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Huawei-IUCN Tech4Nature Initiative Announced New Phase of Coral Reef Protection Project

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Huawei Mauritius, International Union for Conservation of Nature (IUCN), and EcoMode Society has embarked on a new phase of the Tech4Nature Mauritius project to study species' reproductive success in a restored area of reef in Mauritius.

The new phase directly follows a key project milestone achieved in June in which the partners, supported by the local community, successfully transplanted 25,000 coral fragments cultivated in coral nurseries to a degraded area of the reef ecosystem in Pointe-aux-Feuilles, a 20-km^2 site off the east coast of Mauritius. This project is one of the first its type in the Western Indian Ocean.

To monitor the mobility of species at the coral reef restoration site and determine the factors that disturb reproductive success, a solution comprising cameras and GPS receivers, 4G, and cloud has been deployed. The second phase of the project will use AI-based data analysis to guide the conservation decisions, support the research of marine biologists, and educate the public on the importance of reef conservation and restoration.

"The project will help us to have more information to manage and regulate public use," said Nadeem Nazurally, President of the EcoMode Society. "It will also bring biodiversity conservation closer to the general public, as videos and other dissemination materials are planned through the mobile app. In collaboration with IUCN and Huawei, the project allows us to make a qualitative leap by incorporating new technologies to the monitoring and conservation of species."

The 243-km^2 lagoon created by the 150-km reef system of fringing coral is home to a rich array of aquatic life, including 61 species of macroalgae, 110 species of corals, 132 species of fish, and many endemic species. However, the reef system faces many threats, including overfishing, pollution, and changing seawater composition due to the removal of mangroves and seagrass. Climate change has caused a rise in sea levels, more extreme storms, and increased sea temperatures. Restoration efforts for coral reefs can boost resilience against climate change by protecting coastal regions against erosion and mitigate rising sea levels.

Early monitoring at the restoration site has shown an increase in local biodiversity, and an additional 1,890 coral fragments are currently being propagated in the coral nursery to expand the restoration area. With the site's designation as a Voluntary Marine Conservation Area (VMCA), the momentum for revitalizing biodiversity in the reef ecosystem using the power of technology and partnerships is accelerating.