

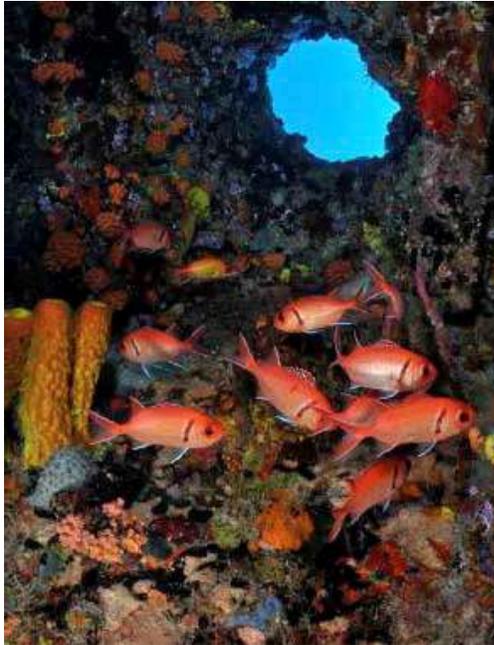


COMMUNITY SUSTAINABLE MANAGEMENT OF  
*La Caleta National Marine Park*



## Background

by Ruben E. Torres and Vinicio Ulloa



*La Caleta* National Marine Park is located 22 kilometers from Santo Domingo, next to the town of Boca Chica and just three kilometers from the Las Americas International Airport . The waters of this park are rich in coral reefs and reef fishes have represented food and income for those who live in La Caleta and its vicinity.

The Dominican Government established it as a national park in 1986. Since then it has been a recreational area for Santo Domingo residents as well as tourists visiting the country. Scuba divers, in particular, enjoy the clear waters and its coral reefs as well as multiple ship wrecks which are now populated with marine life.

The increase in the number of American and European tourists in Boca Chica has increased the demand for fish and shellfish from hotels and restaurants and has also affected illegal fishing in the protected waters of the park. This is affecting legal fishing, which is carried out outside the park, due to the decrease of the fish population, and is endangering the livelihood of the fishermen and their families.

The drop in the fish population at La Caleta is alarming, but there is hope. Studies carried out in protected marine areas throughout the world show that reef fish populations can be recovered in a period of 4 to 6 years if fishing regulations and its enforcement are effective. If fishing around La Caleta is reduced and park regulations are observed, the fishermen that provide services to divers in the aquatic center will be able to obtain net income equivalent to 90% of their present net income. Recovery of the fish population at La Caleta will generate benefits for the communities of La Caleta and Boca Chica, as well as for the tourists and the marine ecosystem. Fishermen have understood La Caleta's importance as a tourist destination and have started to complement their income providing services to divers in the park.

Reef Check Dominican Republic Foundation (RCRD) for several years has been working at *La Caleta* National Marine Park hand in hand with the Ministry of Environment and Natural Resources of the Dominican Republic under the auspices of the Environment and Natural Resources General Law (64-00).

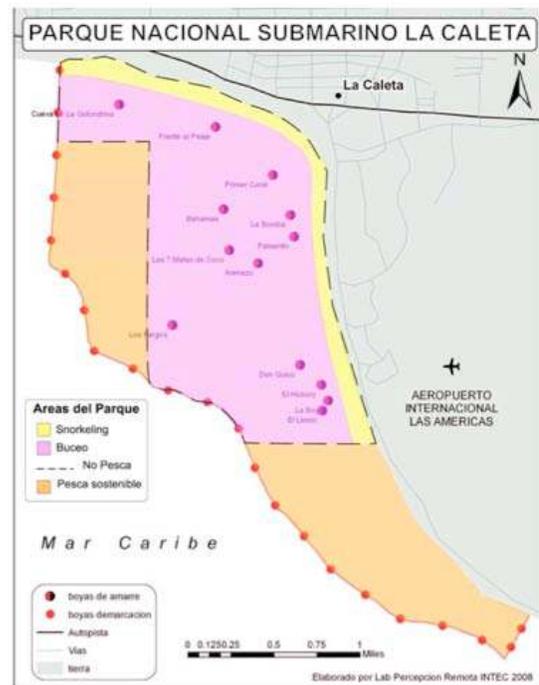


The first step was the signing of a cooperation agreement to support the park's management which consisted of monitoring the health of the zone's reefs, training users, improving the infrastructure for general visitors and for scuba diving, implementation of a best practices, and supervision and protection of the area permanently to

ensure fulfillment of existing regulations. Protection includes establishment of a buoy system to properly delimit the spaces for boats, in a way that they do not affect the coral reefs.

