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## Lagrangian analysis of atmospheric water balance over the Bay of Bengal

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The origin of the atmospheric freshwater fluxes into the Bay of Bengal (BoB) are traced with Lagrangian water trajectories for both present and possible future climates. The water is traced backward from the precipitation at the sea surface to the evaporation regions. In the present-day simulation, the source is mostly from the Western Indian Ocean and near the Western Australian Coast. In the future climate scenario, simulated by EC-Earth, the origin of the moisture will not be the same as the present climate. In addition to it, the Bay of Bengal sourced water is also traced from the evaporation region to the precipitation locations. Most of the BoB originated moisture is precipitating within the neighbouring areas of the drainage basin and some part is transported into the Pacific Ocean. The Lagrangian model TRACMASS is currently running and a detailed analysis and results will be presented in the conference.