

Project Update: July 2021

Our project started during the COVID-19 pandemic period in October 2020. We started the social communication about the sun coral invasions. In 2020, sun corals were reported occurring in shipwrecks in Pernambuco < 90 km from the MPA Costa dos Corais (Fig. 1). We produced and shared on social media a short documentary about the problem of artificial shipwrecks as a stepping-stone to sun coral invasion in Brazilian coral reefs (Fig. 2, www.youtube.com/watch?v=GxVADp_MJsg). We also produced posts on Instagram detailing the important steps of sun coral invasion process in Brazil; introduction, survival, establishment, dispersal (including artificial shipwrecks as a facilitator) and ecological impacts (Fig. 3, <https://www.instagram.com/p/CNtA7rxlvUw/>). Additionally, we started fieldwork activities in January 2021 using scuba diving to take ~6,000 photo-quadrats (Fig. 4) to monitor potential arrive of sun corals in MPA Costa dos Corais (12 reef sites), and fortunately, we didn't find them. These data will also be important to access vitality conditions, abundance and richness of native benthic species to investigate the main research question of our project: how vulnerable are reef communities to invasion impacts based on native species biological characteristics? Some management actions were also conducted in partnership with environmental agencies in Pernambuco and Alagoas governments (Fig. 5) to implement public laws and regulations to avoid sun coral invasion.



Figure 1. High coverage of Sun Coral (*Tubastraea* spp.) reported in 2020 on artificial shipwreck Walsa intentionally sunk in 2006.



Figure 2. Documentary poster available on YouTube: "Artificial Shipwrecks: private gain, generalized impact". www.youtube.com/watch?v=GxVADp_MJsg

