

Tourism and its environmental impact on the D.R. coastline

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Special to The Star

More than 36 years ago, Punta Cana Resort & Club acquired some 30 square miles of virgin property on the east end of the Dominican Republic with eight miles of coastal reef habitat on the Mona Passage. Richly endowed with subtropical forests, coral reefs and abundant terrestrial and marine life, this once isolated area was targeted for tourism development.

Throughout those years Punta Cana Resort & Club has carefully and thoughtfully developed its property while seeking to conserve its natural environment and maintain a respect for the local communities. Pioneering efforts by the group in the development of public infrastructure, including roads, an international airport, energy generation and wells, opened up the Eastern coast of the country to the economic development in the form of tourism.

Today, the Punta Cana region is the fastest-growing tourist destination in the Caribbean. The Punta Cana International Airport ranks behind only San Juan, Puerto Rico and Cancun, México in yearly passengers, receiving 1.6 million passengers a year.

There are more than 40 hotels in the region with approximately 24,500 hotel rooms whose related businesses and services provide approximately 35,000 jobs. The Punta Cana region is cited as the source for a third of the foreign exchange of the Dominican Republic.

While providing numerous bene-

fits to the Dominican economy and the progress of the country, this rapid growth has also had played a significant role in the growing impact on the social and environmental community that supports the tourist industry. This impact has been especially evident in the coastal resources of Punta Cana, including impacts on the coral reef habitat, mangroves, beaches, sea grass beds and fisheries.

Coastal degradation is widespread throughout the Caribbean because of a combination of factors: overfishing, destruction of key habitats — particularly mangroves and sea grass beds — contamination by offshore and onshore pollutants, sedimentation from onshore development, degradation of water quality damage to coral reefs by hurricanes, cyclones and severe weather events and the bleaching triggered by global climate changes.

In the 1980s, before the arrival of mass tourism to the Punta Cana region and most of the coastal development that has since taken place, Punta Cana Resort & Club had begun to detect serious environmental change to the local coastal ecosystem.

The coral reef, dead in many areas, had become devoid of fish, lobster, conch and sea turtles. The erosion of the beach became each year more significant.

Offshore pollution, overfishing and increased nutrients in the reef ecosystem were to blame.

In 1994, Punta Cana Ecological Foundation was born with a commitment of financial resources, a donation of 1,500 acres of forest reserve and a mandate to imple-



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ment programs and projects that improved and protected the interests of the local environment and community while improving the bottom line of the business. The programs of the Foundation would serve as a model for developments in the region and thus contribute to the sustainable development of the Dominican Republic. For too long environmental groups have served as an obstacle to business. The aim of the Foundation is to prove that environmental sustainability done right can make businesses more competitive and improve their bottom line.

Ultimately, it is the private sector that has the power to reverse patterns of environmental degradation.

Punta Cana Resort & Club had commissioned numerous studies to identify the causes of the degradation of the coastal habitat and to address them. In 1993, the Punta Cana Dive Center was initiated as a research and education center that would link tourists to the dive resources of the region and use funds generated from the dive operation to better understand and help protect the ecosystem.

One year after, the Foundation and Punta Cana Resort & Club co-sponsored the United Nations Caribbean Conference on Sustainable Tourism, bringing together business leaders, scientists and world experts to discuss possible solutions to the growing pressure of tourism development.

The effort showed a return on investment in 1996 when the Punta

Cana Resort & Club won the American Express, Green Hotel of the Year Award for Conservation.

A joint effort between Punta Cana Resort & Club, Punta Cana Ecological Foundation and Cornell University was born in 1999 with the objective to build and operate the Punta Cana Center for Sustainability and Biodiversity as a research and education facility dedicated to implementing principles of sustainable tourism throughout the Punta Cana region and the Caribbean and the creation of sustainable solutions to the conflict between environment and development.

This unique center has since expanded its members to a diverse and distinguished group of institutions including Cornell, Harvard, Columbia, Virginia Tech, University of Miami, Leiden University (Holland), Steven's Institute of Technology, Millikin, and INTEC (Santo Domingo). Today the Foundation has become an integral part of the educational process of many students from the Dominican Republic and other countries.

After numerous studies, several proposals and years of continued decline, in 2004 the Punta Cana Ecological Foundation developed and presented a five-year plan to the Board of Directors of the Resort to restore the coastal ecosystem of Punta Cana. This project sought to develop a comprehensive and holistic approach to mitigating the damage to the coral reef ecosystem, restoring critical habitats such as mangroves, improving local envi-

ronmental conditions in the Punta Cana region, and implementing a management plan that included all local stakeholders that would allow the reef system to recover on its own.

The resort accepted the proposal with a first year budget of \$1.54 million to be managed by the Ecological Foundation that has since hired fulltime international marine experts to help implement the plan, including an oceanographer, marine biologist, and enlisted the collaboration of numerous local experts including the national aquarium and other not-for-profit foundations.

The first step in this program was implementing a water quality monitoring and improvement program to identify problem areas and address them as quickly as possible. The foundation established regular coastal water quality monitoring program that allowed systematic corrections to be made if and when problems were detected.

The foundation, along with the resort management, reduced nutrients introduced in the coastal ecosystem while addressing the degradation and loss of mangrove habitat in the area. Mangroves provide important nurseries for reef fish, control nutrients flows, protect against damage from hurricanes and provide a stabilization element for beaches.

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