Once the agreement's period elapsed, Reef Check requested the Ministry to allow Reef Check to co manage *La Caleta* National Marine Park which resulted in the approval and signing of a joint management agreement which appointed a board and delineated the responsibilities of each for the benefit of the park and its surrounding community.

RCDR is taking action to turn this park into a role model of sustainable protected area management in order to replicate it in other similar areas of the Dominican Republic. Funds collection through several international agencies such as the Inter American Foundation, the Small Subsidies Programme – UNDP, UNEP-GCFI, the Dominican Alliance for Sustainable Tourism, the British embassy in DR, and local institutions has provided good support to start the project.



### What problems does it solve?

The Food and Agriculture Organization of the United Nations (FAO) published a study which shows that: “19% of the marine fish stocks are overexploited, 8% are depleted”, although the situation “has been relatively stable for the past 10-15 years”, according to a world report regarding fisheries published in March 2009. Of the 27% of world fishing resources that would be overexploited or depleted, 20% is moderately exploited and 1%

is being recovered “after having been depleted”, stated FAO. And “52% rank as fully exploited and are producing catches that are at or close to their maximum sustainable limits.”

The World Resources Institute (WRI) states in its most recent study published in the Dominican Republic that: “Overfishing has hurt the country’s fishing. The report estimates that income from the reefs and fishing which is dependent on the mangroves has been reduced to 60% in the last decade. This trend threatens the livelihood of many fishermen in the Dominican Republic and it is expected to continue unless overfishing is stopped”.

Unsustainable fishing has turned into very precarious the once abundant population of fishing resources in the waters of La Caleta National Marine Park.

Up to now, fisheries have provided food to hundreds of thousands of Dominicans and foreigners. However, because of poor implementation of close seasons during the



reproduction period and the use of fishing practices that harm the fish captured, even when returned to the sea, these important fishing resources have been drastically depleted.

Biodiversity, as well as fishing resources, is threatened, thus diminishing the diving tourism potential of the Park. The diving industry

provides economic benefits to local communities. This income has been decreasing, which in turns results in the community continuing its fishing activities that worsen the situation.

The methodology adopted by RCDR shows the ecological and economic benefits that conservation of these protected marine areas represent. With the implementation of economic alternatives such as a center of aquatic activities, a restaurant, and gift shop, it is intended to stimulate local economy so that communities receive benefits while protecting the park so that it may cater to an increased number of visitors.

## Community management of La Caleta park

Arising from a support agreement for its management and with the active participation of several institutions, the work methodology has been set up as follows:

### Coral reefs health study

The reefs are the main resource to protect with the creation of this important protected marine area and a source of livelihood for the La Caleta community. They constitute a shelter for thousands of species ecologically and economically important.



### Integration of La Caleta community

Workshops were held with direct and indirect users (divers, fishermen, park rangers, environmental police, DR navy, community members) to make them aware of the changes in the management of this important protected area. Also, lectures were given regarding management of marine protected areas, sustainable fishing, buoys, and climate change.

### Delivery of the diving flag

In a simple ceremony filled with emotion the diving flag was delivered to the La Caleta community, represented by the park's administrator, the directors of the educational center Francisco del Rosario Sanchez and the La Caleta School, community leaders, and a representation of fishermen.

### Buoy placement in the Park

Demarcation of the marine boundaries of the La Caleta National Marine Park was completed. The demarcation buoys clearly indicate the areas within and outside the park that facilitates implementation of the various uses of the park and existing regulations. A system of mooring buoys was installed in the diving sites of the park. These buoys besides physically identifying the diving spots prevent vessels from dropping anchors, which constitute one of the main impacts on coral reefs, destroying the resources they are supposed to enjoy.



### **Buoys' maintenance**

The buoys system periodically receives maintenance to ensure optimum performance and condition.

### **Incentive for the use of sustainable fishing practices**

An essential part for the good development of the process is counseling and training of the community. Support was given to the fishermen to form the Production and Work Cooperative of the La Caleta Fishermen and Tourism Service Providers (COOPRESCA), and training was provided in subjects such as the environment and management of protected areas. COOPRESCA, thanks to the training provided, has implemented sustainable fishing practices, as an alternative to present techniques, which for decades have harmed the fish population of the area, and therefore the Park itself. This process has resulted in larger fish populations.



