Towards a sustainable safeguarding of coastal ecosystems: using an adaptive strategy of filaos (*Casuerina equistifolia*) plantation to fight against the sanding of coral reefs and mangroves in the bay of Ranobe – Southwestern Madagascar

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The coastal and marine ecosystems in the tropical regions, particularly in the Southwest Madagascar are threatened by the advancement of sand dunes, exacerbated by climate change. To safeguarding the conservation and the management efforts since more than one decade in the area, the Young reSearcher Organization with many NGOs working on marine conservation, planted in June 2016 (fresh season), 500 seedlings of filaos (*Casuerina equistifolia*) of about 20 cm height in the arrow (575 m) of sand dunes. The plantation was made into four lines in which each line was separated by 1.5 m of width, and perpendicular to the direction of the dune move and the prevailing wind. The holes are plugged by soil from under the tamarind tree which consist a mixture of dead leafs being useful as natural compost. The plantation is directly followed by the first watering that was planned weekly until the raining season (in December) by the members of fishermen community. Six months later after plantation, maintenance, watering and monitoring, 131 seedlings died and the 369 (alive) remaining grew up very well on the sand dunes with average height of 80 cm. These results show a success rate of 74%, a very remarkable value if we refer to all reforestation system in the region with dry and semi-arid climate. According to these adaptive strategies of plantation, using *Casuerina equistifolia* as a biological material to stabilize the advancement of dunes can be one of the best applied solutions to safeguarding sustainably the coastal ecosystems in the area and anywhere else in the world that encounter sanding issue.