2015-2016 coral-bleaching event in Madagascar. Case of the Southwest region

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Due to abnormal rise of the sea surface temperature and the El Niño event, NOAA officially announced the third global coral bleaching event in July 2015 in the three main oceanic basins (Pacific, Atlantic and Indian). In the Southwest Madagascar, a monitoring of the bleaching degree and magnitude was performed every two months in 2016, in 8 stations of the Bay of Toliara and 4 stations in the Bay of Ranobe using the Western Indian Ocean monitoring guide. The sea surface temperature from 2015 to 2017 was also analyzed using “Aqua Modis SST 4km” by Nasa data. The bleaching rates were 48% and 55%, respectively on the reefs of the 2 bays. Indeed, some species in the study sites have managed to survive by recovering zooxanthellae, but most die and covered with algae. Coral bleaching associated by mortality not only have impact on coral communities, but they also have impact on fish communities and the fishermen communities who depend on coral reefs and associated fisheries for livelihoods and wellbeing. Local action plans and government decisions need to be considered to reduce the human impact on reef ecosystems and subsequently strengthen their resilience.