### **Incentive to change the economic model of the fishermen's community**

Fishing represents the livelihood of the local community, in many cases generating the near deterioration of the local fishing grounds. A process of change has been initiated in the manner of benefiting from the Park's resources, both from fishing as well as from scuba diving visitors, to ensure sustainable, long-term benefits. This new approach is even increasing the fishermen's profits as the fish population is recovering.



### **Building lobsters casitas to be placed in the Park**

After the exchange trip with Mexican fishermen, one of the most interesting experiences was the lobster sustainable fishing through the practice of building lobsters casitas. These are structures used as an artificial refuge for lobsters.



This system, developed in Cuba several decades ago, is presently used throughout the Caribbean region as a sustainable way of fishing lobster. It consists of flat cement structure of approximately 1.5

x 1.2 meters in dimension elevated from the ocean floor by two lateral legs 12 cm high.

These lobster casitas are placed in areas away from the coral reefs to reduce fishing pressure in them, and represent an easy, sustainable and highly productive manner of lobster fishing. The community participates in the building of the houses as well as the

*jatigos* (nylon bags) which result in less damage to the lobsters. Fishermen are trained in the use of the casitas and jatigos.

## Results

Thanks to the community's participation and the institutions' support, Reef Check Dominican Republic initiative carried out in La Caleta, achieved the following results.

- Placement of mooring buoys at the scuba diving areas, which minimized the impact of boat's anchors on the zone's corals. They also serve to delimit clearly the areas within and outside the park, which facilitates implementation of the various uses of the park and implementation of existing regulations. The buoys were obtained through Reef Check and the Coop provides maintenance.
- Organization of educational sessions, which contributed to train local fishermen in the use of sustainable fishing practices and its long-term benefits. During these sessions other subjects were discussed, including management of protected marine areas, sustainable fishing, installation of mooring buoys and climate change.
- Monitoring by the community of reefs and the marine species. The community became the main actors and beneficiaries of the conservationist efforts.
- Implementation of refuges or little houses for lobsters as a sustainable alternative for its fishing.



Use of this work methodology provided the following benefits:

### Economic benefits

- The increasing number of divers and fishes is beginning to show.
- Confidence is returning to the Park.

### Ecological benefits

- The number of fish in the no fishing zones is significant, divers have noticed.
- The pressure on the reefs is less, because areas were specified for sustainable fishing, also difference is noted outside the Park since the reef acts as a hatchery.

## Cultural benefits

- Unsustainable fishing was eliminated by 90% and monitoring is constant to prevent intruders from entering the area.
- The use of spear guns is prohibited by law in this, and all marine protected areas of the country.

## Global Interest

The Reef Check Dominican Republic Foundation is part of a global network of non-governmental organizations, implementing conservation, education, management of coastal and marine resources projects in over 90 countries and territories. The Reef Check program brings together community groups, governmental agencies, education institutions and businesses.

Reef Check is a component, community based, of the Global Coral Reefs Monitoring Network (GCRMN) and cooperates with government's reports. Reef Check is member of the International Coral Reefs Initiative (ICRI) and the International Coral Reef Action Network (ICRAN). Reef Check provides data and develops systems for the interactive management and monitoring of reefs through ReefBase, the global database for coral reefs. Reef Check's national and regional training programs are provided throughout the world each year.



## For further information visit:

- Fundacion Reef Check Republica Dominicana: [www.reefcheckdr.org](http://www.reefcheckdr.org)
- Status of Coral Reefs of the World: [www.gcrmn.org](http://www.gcrmn.org)
- The State of World Fisheries and Aquaculture. FAO Department of Fishing and Aquaculture, Rome, 2009:  
<http://www.fao.org/news/story/es/item/10270/icode/>

- Valoración de los Ecosistemas Costeros y Marinos en la República Dominicana:  
<http://www.wri.org/project/valuation/caribbean/reefs>



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## Promoters of the National Catalogue for human development in the Dominican Republic

The **UNDP ART GOLD** Dominican Republic program supports the Dominican Republic Government's strategies to reduce poverty and the promotion of democratic governability starting with a holistic management of territorial division, strengthening of local organizations of the public and private sectors and civil society, stimulating territorial competitiveness and promoting employment and sustainable income, including the formation of human capital with emphasis on the most vulnerable groups.

**IDEASS** (*Innovation for Development and South-South Cooperation*) is an international cooperation program supported by UNIFEM, ILO, UNDP, and UNOPS. IDEASS promotes at the international level innovations which have demonstrated that they contribute to human development. IDEASS works in collaboration with the national agencies responsible for science and technology and contribute to the transfer of knowledge and the support of the innovations authors.