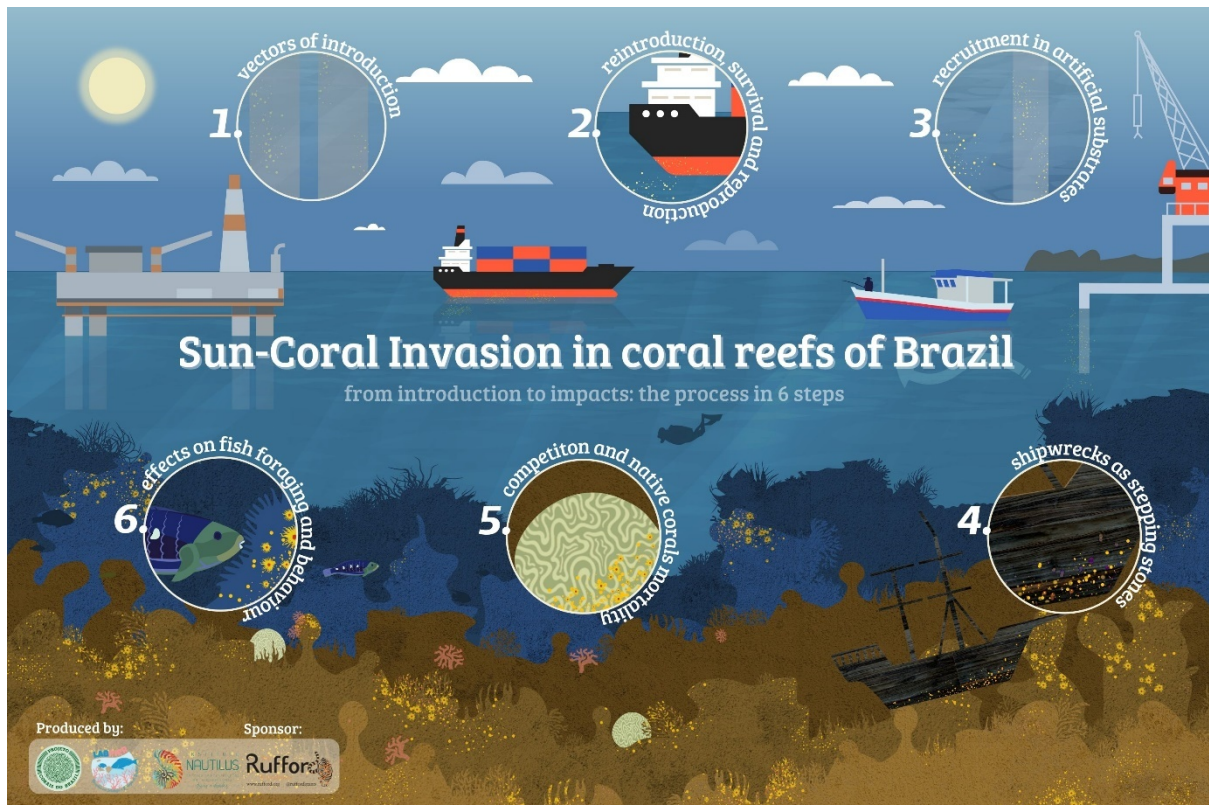


Figure 3. Infographic about Sun Corals invasion process on coral reefs of Brazil available on Instagram. <https://www.instagram.com/p/CNtA7rxlvUw/>

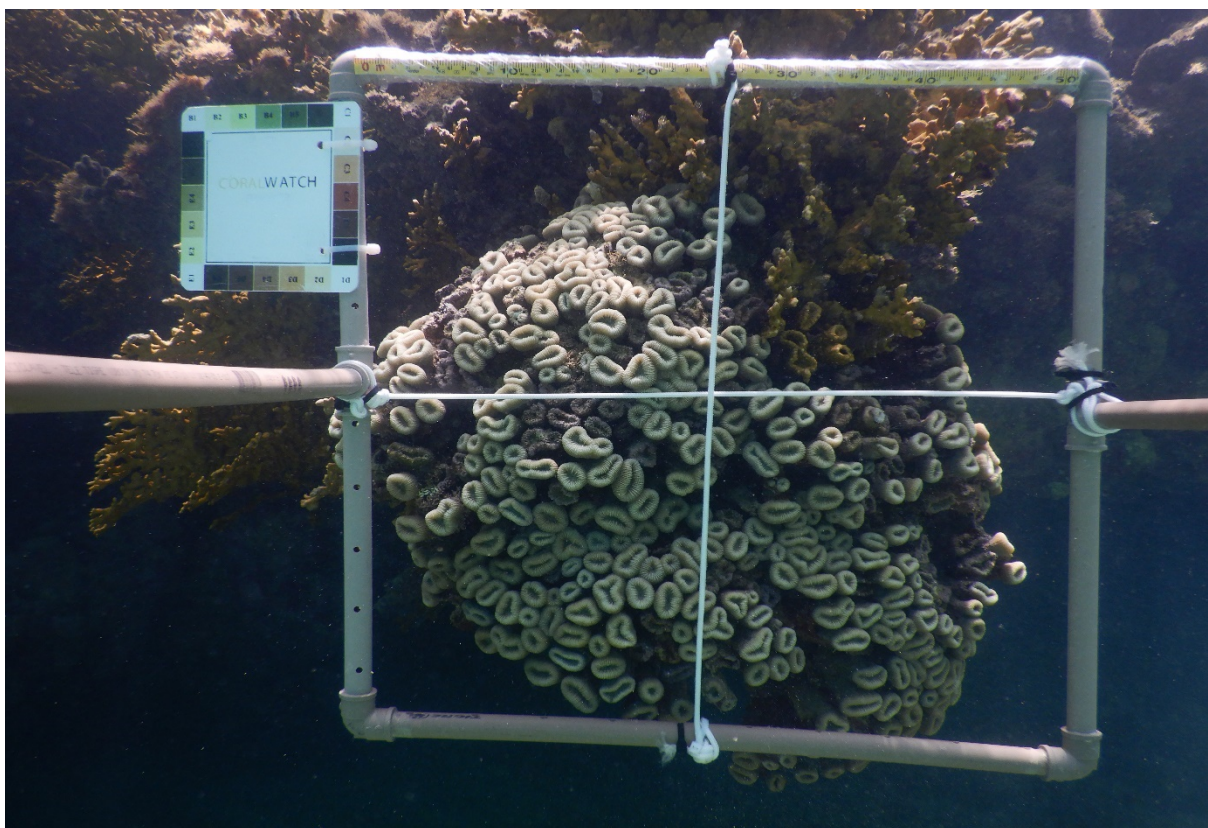


Figure 4. Photo-quadrat taken during a fieldwork activity in non-invaded coral reefs in Maragogi, Alagoas state, Brazil.



Figure 5. Meeting with representants of environmental agencies and NGOs at Alagoas state to build a police tool to implement actions to avoid Sun Corals invasions.