# Walker Circulation strengthening due to an Atlantic Meridional Overturning Circulation collapse.

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Changes in the Atlantic Meridional Overturning Circulation (AMOC) have been attributed as the driver of past abrupt climate changes, furthermore it is projected to slowdown in the future global warming scenario and it has the potential to shut down. Although a shutdown is not a very likely possibility, it is indeed a high impact one so, analysing the implications of this possible change is essential. In this study, we use a coupled climate model to simulate an AMOC shutdown and analyse its global effects with particular focus on a key area that is also a driver of the climate around the world: The Tropical Pacific. It is found that through a combination of pressure gradients, tropical basin teleconnections and a rearrangement of the Hadley cell and the Inter-Tropical Convergence Zone (ITCZ), the Walker Circulation in the Tropical Pacific gets intensified which could potentially counteract the weakening effect exerted on it by the greenhouse warming and have implications on the variability and characteristics of El Niño Southern Oscillation (ENSO).

Keywords: AMOC, Walker circulation, ITCZ

 