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Northern Indian Ocean bio-physical interactions at the mesoscale

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In the northern Indian Ocean, monsoon-driven seasonally reversing currents are most likely influencing biogeochemical fluxes and ecosystem dynamics. One major mechanism associated with these bio-physical interactions is the formation of small-scale structures that mediate exchanges between open-ocean and coastal environments. We performed two interannual simulations of increasing horizontal resolution (eddy permitting: 25 km and eddy resolving: 9 km) covering the northern Indian Ocean. This allows to investigate and quantify the contribution of mesoscale dynamics to the biogeochemical budget associated with Indian Ocean northern boundary currents.