCM3.1(t63), GFDL-CM2.0, MRI-CGCM2.3.2
- The A1B scenario was used to prepare climate change scenarios for the periods 2020-2029, 2040-2049 and 2070-2079 with respect 1990-1999.

Conclusions:

- The comparison between the changes projected in precipitation and the ones for moisture convergence show in most of the cases (models, temporal horizons and sub-regions) a coherent pattern with positive changes of both variables considering convergence as the negative value.
- There is a consistent relationship in the three regions between the zonal and meridional moisture transport differences, between projections for 2070-79 and simulations for 1990-99, with what precipitation projected changes show.

