

Koral Print

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
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Advisor: Claudia Florin

Topic: Restoring reefs using technology and recycling

Audience: FEMSA

Sustainable Development Goals

SDG #12: Ensure sustainable consumption and production patterns

SDG #14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Executive Summary

In Mexico, 755 reef ecosystems have been identified, with a varied composition that includes 420 coral reefs, 259 rocky coral reefs and 48 rocky reefs. Unfortunately, it is estimated that 10% of these reefs are in a process of deterioration, while in the last four decades there has been an alarming decrease of 50% in the coral population. This phenomenon has been exacerbated by the bleaching of corals, which have caused the death of tens of thousands of reef colonies in the region of the Mexican Caribbean.

Faced with this critical situation, the FEMSA Group, leader in the production of soft drinks in Mexico that has a wide presence in Latin America, committed to contribute to the #UnMundoSinResiduos goal. Our focus is on the restoration and conservation of coral reefs, using biopolymers and recycled PET to create reef structures more resistant and less polluting than traditional artificial ones. In addition, the restoration of "La Gran Barrera Maya" is sought, in collaboration with the local community, with the aim of establishing a circular economy that recovers plastics, generates employment and promotes environmental awareness in the area. On the other hand, given the urgency of this problem, Koral Print emerges as an innovative and sustainable response. This initiative uses 3D printing technology with edible biopolymers for animals, recycled PET and toxin neutralizing additives to create habitats that not only repair damaged reefs, but also promote environmental awareness and reuse of materials in the restoration process.