



AUTORIDAD DE  
CONSERVACION Y  
DESARROLLO DE  
CULEBRA



MUNICIPIO DE  
CULEBRA

# **PUBLIC PARTICIPATION GUIDE IN THE DEVELOPMENT AND MANAGEMENT OF NATURAL RESERVES WITH MARINE ECOSYSTEMS IN PUERTO RICO**

**By**

**Joseph Reillo Rey  
and  
Javier E. Rosario Pérez**

## TABLE OF CONTENTS

	Pages
Prologue	1
Description of the required process for writing management plans for marine and natural reserves and its components, including the requirements for modifying these established processes and components of said plans.	2-6
Description of the functions of the decision making authorities for development and implementation of Natural Reserve Management Plans, including whether the Puerto Rico Department of Natural and Environmental Resources (DNER) has the final word in decisions.	7-9
Description of the current legal framework that forms the legal basis for community participation in the development of management plans for MNR, including no-fishing zones. Description of past and current examples including other designations like Conservation Trust sites and terrestrial sites.	10-14
Description of the legal basis for citizen participation during the process of implementation of management plans. Description of the extent to which citizens and municipal governments may participate in daily management tasks, such as monitoring, education, resource restoration, etc.	15-16
User Fees in Natural Reserves: advantages and disadvantages	17-19
Legal Base for Budget Decision Making	20
Legal status of monetary and equipment donations that are stipulated by donors for specific Natural Reserves	21-22
Municipal participation in MPA development and management.	23-24
Recommendations that may enable appropriate local participation in management plan development and implementation of Natural Reserves with Marine Ecosystems.	25-34
Recommendations for financing mechanisms that would strengthen natural reserve management.	35-41



---

## Prologue

The purpose of this study is to compile in one document different investigations or assignments done by attorneys, alumni of the University of Puerto Rico Law School at the request of the National Oceanic and Atmospheric Administration (NOAA) regarding: (1) the concept of natural reserves and marine ecosystems in Puerto Rico and their management plans; (2) the legal base of public participation in the creation and implementation of said management plans; (3) financial mechanisms for natural reserves; (4) other legal concepts, apart from natural reserves, for the protection of marine resources, and (5) recommendations for strengthening the concept of natural reserves with marine ecosystems.

The task involved a wide range of investigations into state and federal laws and regulations which apply to natural reserves with marine elements in Puerto Rico; as well as non juridical sources, such as scientific, ecologic, planning and use of land publications. The investigation also included some interviews with different employees of the Department of Natural Resources and Environment (DNER) and other regulation agencies. The final document is considered an independent study and does not represent the opinion of the DNER or the PB. Citizens interested in participating in the development of management plans of natural reserves of its implementation should contact the Secretary of the DNER directly.

March 2008



## **DESCRIPTION OF THE REQUIRED PROCESS FOR WRITING MANAGEMENT PLANS FOR MARINE AND NATURAL RESERVES AND ITS COMPONENTS, INCLUDING THE REQUIREMENTS FOR MODIFYING THESE ESTABLISHED PROCESSES AND COMPONENTS OF SAID PLANS.**

### **I. NATURAL RESERVES IN PUERTO RICO**

There are many natural areas and resources of enormous ecological value on the island of Puerto Rico, particularly in the coastal region. Coral reefs, mangroves, swamps, coastal forests, sand dunes, beaches and wildlife stand out as the most important. Accordingly, the Constitution of the Commonwealth of Puerto Rico requires the government to ensure the most efficient conservation of these important natural resources<sup>1</sup>. The designation of *Natural Reserve* (NR) is just one of the many mechanisms employed by the Puerto Rican Government in order to comply with its constitutional mandate. There are several definitions at the Commonwealth and Federal level for the concept of NR. In broad terms, to designate a particular natural area or resource as a NR means that the state has decided to protect and manage it according to the guidelines of conservation, preservation and restoration.

The concept of ‘Natural Reserve’ (NR) was used for the first time in Puerto Rico after the approval and adoption of Puerto Rico’s Coastal Zone Management Program (PRCZMP) in 1978. This program applies the term *natural reserve* almost as a synonym of the ‘areas of preservation and restoration’<sup>2</sup> a concept that can be found in the Federal regulation. According to the PRCZMP, NR “are important coastal resource areas, subject to serious present or potential conflicts regarding their use, and they have to be preserved in substantially their present condition or, in the case of natural areas where restoration is possible, restored to their previous natural condition”<sup>3</sup>. The principal goals in these areas are conservation, preservation and restoration.

The definition of the term *conservation* as adopted by DNER, is the rational and sustainable use of natural and cultural resources, with the purpose of improving and maintaining their natural conditions and characteristics for the use of present and future generations; the term *preservation* is used as protection through non-intervention or use of the unique and important natural and cultural characteristics of the resource, in order to guarantee its permanence and perpetuity; the concept of *restoration* involves the rehabilitation of a damaged area to the way it existed in its natural state, or to a higher ecological value, through human intervention and/or natural regeneration, achieving conservation and preservation<sup>4</sup>. Any use within a NR which is not consistent with the objectives of conservation, preservation and/or restoration must be excluded, except if there is public need.

In the United States, the concept of NR was adopted by several entities such as The Office of Natural Reserve Systems of the University of California, and it implies the preservation of natural systems for teaching and investigation. The State of Hawaii has been using the concept

---

<sup>1</sup> Constitution of the Commonwealth of Puerto Rico, VI, § 19 – “Será política pública del Estado Libre Asociado la más eficaz conservación de sus recursos naturales, así como el mayor desarrollo y aprovechamiento de los mismos para el beneficio de la comunidad;”.

<sup>2</sup> Puerto Rico Coastal Management Program and Final Environmental Impact Statement (1978) p.165.

<sup>3</sup> Id.

<sup>4</sup> Coastal Zone Management Regulation, 15 C.F.R. § 923.23.



of “Natural Area Reserves System” since 1971 with the purpose of preserving and protecting the best native ecosystems<sup>5</sup>.

It is important to point out that in the PMZCPR document the concept of “marine NR” is not used. But according to the regulations of Federal Law regarding Coastal Zone Management, based upon which the program was created with the purpose of establishing a national public policy and develop programs for their management, beneficial use, protection and development of water and land resources in the coastal zone of the nation, the NR concept, as used by this legislation, does not have to specifically define if the reserve is marine or on land, because the law upon which the program is based, includes in its purpose the protection of marine elements. For the present legal analysis we will refer to “NR with marine ecosystems”.

The designation as NR differs from other conservation mechanisms, as for example “Special Planning Areas”. The PRCZMP uses this term (SPA) instead of “Special Interest Areas” used in federal regulations. “Special Interest Areas” are defined as important coastal resource areas, subject to serious present or potential conflict regarding their use, and therefore requiring detailed planning<sup>6</sup>. According to the Federal Coastal Zone Management Regulation, these SPA can be used for other purposes which do not include preservation, conservation and restoration<sup>7</sup>.

Since NR with marine ecosystems are the central objective of this report, it is necessary to establish the meaning of ‘coastal zone’. The official PMZCPR definition indicates that the ‘coastal zone’ extends one (1) kilometer inland from the coastline, and seaward up to the limit of the United States territorial waters. At the time of the PRCZMP approval, the territorial waters of the United States extended to three (3) nautical miles from all land areas. In 1988 the United States extended its territorial waters to twelve (12) nautical miles, consistent with customary international law as reflected in the 1982 United Nations Convention on the Law of the High Seas. The Commonwealth of Puerto Rico’s jurisdiction over its territorial waters surrounding the island, according to Article 8 of Public Law 205-96, amending the March 12, 1917 Jones Act, 39 Stat 954, known as the Puerto Rico Federal Relation Law, as amended by Public Law 96-205 from March 12, 1980, extends to nine (9) nautical miles offshore and includes the sea water and underwater lands in this area. The coastal zone extends further inland as far as necessary, to include important coastal ecosystems<sup>8</sup>.

As part of the strategies designed to improve the development in the coastal zone, PMZCPR recommended the formal designation of twenty-six (26) important coastal areas as NR. As of today, 28 areas have been designated administratively, including 21 of the 26 areas originally identified. With the approval of PMZCPR, 8 more areas were designated as SPA, including all the mangroves systems of the Island. Other strategies recommended in the PRCZMP are the formulation of detailed public policy and the enactment of management plans and regulations to guide development in the identified *NR* and SPA.

Within the Federal jurisdiction there are various designations for the protection of coastal resources, among which MPA<sup>9</sup> stand out. . Executive Order 13158 defines them as “any area of

---

<sup>5</sup> Zoning Regulations of Puerto Rico. Puerto Rico Regulations, Title 23, Planning Board 650 §§ 1638-1750

<sup>6</sup> Id.

<sup>7</sup> Coastal Zone Management Program Regulations 15 C.F.R. § 923.23

<sup>8</sup> Bush, Webb, Liboy, Hyman & Neal. Living with the Puerto Rico Shore. Duke University Press 1995 p 143.

<sup>9</sup> Executive Order No. 13, 158, 65 Fed. Reg. in 34909.



the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.” This term is generally applied to all areas with any degree of protection. The World Conservation Union (IUCN) defines MPA as any area affected by the ocean tides, any submerged land, including the water that covers it, living organisms and any historical or cultural resource related to the system that has been reserved by law or other effective mechanisms for the protection of the marine ecosystem<sup>10</sup>.

The use of the term MPA to describe areas with different goals and protection levels as protected marine and coastal areas with land, sea, estuary and marine environments, has led to considerable confusion<sup>11</sup>. Furthermore, several related descriptions are in use, such as marine parks, marine preserve, marine, coastal or littoral reserves, as well as official terms like state park, national wildlife refuge, national park and national coastal reserve. National coastal reserves are similar to the MPA concept. Due to the fact that this term is of general use, its exact definition will differ from state to state and from jurisdiction to jurisdiction. In order to define the different MPA, the National MAP Center has developed a classification system which makes it possible to describe them according to their predominant goal, such as conservation of natural resources or cultural patrimony; or the production of sustainable resources<sup>12</sup>.

The Department of Natural and Environmental Resources (DNER) has not established a formal definition for the concept of *marine NR*. Nonetheless, in the Law of Tres Palmas Marine Reserve at Rincón, the state legislation defines the concept of marine NR for the first time in our jurisdiction as “area protected from the impact of human activities in order to allow its recovery, maintain its biodiversity, and reduce conflictive uses by separating compatible activities; it is also a reference area where natural processes can be studied<sup>13</sup>”.

In its disclosure of motives, the legislation declares as purpose of this designation the prevention of coastal development and other unwanted human activities, and the establishment of a marine reserve that includes no fishing regulations for the Tres Palmas Marine Reserve<sup>14</sup>. Even if the definition offered does not seem to include it, the disclosure of motives takes up the concept of “no fishing zone”, used at federal level and in several states of the USA.

States such as California have formally defined the concept of *Marine NR*. California’s judicial ordinance defines them as: “MPA in which all extractive activities, including the taking of marine species and other activities that upset the natural ecological functions of the area are prohibited. While, to the extent feasible, the area shall be open to the public for managed enjoyment and research, the area shall be maintained to the extent practicable in an undisturbed and unpolluted state”<sup>15</sup>.

---

<sup>10</sup> Kalo, Hildreth, Rieser, Cristie, Jacobson. Coastal and Ocean Law. Second Edition West Group 2002 page 779.

<sup>11</sup> El Diario Actual de la Educación Ambiental. Centro Nacional de Áreas Marinas Protegidas. NOAA, Volume Number 3, 2004.

<sup>12</sup> A Functional Classification System for MPA in the United States. Published by the National Marine Protected Area Center.

<sup>13</sup> Ley de la Reserva Marina Tres Palmas de Rincón, Law No. 17 from January 8, 2004.

<sup>14</sup> Id. Disclosure of Motives.

<sup>15</sup> “marine protected area in which all extractive activities including the taking of marine species, and other activities that upset the natural ecological functions of the area are prohibited. While, to the extent feasible, the area shall be open to the public for managed enjoyment and study, the area shall be maintained to the extent practicable in an undisturbed and unpolluted state” Wing, Kate: Keeping Oceans



## II. DESIGNATION OF NATURAL RESERVES

In the jurisdiction of Puerto Rico, there are two main mechanisms for designating an area or resource as a NR: administrative designations and the statutory designation.

The administrative designation process rests upon the faculty of the DNER Secretary granted in the PMZCPR to recommend to the President of the PB areas to be designated as NR in order to be part of the Land Use Plan<sup>16</sup>. The DNER has the authority to identify, limit, qualify and recommend the land and areas to be designated as NR. The PB, which is recognized and authorized for this purpose by law, performs the actual designation, based upon the DNER's recommendation, included in a designation document. If the PB adopts the recommendation, an official resolution is issued, and the designated NR becomes part of Puerto Rico's Land Use Plan.

Once the PMZCPR was adopted by the PB in 1978, it became the coastal element of the Puerto Rico Land Use Plan. Accordingly, once adopted by the PB, Management Plans for NR and other Special Planning Areas become part of Puerto Rico's Land Use Plan by resolution.

The Natural Patrimony Act<sup>17</sup> allows the DNER Secretary to recommend to the PB the designation as NR of any area included in the Inventory of Areas of Natural Value in that law. This inventory, created by the DNER in conjunction with the Federal Fish and Wildlife Service and the Puerto Rican Conservation Foundation, is intended to serve as a guide for the protection, acquisition, restoration and management of the natural areas identified in it.

On the other hand, statutory designation supposes the enactment of a special law designating a particular area as NR. This mechanism does not require a 'designation document'. In recent years, special laws have been created to establish Rincon's Tres Palmas Marine Reserve, the ecosystems around Cabo Rojo's Laguna Joyuda NR<sup>18</sup>, and Fajardo's Finca Seven Seas NR<sup>19</sup>. The designation as NR under the protection of the Natural Patrimony Act has the same effect as the statutory designation on their behalf.

## III. MANAGEMENT PLANS

A management plan is a planning instrument that brings together the essential element that will direct the decision-making process for a NR. These elements include the physical delimitation of the area, a precise description of the characteristics and ecological value of the natural resources present in the area, the identification of the most important conflicting uses, a list of the principal criteria that will guide the decision-making process, and a general scheme to follow during the implementation of the management plan<sup>20</sup>.

The importance of Management plans is that they provide the basis for the development of a strategic overall vision for the management of a natural resource, defines the roles and functions of the all the parts involved, as well as their interaction and defines the activities that can take place inside the NR.

---

Wild. How Marine Reserves Protect Our Living Seas. Natural Resources Defense Council, April 2001, page 4.

<sup>16</sup> PMZCPR, page 165

<sup>17</sup> Ley de Patrimonio Natural, 12. L.P.R.A. §1228 (6) (2004).

<sup>18</sup> Designation of Cabo Rojo's Laguna Joyuda Natural Reserve 12 L.P.R.A. §§ 5015-5018 (2004).

<sup>19</sup> Designation of Fajardo's Finca Seven Seas Natural Reserve 12 L.P.R.A. §§ 5006-5010 (2004).

<sup>20</sup> La Parguera Sector Management Plan.



A management plan establishes public policy and vision that will direct the management of the area, and it serves as the Managing Officer's main guide regarding the objectives, mission and functions of the area, whereas an operational plan establishes the day-to-day administration of the reserve, such as the hours at which the area will be open to the public, entrance fees, maintenance schedules, etc.

Management plans are based upon public policy DRNA Organic Law number 23, from June 20, 1972 as amended. The designation resolution or statute usually imposes on the DNER the responsibility of creating a management plan for this specific area and the management plan has to follow this law. Apart from this, the PRCZMP specifically requires the DNER Coastal Management Unit (CMU) to prepare detailed plans for SPA and NR, recommend new SPA and NR to participate in the revision of development proposals and to be available for consultations<sup>21</sup>.

Monitoring of public activities and the enforcement of rules and regulations within and outside the resources are the duty of the DNER Ranger Corps.

When preparing the management plans, the DNER may work in collaboration with other governmental agencies, and with non-governmental and non-profit organizations<sup>22</sup>.

Management plans are subject to revision every five (5) years; although in certain circumstances drastic changes require the DNER to modify the plans before the five year period expires.

#### **IV. CONCLUSION**

The DNER is the agency responsible for the development, implementation and modification of management plans for these NR and SPA, tasks for which it may request the aid of any other governmental agency, non-governmental or non-profit organization.

The Puerto Rico PB Organic Statute makes it possible for the PB to prepare, adopt and modify land use plans. The PRCZMP is the coastal component of the Land Use Plan, as well as the Management Plans adopted by the PB, which have to be prepared by the DNER.

---

<sup>21</sup> Id. note 1, on page 169

<sup>22</sup> Department of Natural Resources Organic Law 3, L.P.R.A. § 155 (2004).





# **DESCRIPTION OF THE FUNCTIONS OF THE DECISION MAKING AUTHORITIES FOR DEVELOPMENT AND IMPLEMENTATION OF NATURAL RESERVE MANAGEMENT PLANS, INCLUDING WHETHER THE PUERTO RICO DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES (DNER) HAS THE FINAL WORD IN DECISIONS.**

## **I. INTRODUCTION**

The Puerto Rico Coastal Zone Management Plan (PRCZMP) established the creation of the Coastal Management Unit (CMU) within the DNER. The Coastal Management Unit's fundamental task is to facilitate institutional and procedural changes in effectively dealing specifically with coastal zone development issues. The responsibilities of the Unit are the following:

1. Preparing detailed policies and plans for Special Planning Areas (SPA) and NR.
2. Proposing the creation of additional NR and Special Planning Areas.
3. Serving as the main source of knowledge on the impact of coastal zone development during the review and evaluation processes of coastal projects.
4. Ongoing consultation with state and federal agencies and the general public.<sup>23</sup>

## **II. PREPARATION OF MANAGEMENT PLAN DRAFTS**

According to the PRCZMP, the Coastal Management Unit is responsible for the preparation of management plan drafts for the NR and SPA. The management plans identify the main criteria that will guide the decision-making process during the operation of the reserve/area and establish a general strategy to be followed during the implementation of the management plan.

In reality, the Terrestrial Resources Division within the DNER is the entity in charge of preparing the management plan drafts. This division is also in charge of preparing the NR designation documents, and the management plans for NR and SPA (which had already been prepared by the PRCZMP). The CMU provides technical information for those reserves, including coastal elements. Other DNER divisions participate in the phase of setting the physical boundary of the areas, precisely describing the characteristics and the ecological values of the natural resources present in those areas and identifying the most influential use conflicts. The preparation of management plans is a complex process which requires the intervention of duly prepared scientific personnel.

Once prepared, the drafts circulate in the DNER in order to obtain comments and recommendations from the different divisions, including those who gave information during the elaboration process. After adding the comments and recommendations, the document is given to the Secretary for its evaluation. According to PMZCPR, after amending the drafts, if necessary, the Secretary forwards the plans to the PB along with his recommendation for the plans to be incorporated as elements of the Land Use Plans<sup>24</sup>.

## **III. ADOPTION OF MANAGEMENT PLANS**

<sup>23</sup> Puerto Rico Coastal Management Program and Final Environmental Impact Statement (1978) pages 169-170.

<sup>24</sup> Id, page 169

<sup>25</sup> 23 L.P.R.A. §§ 62 (j) (13) and (14).



The PB has the faculty to adopt Land Use Plans and determine the land uses in Puerto Rico<sup>25</sup>.

Within the PB, the management plans are assigned for evaluation to the technicians of the Land Use Plan Program of the corresponding geographic region. The technicians review and analyze the document and the management strategies proposed herein according to public policies of the Puerto Rico Land Use Plan and other applicable public policies. During this evaluation process the PB technicians can consult DNER personnel or any other state agency.

After the analysis, the PB technicians send their comments and recommendations to the DNER for the corresponding corrections or amendments and for the elaboration of the final document. The DNER prepares the final draft and sends it to the PB for a last review if necessary. Based on the information in the file, the technicians make a recommendation to the members of the PB, who have the final word in the decision making process for the adoption of management plans as part of the Land Use Plans.

In the case of SPA, after adoption of the management plans, they have to be approved by the Governor according to the PMZCPR regulations, and are then included as integral elements of the Land Use Plan<sup>26</sup>. All management plan resolutions (SPA and NR) have to be registered at the State Department. The management plans for the SPA of Piñones<sup>27</sup>, La Parguera and Tortugero Lagoon were approved, and the resolutions for their adoption duly registered at the State Department.

Previously, the DNER had not sent management plans for NR to the PB for their adoption as elements of the Land Use Plan, the only ones the agency had submitted were for SPA. The practice to submit management plans for their adoption as Land Use Elements to the PB only for SPA and not for NR is due to the fact that special planning areas generally include public and private land because of their vast extension, and in order to limit the use of private land and avoid a “taking”, the state opted for the incorporation of management plans for those areas as part of the Land Use Plans and to adopt them according to the proceedings established by LPAU.

Due to the fact that NR are usually established on public land, the DNER has not deemed it necessary to adopt management plans for a limitation of their use and practices as part of the Land Use Plans. The DNER, recently decided to submit the management plan drafts to the PB starting with the management plan for the Seven Seas NR, which was approved by the PB on October 22, 2007, through Resolution number PU-002-2007-24-1. Meanwhile DNER uses the already prepared plans as guide<sup>28</sup>. For the implementation of public policies identified in the NR management plan drafts, the DNER determines which laws and regulations are applicable to those NR lands. In case the DNER wishes to limit uses within an NR with marine ecosystems

---

<sup>26</sup> Land use management plans designate the distribution, location, extension and intensity of land uses for urban, rural, minery, conservaton of natural resources, recreation, transportation, communication, electricity production, residential, comertiona, industry, education, public and institutional uses depending if the plans are for the development of a region, city, rural area, municipality or depending on the geograficla expand of the plan. Together with the land use plans the Planning Board prepares an inventory, including their estimated cost, of properties necessary for public and private use.

<sup>27</sup> Management Plan for Piñones SPA

<sup>28</sup> The DNRA's Terrestrial Resources Planning Division of the Area of Integral Planning informed that the agency has produced three final drafts of management plans for the following natural reserves: Reserva Natural Caja de Muertos (1989), Reserva Natural Arrecifes La Cordillera (1992), y Reserva Natural Bahía Bioluminiscente de Vieques (1990-2004). Visita del 29 de noviembre de 2004.



and decides to adopt for example a no-fishing area inside the NR, the agency will use an administrative order prohibiting fishing within the area under the authority of Fishing Regulations<sup>29</sup>.

There could however be a need for the DNER to limit the uses or activities within the NR which are not included in the existing rules and regulations. If, for example, the DNER wishes to restrict the use of a certain draught or prohibit the use of jet skis [personal water crafts] in certain areas of a NR with marine ecosystems for the protection of certain organisms, and their use was not restricted in any existing regulation, even if a restriction existed in the draft management plan, the prohibition could not be enforced because the management plan for this NR would not be enforceable. Only if the power to establish the restriction was given to the agency by law, the DNER could implement the restriction by executive order or approval of a regulation.

It is the responsibility of DNER management officials and the rangers to implement the management plans for SPA and NR adopted by the PB. In accordance with the management plans, management officials prepare operational plans for the daily management of the reserves. The operational plans address the daily administration of the reserve, and can include opening schedules, entrance fees, maintenance schedules, among other things, as long as they are in agreement with the policies and strategies outlined in the management plans.

#### **IV. CONCLUSION**

Up to the year 2005 there were only three NR management plan drafts in existence: (1) The Cordillera Coral Reef NR, drafted in 1992; (2) The Vieques Bioluminescent Bay NR, drafted in 1990; and (3) The Caja de Muerto NR, drafted in 1989. None of these plans has been incorporated as part of the Land Use Plan or approved by the PB because of the already expressed reasons. The process of submitting the plan to the PB for their adoption as part of the Land Use Plan started with the adoption of the Seven Seas NR management plan. Since 2005 the DNER has been continuing its efforts to develop management plans for NR with marine ecosystems. The Management Plan for Cordillera Coral Reef NR was reviewed in 2006 and the Management Plan for the Vieques Bioluminescent Bay NR in 2006. There were also management plans developed for Culebra, Tres Palmas, and in October 2005 a list of priorities for future management plans was drawn up. This list was revised in 2007 and the next three NR chosen with priority status were La Parguera, Guánica and Desecheo.

---

<sup>29</sup> Reglamento de Pesca de Puerto Rico, Reglamento Núm. 6768 del Departamento de Recursos Naturales y Ambientales de 10 de febrero de 2004.



## **DESCRIPTION OF THE CURRENT LEGAL FRAMEWORK THAT FORMS THE LEGAL BASIS FOR COMMUNITY PARTICIPATION IN THE DEVELOPMENT OF MANAGEMENT PLANS FOR MNR, INCLUDING NO-FISHING ZONES. DESCRIPTION OF PAST AND CURRENT EXAMPLES INCLUDING OTHER DESIGNATIONS LIKE CONSERVATION TRUST SITES AND TERRESTRIAL SITES.**

### **I. INTRODUCTION**

The process of *developing* a management plan for a NR begins with the reserve's designation and the DNER is the agency responsible for its development<sup>30</sup>.

### **II. LEGAL BASIS FOR CITIZEN PARTICIPATION IN THE DEVELOPMENT OF MANAGEMENT PLANS**

In most cases, the Terrestrial Resources Division (DPRT) of the DNER's Planning Area has the obligation to prepare and develop the management plans for the Island's NR. The usual practice of the Terrestrial Resources Division is to keep in touch and accept recommendations not only from other divisions within the DNER, but also from the general public interested in contributing its knowledge and experience to the development of the document.

PRCZMP started in 1972 when a group of citizens prepared the "Puerto Rico and the sea" report where the most critical coastal problems were identified together with suggestions for their solution. Even though the people involved came from different local organizations (scientists, planners, journalists, bankers, students, builders, government officials and academics) they participated only as concerned and informed citizens, contributing their knowledge and special skills free of charge. So it can be said that what happened before the approval of PMZCPR in 1978 can be considered a manifestation of citizen participation.

Although the participation of citizens and the community interested in the conservation of the island's natural resources has been recognized as a key ingredient in an effective development and implementation of a management plan, there are no legal bases compelling an interaction between the general public and the DNER. PRZCMP requires the DNER to prepare management plans for all designated NR, and the Coastal Zone Management Act from 1972 (CZMA), the legislation that facilitated the creation of PRCZMP, establishes as public policy encouraging the active participation of the public and local governments in coastal management decision making<sup>31</sup>. One of the general goals established by the legislation is to promote and

---

<sup>30</sup> Puerto Rico's Coastal Zone Management Program, p. 169: "The Coastal Management Unit (of the DNER) will have primary responsibility for preparing detailed policies and plans for areas designated as Special Planning Areas and Natural Reserves. Working closely with the staffs of the Planning Board and other Commonwealth agencies, the Unit will prepare draft plans for submission to the Secretary of Natural Resources who, after any appropriate modifications, will submit them to the Planning Board with a recommendation that they be incorporated as elements of the Board's Land Use Plan."

<sup>31</sup> Coastal Zone Management Act of 1972 16 U.S.C. § 1452 – "The Congress finds and declares that it is in the national policy – [...]

(2) to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic and esthetic values as well as the needs for compatible economic development, which programs should at least provide for [...]

(1) the giving of timely and effective notification of, and opportunities for public and local government participation in coastal management decision-making.  
[...]



encourage the active involvement of the public, agencies and the governments in the actual process of its implementation<sup>32</sup>.

This CZMA public policy is reflected on the new PRCZMP web page, where one of its goals is expressed as “Promoting environmental education, scientific investigation and public participation in the management of costal resources.” Furthermore, nothing in the DNER’s Organic Act prohibits consultations or agreements with citizen groups in order to advance the agency’s main goal: the best protection of NR<sup>33</sup>. This has been recognized by Puerto Rico’s Legislative Assembly, for example, by ordering the DNER to develop the Management Plan for Rincon’s Tres Palmas Marine Reserve in collaboration with other government entities and non-profit organizations<sup>34</sup>.

Examples of public participation in the elaboration of NR Management Plans will be given further on.

### III. MANAGEMENT PLANS FOR NO-FISHING ZONES

In its fishing regulations, the DNER has established at least four no-fishing zones: Desecheo Marine Reserve, parts of Mona Island NR, the Luis Peña Canal NR in Culebra and the Condado Lagoon<sup>35</sup>. All commercial and recreational fishing activities are strictly prohibited in these areas.

The no-fishing zones are established by agency rulemaking procedures, which mean that the UAPA requires the DNER to incorporate citizen participation through public notice and written commentary. At present there are no management plans for no-fishing zones, but in case they existed, the Luis Peña Channel and La Mona Plans would serve as example for NR management plans for no- fishing zones. Citizen input was obtained during the process of the development of the Fishing Zone Regulation and also during its amendment process.

### IV. MANAGEMENT PLANS DEVELOPED BY THE CONSERVATION TRUST

---

(4) to encourage the participation and cooperation of the public, state and local governments, and interstate and other regional agencies , as well as of the Federal agencies having programs affecting the coastal zone, in carrying out te purposes of this title;”

<sup>32</sup> Id.

<sup>33</sup> Ley de la Reserva Marina Tres Palmas de Rincón, Law No. 17 from January 8, 2004.

<sup>34</sup> Ley de la Reserva Marina Tres Palmas de Rincón. Ley Núm. 17 de 8 de enero de 2004. Artículo 5 - “Se ordena al Secretario del Departamento de Recursos Naturales y Ambientales a que desarrolle, en colaboración con aquellas entidades gubernamentales y organizaciones sin fines de lucro, un Plan de Manejo y la reglamentación compatible para la administración, rehabilitación y conservación del área [...]”.

<sup>35</sup> Reglamento de Pesca. Reglamento Núm. 6768 del Departamento de Recursos Naturales y Ambientales (2004) – “**ARTÍCULO 8** - Será ilegal que cualquier persona: [ . . ]

g. Pesque dentro de un perímetro de media (1/2) milla alrededor de la Isla de Desecheo (Figura 8), designada como Reserva Marina mediante la Ley Núm. 57 de 10 de marzo de 2000.

h. Pesque dentro de un perímetro de media (1/2) milla (Figura 9a) alrededor de Isla de Mona y Monito.

En Isla de Mona se permitirá pescar dentro de la media (1/2) milla solamente en la siguiente área (exceptuando el arpón): entre Punta Arenas (18°05.0' N 67°56.8' O) y Cabo Barrionuevo (18°06.6' N 67°55.8' O) (ver Figura 9b). La pesca de peces de acuario esta prohibida dentro de la Reserva de Isla de Mona.

i. Pesque en el área delimitada por las siguientes coordenadas geográficas (a) 18°18.1' N 65°18.7' O; (b) 18°17.4' N 65°19.7' O; (c) 18°18.6' N 65°20.4' O; y (d) 18°19.9' N 65°20.' O; las cuales están designadas como la Reserva Natural del Canal Luis Peña de Isla de Culebra (Figura 10).”



The Conservation Trust (Trust) is a private non-profit organization which, since its creation in January 1970, has acquired more than 6 thousand *cuerdas* [1 cuerda is 4.810 square yards] of land of incalculable ecological, historical and cultural value. The goal and purpose of the Trust has been the protection and preservation of these lands<sup>36</sup>.

The Humacao Pterocarpus Forest and the Cabezas de San Juan NR are among the properties managed by the Trust figure. Other properties include Punta Ballena (Guánica) and Punta Guaniquilla (NR Bosque Estatal de Boquerón, Cabo Rojo), both adjacent to the Guánica Forest NR<sup>37</sup>.

Instead of preparing formal management plans, the Trust uses general management guidelines for the administration of these properties of high ecological value<sup>38</sup>. According to the Trust's management philosophy, the guidelines are prepared by experts and professionals<sup>39</sup>.

Since the Trust is not a government agency, the LPAU legal basis for public participation in the development of management plans is inapplicable. The Trust does not have any legal obligation to encourage or facilitate citizen participation during the process of developing management plans or general guidelines for its properties<sup>40</sup>. Nevertheless, according to the DNER, management strategies for the areas controlled by the Conservation Trust have to be designed according to the rules and regulations of the agency and with its input.

## **V. EXAMPLES OF PUBLIC PARTICIPATION IN THE DESIGNATION AND DEVELOPMENT OF NR MANAGEMENT PLANS.**

Recognizing the importance of citizen participation and the relevant part the communities have had in the NR designation process, and which they have at present in the development of management plans, the DNER has encouraged and facilitated citizen participation in the development of several management plans which are currently in the development process for Caño Tiburones NR, Canal Luis Peña NR, Arrecifes La Cordillera NR and Rincon's Tres Palmas Marine Reserve.

### **Caño Tiburones Natural Reserve**

The proceedings for protection and management of this NR were not only marked by the DNER's interest in it, but also by the claims of community groups who wanted to rescue it for the use and enjoyment of the general public. The development of a management plan is part of the DPRT's agenda. The Comité Reserva Natural Caño Tiburones had already held public hearings with the communities and groups of interest for the development of a management plan, and those hearings have to continue in order to complete the process.

### **Canal Luis Peña NR**

---

<sup>36</sup> <http://ponce.inter.edu/proyecto/fidei/fidei.html> (2004).

<sup>37</sup> Id.

<sup>38</sup> Telephone interview with Debbie Boneta, co-ordinator and assistant of Mr. Silva Caraballo, Director of the Conservation Trust's Natural Protected Areas on December 9, 2004.

<sup>39</sup> Id.

<sup>40</sup> This does not mean that the Conservation Trust does not maintain any contact at all with the general public and the communities adjacent to its lands. In fact, one of the Trust's most important efforts has been the creation of educational programs for the communities and the general public. That means that according to the Trust's management philosophy, the appropriate part for the general public is to be "educated" instead of actively participating in the management of its properties.



The designation of this NR and Marine Reserve was promoted by the fishermen of Culebra Island. They asked the DNER to use its power and faculties in order to achieve the designation of the marine area of the NR as no-extraction zone. The draft of the management plan, which is in an advanced stage of development, has had a relevant participation of the general public from the beginning. There is a steering committee whose members are the DNER, La Autoridad de Conservación y Desarrollo de Culebra and the Asociación de Pescadores de Culebra, and they make the important decisions. The work group provides input to the steering committee and to the co-coordinator of the management plan.

### **Arrecifes de la Cordillera NR**

The management plan was prepared by a private entity in collaboration with the DNER. For this plan a series of public hearings and polls were done in order to obtain public input which was incorporated into the management plan. The draft of this plan is currently in its final stage.

### **Tres Palmas Marine Reserve in Rincón**

The law that designated this NR is due to the effort and demands of the general public. This law requires that the management plan must include citizen participation, a disposition which is being complied with. The Surfrider Foundation, in collaboration with the DNER, is in charge of the development of this management plan.

### **Bosque del Pueblo**

The management of protected marine areas throughout the world partially evolved taking as an example management plans for terrestrial resources. Even though it is an example for terrestrial resources, it is appropriate to mention the case of Bosque del Pueblo, because it represents a case of extensive and important public participation. Bosque del Pueblo is located in the municipality of Adjuntas, and it is owned by the DNER<sup>41</sup>. Breaking the usual pattern for most of the island's NR, the Governor of Puerto Rico at that time, ordered the creation of a Management Council for the forest, to be comprised by DNER personnel, the Casa Pueblo community organization, and several other representatives of the interested community for the administration, management and custody of the forest<sup>42</sup>.

According to Casa Pueblo officials, interested citizens have been the driving force in the preparation and development of the management plan for Bosque del Pueblo as well as for its factual implementation and the development of new conservation projects in adjacent zones<sup>43</sup>.

There are areas whose designation, even when they were on the DNER's agenda, was pushed by organizations or community groups. This shows that even before the designation and the intervention of the PB in the adoption of the management plan; citizens participated in its development. These groups have been included during the writing of the Designation Document due to the amount of information on the area they had compiled and put at the DNER's disposal. They have also participated in meetings working on matters related to the development of the Management Plan. An example for these activities is Caño Tiburones, Canal Luis Peña among others, and the Designation Document for Caño Boquil.

---

<sup>41</sup> Executive Order Number 1996 54.

<sup>42</sup> Id.

<sup>43</sup> Entrevista con el Dr. Alexis Massol, 23 de noviembre de 2004.



---

## **VI. CONCLUSION**

There is no single statute or regulation in Puerto Rico's legal system that requires the DNER to open and facilitate spaces for citizen participation during the process of preparing and developing management plans for NR. The CZMA establishes a public policy that encourages the active participation of the citizenry in the management of the island's coastal resources.

Finally, even though the development of management plans by private entities (non-lucrative organizations and private consultants) has not been regulated in the present judicial system in Puerto Rico, these entities have followed very diverse public participation policies, ranging from zero participation to the active incorporation of citizen input through novel and useful participation mechanisms.





## **DESCRIPTION OF THE LEGAL BASIS FOR CITIZEN PARTICIPATION DURING THE PROCESS OF IMPLEMENTATION OF MANAGEMENT PLANS. DESCRIPTION OF THE EXTENT TO WHICH CITIZENS AND MUNICIPAL GOVERNMENTS MAY PARTICIPATE IN DAILY MANAGEMENT TASKS, SUCH AS MONITORING, EDUCATION, RESOURCE RESTORATION, ETC.**

### **I. INTRODUCTION**

The DNER is the state agency responsible for the implementation of management plans approved by the PB and for those not presented to it. In Puerto Rico there is no single statute or regulation that specifically describes the manner in which such public participation shall take place.

Nevertheless, this lack of clear and specific directives has not prevented the DNER from opening spaces for public involvement in the daily administration of the NR. This public participation ranges from community education campaigns to cooperation with groups of citizens interested in voluntary assistance in the administration of the NR.

### **II. PUBLIC POLICY**

The Coastal Zone Management Act (CZMA) suggests that the DNER open spaces for public participation during the implementation of the management plans. The federal statute specifically states that the public's input must be obtained in each management phase of an NR<sup>44</sup>. The CZMA allows the DNER to select the appropriate participation mechanism: public notice, written comments, public hearings, educational conferences, etc<sup>45</sup>.

The DNER's organic statute also allows its Secretary to convene necessary agreements with non-governmental entities in order to guarantee compliance of its mission: the protection of Puerto Rico's natural resources<sup>46</sup>.

In the case of Tres Palmas, the Legislative Assembly has specifically stated that the DNER has the power to incorporate citizen input during the management and custody of the Reserve<sup>47</sup>.

---

<sup>44</sup> Coastal Zone Management Act, 16 U.S.C. § 1455b-

"[...] (b) Program contents. Each State program under this section shall provide for the implementation, at a minim, of management measures in conformity with the guidance published under subsection (g) , to protect coastal waters generally, and shall also contain the following:

[...] (5) public participation. Opportunities for public participation in all aspects of the program, including the use of public notices and opportunities for comment, nomination procedures, public hearings, technical and financial assistance, public education, and other means.

<sup>45</sup> Id.

<sup>46</sup> Ley Orgánica del Departamento de Recursos Naturales y Ambientales. Ley Núm. 23 de 20 de junio de 1972. Artículo 5 – ““El Secretario de Recursos Naturales tendrá [. . .] las siguientes facultades y deberes: [. . .]

(e) Celebrar convenios o acuerdos necesarios y convenientes a los fines de alcanzar los objetivos del Departamento y sus programas, con organismos del Gobierno de los Estados Unidos de América, con los gobiernos estatales, con otros departamentos, agencias o instrumentalidades del Gobierno del Estado Libre Asociado y con instituciones particulares; [. . .]”. (12 LPRA 155e).

<sup>47</sup> Ley de la Reserva Marina Tres Palmas de Rincón, Ley Núm. 17 de 8 de enero de 2004. Art. 6 – “[. . .] se faculta al Secretario del Departamento de Recursos Naturales y Ambientales a a entrar en convenios de manejo con aquellas entidades gubernamentales y/o organizaciones sin fines de lucro ‘bona fide’ comprometidas con la conservación y desarrollo de la Reserva Marina, con el fin de establecer un manejo y custodia conjunta de la misma.”



### III. IMPLEMENTATION OF MANAGEMENT PLANS

While the *development* of management plans for NR is the responsibility of the DNER's Terrestrial Resources Division, the task of *implementation* rests upon the Management Officials of the Division of Natural Reserves and Wildlife Refuges<sup>48</sup>.

The DNER supervises the management of the NR, and many are assigned a Management Official who is in charge of the actual implementation of the management plan. For the enforcement of the various norms and regulations of the management plans rules and regulations for fishing, corral reefs and navigation, the Management Officials are assisted by the Ranger Corps, a special unit which is part of the of the DNER Secretary's Office since 1977<sup>49</sup>. It is also common to encounter the presence of groups of interested scientists and university students who actively study the NR living and non-living resources.

The personnel at the DNER have come to recognize the importance of engaging local communities during the process of NR management. This is the reason why Management Officials invest valuable time and resources trying to maintain good relations with the local communities, even though there is no single statute or regulation that specifically compels them to do so<sup>50</sup>.

The main interaction between the Management Official and the local communities occurs during the educational activities that the DNER organizes in order to inform the public about the NR resources and the management measures that will be carried out<sup>51</sup>.

There have also been occasions where one or various groups of interested citizens directly approach the Management Official and express their willingness to donate time and services in order to assist in certain activities of the NR management<sup>52</sup>. In such instances the Management Official usually requires the interested group of citizens to write up a formal proposal indicating the exact tasks and activities it intends to work on<sup>53</sup>. Once the Management Official and the Secretary of the DNER approve the proposal as presented or modified, the group of interested citizens is considered authorized to carry out the tasks indicated in the agreement<sup>54</sup>.

At the moment, there is no rule or regulation to determine which activities can be delegated in a NR management and which ones cannot, nor is there a rule that limits citizen participation in certain activities, so all collaboration proposals have to be evaluated individually according to their merits, the interested group and the specific circumstances of each NR. Nevertheless there are certain activities, such as the restoration of a natural area, that require a certain preparation which can only be coordinated with an educational entity or institution (e.g. universities, foundations, etc.) and cannot be delegated to just any group. That does not mean that the DNER cannot include citizen participation regarding other aspects. Certainly any directive issued by the DNER regarding the criteria to be considered in the evaluation of any collaboration proposal in the management of a reserve will be welcome.

---

<sup>48</sup> Interview with Myrna Aponte, Biologist at the DNER Natural Reserve and Wildlife Refuge Division. February 2, 2005.

<sup>49</sup> Ley de Vigilantes de Recursos Naturales y Ambientales (Ley Núm. 1 del 29 de junio de 1977) y Reglamento del Cuerpo de Vigilantes del Departamento de Recursos Naturales y Ambientales (Reglamento Núm. 5855 de 8 de septiembre de 1998)..

<sup>50</sup> Interview with Myrna Aponte, *supra*.

<sup>51</sup> Id.

<sup>52</sup> Id.

<sup>53</sup> Id.

<sup>54</sup> Id.



## USER FEES IN NATURAL RESERVES: ADVANTAGES AND DISADVANTAGES

### I. INTRODUCTION

One of the many obstacles encountered by government agencies in charge of the administration and protection of NR is how to produce funds to manage its reserves. The implementation of user fees has thus become one of the most effective financing vehicles in natural area and reserve management<sup>55</sup>. In fact; more than fifty percent of the worlds' natural protected areas are subject to user fee financing mechanisms<sup>56</sup>. In the Caribbean region, user fees are the third most popular MPA financing mechanism<sup>57</sup>.

### II. HOW CAN USER FEES BE IMPLEMENTED?

The first step in implementing user fees in NR is to determine exactly how much money is needed to effectively manage the protected area<sup>58</sup>. Once the basic amount has been identified, the decision of implementing a user fee program must be consulted with the natural area's primary users. Likewise, it is recommended that the user fee program be as diverse as possible: that is, that the fees should be assigned to as many uses as possible<sup>59</sup>. Some of the principal alternatives of user fees are the following:

- *Entrance Fees.* The visitor pays a small fee in order to access the protected area, visitor's centers and museums. These are the most common types of user fees<sup>60</sup>.
- *Fees for Equipment and Facility Rental.* A special fee is fixed and charged for the use of equipment, materials and facilities, such as picnic and camping equipment and structures. Parking and anchoring fees are also a common example.
- *Permit Fees.* A special fee is charged as a condition to allow a person or company to engage in a specific activity that requires supervision or special management arrangements. The most compelling reasons for assigning permit fees are: the fact that the activity allowed is somewhat unusual; that the demand for such an activity is high and must be limited; and, finally, that the activity must be controlled because it causes or could cause some kind of damage to the natural resources that comprise the reserve<sup>61</sup>.
- *Concessions.* Companies are charged a fixed amount in exchange for the authorization to provide a specific service to visitors: food stands, boat rental, etc. The concessions are usually allocated through a bidding process.

---

<sup>55</sup> Kreg Lindberg, *Protected Area Visitor Fees: Overview 1* (2001) -" a natural response to the lack of government funding is to explore alternative forms of revenue generation, and visitor fees is one such form"

<sup>56</sup> Lindberg, *supra*, p. 7 - "Responses to a survey of protected areas conducted in the early 1990s suggest that about one half of the world's protected areas charged entrance fees at that time (Gionco, Bosco-Nizeye and Wallace, 1994) and it is likely that this proportion has increased in the ensuing years".

<sup>57</sup> Tighe Geoghegan, Allan H. Smith and Katy Thacker. *Characterization Of Caribbean Marine Protected Areas: An Analysis Of Ecological, Organizational And Socio-Economic Factors*. CANARI. 2001 (p.10)- The two principal sources for financing are the allocation of public funds and donations.

<sup>58</sup> Geoghegan, Tighe. *Financing Protected Area Management: Experiences from the Caribbean*. CANARI. 1998

<sup>59</sup> *Id.*

<sup>60</sup> Barry Spergel and Melissa Moye, *Financing Marine Conservation: A Menu of Options*. World Wildlife Fund, 2004.

<sup>61</sup> Tourism User Fees, Mobilizing Funding For Biodiversity Conservation. In [www.conservationfinance.org](http://www.conservationfinance.org)



It is very important that the funds obtained by user fee implementation be directly assigned to the NR management fund, and not transferred to the central governments general treasury<sup>62</sup>.

### III. ADVANTAGES OF USER FEE IMPLEMENTATION

Apart from generating funds for the effective management of a natural area or an NR, user fee implementation programs have other beneficial collateral effects.

First of all, user fees allow the NR management staff to effectively monitor and control access to the resource. This is necessary in order to prevent excessive use and deterioration. Secondly, the user fee program can be designed in a way that stimulates the local and adjacent economies. Interested citizens can be employed as part of the user fee implementation program or as concessionaries for the services to be provided. And finally, one of the most advantageous aspects of user fee implementation programs is that it is the actual users who pay the management costs and not the central government.

### IV. DISADVANTAGES OF USER FEE IMPLEMENTATION

In certain circumstances the implementation of user fees could have unexpected adverse effects. It is therefore recommended to undertake a preliminary analysis of the affected surrounding community's socioeconomic conditions in order to identify potential conflicts. What follows is a brief discussion of three of the most common problems confronted by user fee program implementation:

*Exclusion of the poor: the problem of equity*<sup>63</sup>. The imposition of fees to access or use a natural area can have the effect of limiting low-income citizens' access to the resource. That is why the impact of the user fee implementation must be equitable from a socioeconomic perspective. That means that it must not cause a disproportionate impact on low-income communities. This has been a constant preoccupation in the discussion of this kind of mechanisms<sup>64</sup>.

*Cost of implementation.* The cost of implementing a user fee program can be higher than the income generated. Examples for additional expenses are the hiring of new personnel and the user fee program must be designed in such a way that these costs are met.

*Demand reduction in case of price hikes.* There is always the possibility that the cost the user fee represents will result in a reduction of visitors to the natural resource. If the fee is too high, it is possible that tourists will go somewhere else. This will translate into financial for the individuals that indirectly benefit from the NR, such as the tourism industry.

---

<sup>62</sup> Phillips, Adrian (Ed.) *Financing Protected Areas Guidelines for Protected Area Managers*. IUCN/ World Commission on Protected Areas Financing Protected Areas. Task Force 2000.

<sup>63</sup> Antoine Leclerc. *User fees in natural parks issues and management*, In PARKS Vol. 4, No. 2 -"User fees have proven a successful mechanism for generating income for MPA though there are some dangers inherent in establishing a user fee system – primarily alienating people used to free access and favoring more– visited over less– visited areas."

<sup>64</sup> Lindberg, *supra*.



## V. CAN THE DNER IMPLEMENT USER FEES?

The answer is affirmative. The DNER is the agency in charge of the management and administration of Puerto Rico's NR and, as such, possesses the authority needed to implement user fee programs<sup>65</sup>.

According to this authority, the DNER has prepared and implemented several regulations concerning user fees, such as the State Forests and Natural Reserves Concessions Regulation<sup>66</sup>.

---

<sup>65</sup> Ley Orgánica del Departamento de Recursos Naturales y Ambientales, 12 L.P.R.A. §155 (2004) – “El Secretario de Recursos Naturales tendrá, en adición a las que le son por este Capítulo transferidas, las siguientes facultades y deberes: [ . . . ] (h) Ejercer la vigilancia y conservación de las aguas territoriales, los terrenos sumergidos bajo ellas y la zona marítimo-terrestre, conceder franquicias, permisos y licencias de carácter público para su uso y aprovechamiento y establecer mediante reglamento los derechos a pagarse por los mismos. A estos efectos estará facultado para ejercer aquellos poderes y facultades que le puedan ser delegadas por cualquier agencia o instrumentalidad del gobierno federal bajo cualquier ley del Congreso de los Estados Unidos. [ . . . ] (m) Facultad para establecer, construir, desarrollar, operar y mantener áreas, estructuras y facilidades recreativas en los terrenos bajo su custodia y administración y fijar los derechos y tarifas a cobrarse por estos conceptos. Esto se hará con la aprobación del Secretario de Recreación y Deportes. Los ingresos que se devenguen por estas actividades se depositarán en un Fondo Especial destinado al mantenimiento y operación de estas áreas.

<sup>66</sup> State Forests and Natural Reserves Concession Regulation DNER 2000.



---

## LEGAL BASE FOR BUDGET DECISION MAKING

The DNER has primary jurisdiction regarding the management of NR in Puerto Rico, which includes the authority of decision making for budget management<sup>67</sup>.

The budget decision making issue has to be addressed in the management plan because there is a lack of rules regarding that aspect in local legislation. There are multiple possible arrangements, but the limitations imposed by current laws and regulations have to be obeyed always.

In the case of co-management of a NR, the private entity has to maintain the limitations imposed by the document and designation legislation, as well as any other applicable law or regulation in force.

Article 3, of the DNER Organic Law<sup>68</sup> requires the agency to implement programs for the utilization and conservation of natural resources in Puerto Rico, always within the norms established by the Environmental Quality Board (EQB). Article 12 of that same law<sup>69</sup> requires that all the programs administered by the DNER and the faculties given to its Secretary will be implemented according to established public environmental policy.

---

<sup>67</sup> Ley Núm. 23 de 20 de junio de 1972, Artículo 5(e). El Programa de Manejo de la Zona Costanera de 1978 dispone que: “the Department of Natural Resources [...] has extensive responsibilities for affirmative management of coastal resources

<sup>68</sup> 3 L.P.R.A. § 153

<sup>69</sup> 3 L.P.R.A. § 162



## LEGAL STATUS OF MONETARY AND EQUIPMENT DONATIONS THAT ARE STIPULATED BY DONORS FOR SPECIFIC NATURAL RESERVES

In Puerto Rico, donations are regulated in the Civil Code, where they are defined as one of different ways to acquire property<sup>70</sup>. Specifically, on the nature of donations, it establishes that a donation or gift "is an act of liberality by which a person disposes gratuitously of a thing in favour of another, who accepts it"<sup>71</sup>. Donations *inter vivos* between the livings can be of three kinds:

- 1) A purely gratuitous gift, or one made without any condition attached and through mere liberality;
- 2) An onerous gift, or one in which the recipient is burdened with a charge upon the value of the gift donated; and
- 3) A remunerative gift or one made to a person by reason of his merits or for services rendered to the donor provided such services do not constitute recoverable debts<sup>72</sup>. The reference to a burden in the onerous donation is in regard to a condition<sup>73</sup>.

Donations *inter vivos*, as opposed to donations *mortis causa* (due to decease) which are regulated by the rules for the testamentary succession, are governed by the general dispositions of contracts and obligations<sup>74</sup>. A donation is consummated upon the donor having knowledge of its acceptance by the recipient<sup>75</sup>.

The determining factor regarding who can receive and bestow donations is the capacity of the person established by law, in the case of donating, as well as in the case of receiving donations, because the donor cannot be specifically incapacitated to donate<sup>76</sup>.

It is a fundamental principle of administrative right that the governmental organisms depend completely on the statutes that create them, which establish their functions and faculties, and because of that they can only exert the powers that have been specifically conferred to them, and those that are reasonably implicit in such functions and faculties<sup>77</sup>.

Therefore, the powers of a governmental organism must come affirmatively from their organic law or by clear implication, and any doubt with respect to the existence of a power must be resolved against its application. Neither necessity, nor utility, nor convenience can replace the law as the source of power<sup>78</sup>.

The DNER Organic Statute authorizes the Secretary of that dependency to accept and receive any donations or funds by means of appropriations, advances, or any other type of aid or benefit when derived from said government organizations or from non-profit institutions<sup>79</sup>. In addition, it empowers him to acquire, through purchase, donation, transfer, or any other lawful means, land and aquatic habitats for the conservation, preservation, management, propagation

<sup>70</sup> Articles 31 L.P.R.A. §1931-2581

<sup>71</sup> Article 558 Civil Code, 31 L.P.R.A. § 1981

<sup>72</sup> Article 560 Civil Code, 31 L.P.R.A. § 1983

<sup>73</sup> Eduardo Vázquez Bote, Tratado teórico práctico y crítico de derecho privado puertorriqueño, T. IX, Equity, Orford (1992), pág. 233.

<sup>74</sup> Articles 562 and 563, 31 L.P.R.A. §§ 1985 and 1986

<sup>75</sup> Article 565, 31 L.P.R.A. § 1988

<sup>76</sup> Articles 566 and 567, 31 L.P.R.A. §§ 2001 and 2002

<sup>77</sup> Juan Bigas, Sucrs. v. Comisión Industrial, 71 D.P.R. 336, 341 (1950); Ops. Srio. Just. Núm. 42 de 1988.

<sup>78</sup> Ops. Srio. Just. Num. 1 de 1989, pág. 3; Num. 12 de 1988, pág. 69.

<sup>79</sup> 3 L.P. R.A. § 155(e)



and restoration of wildlife<sup>80</sup>. It is important to point out that this legislation excludes donations from profit private entities, which results in the prohibition of those donations, unless they are permitted by another special law.

Other special legislations also authorize the DNER Secretary to receive donations. The Natural Patrimony Program Act grants the Secretary the power to accept donations of money, as well as real estate or personal property and rights from persons or private profit or non-profit entities in order to comply with the objectives of the Program<sup>81</sup>. Similarly, the law that creates the *Bosque Monte de Choca del Barrio Palos Blancos del Municipio de Corozal* authorizes the Secretary of the DNER to accept and to receive donations from private or public persons or organizations<sup>82</sup>

In order for donations of real estate to be valid, they must be made in a public instrument, stating therein in detail the property bestowed as a gift and the amount of the charges, which the recipient must satisfy, including any condition. The acceptance may be made in the same instrument or in a separate one<sup>83</sup>. Real estate that does not come from a public instrument is not valid<sup>84</sup>. The conditions will not be valid either if they do not come from the public instrument.

Donations can be revoked by the donor when the recipient has not complied with some of the conditions imposed upon him by the donor. In such cases, the gifts shall revert to the donor, all the alienations made by the recipient and the mortgages he may have placed thereon being rendered void<sup>85</sup>.

Any person or organization, public or non-profit, can donate money, real estate or personal property and associated rights to the DNER. In the case of a donation from a private profit organization, the Secretary is only authorized to accept it if a special law exists that authorizes it and the donation fulfils the intentions of the special law. The donor can establish the conditions he wishes, but they must be included in the public instrument if the donation consists of real estate. The DNER Secretary, in the use of his discretion, can accept the conditions or reach an agreement with the donors. In any case, the conditions imposed by the donor cannot be against the law.

---

<sup>80</sup> 3 L.P.R.A. § 155(k)

<sup>81</sup> 12 L.P.R.A. § 1228

<sup>82</sup> 12 L.P.R.A. §217a (e)

<sup>83</sup> 31 L.P.R.A. § 2010

<sup>84</sup> *Santiago v. Rodríguez*, 72 D.P.R. 266 (1951); *Oliver v. Soto*, 58 D.P.R. 70 (1941).

<sup>85</sup> Article 589, 31 L.P.R.A. § 2044





## MUNICIPAL PARTICIPATION IN MPA DEVELOPMENT AND MANAGEMENT.

### I. INTRODUCTION

In Puerto Rico, administration and management of natural and coastal resources with high ecological value have been traditionally considered as an exclusive obligation of the State. The territorial waters, submerged lands in territorial waters, beaches, the coastal zone and other coastal elements are by nature considered of public domain, and the State is in charge of their custody and care<sup>86</sup>. The designation of MPA has been done exclusively by the State government through legislation or administratively<sup>87</sup>.

### II. CAN MUNICIPAL GOVERNMENTS DESIGNATE MPA?

The Autonomous Municipalities Act (AMA) of 1991, as amended, granted municipal governments certain powers and faculties traditionally inherent in the Central State<sup>88</sup>. Under the AMA, municipal governments have the power to formulate public policy, strategy and plans directed at governing their territories, conserving their natural resources and assuring their optimal development<sup>89</sup>.

Accordingly, municipal governments can implement their legislative and executive powers in any municipal issue that results in the well-being of the community, its economic, social and cultural development, the protection of general health and security of its people, the fostering of the communities' civic virtues and their solidarity, and the development of projects and activities of collective interest, subject to applicable laws<sup>90</sup>.

The Autonomous Municipalities Act authorizes municipal governments to acquire land by any legal means within and out of their territorial limits, and to habilitate it for public purposes<sup>91</sup>. Regarding their administrative and management power, municipalities have the authority to:

- A. Acquire the necessary and convenient equipment to facilitate any public purpose<sup>92</sup>;
- B. Contract the professional, technical and consultation services that may be necessary and convenient for the undertaking of public activities, programs and operations or to comply with any authorized public purpose<sup>93</sup>;
- C. Create inter-municipal agencies in order to identify common problems, plan and develop joint activities and services, all in the benefit of their inhabitants<sup>94</sup>;
- D. Reach agreements with the federal government in order to develop public works and facilities and for the offering of municipal services according to applicable Federal, State or Municipal laws<sup>95</sup>;
- E. Contract any public agency and private natural or juridical individuals in order to jointly or by delegation, develop, administer and operate public service facilities; as

<sup>86</sup> Article 255 of the Civil Code, 31 L.P.R.A. §1024

<sup>87</sup> See TASK 1.1

<sup>88</sup> Law Nंबर 81 from August 30, 1991, as amended

<sup>89</sup> Id. Art. 2.004 (g)

<sup>90</sup> