



circulation of the upper layer of the south Indian Ocean

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The south IO is characterized by high variability and mesoscale eddies. After separation the East Madagascar Current forms dipoles that continue to the south-west and connect remote (eco)systems. The Mozambique Current breaks up in eddies that move southward. They connect upstream to the Indonesian Through Flow and downstream to the Agulhas system. East of Madagascar the 'South Indian Ocean Counter Current' (SICC) flows to the east into the Leeuwin Current system while submerged eddies form a return flow to the west.

Hypotheses on the coherence of these flows range from local scale frontal systems to large scale connection via the subtropical super gyre.

We aim to present a coherent large-scale picture of the upper south Indian Ocean circulation, the role of the eddies as connectors and drivers of vertical exchanges that may control observed large-scale phenomena like the plankton blooms east of Madagascar.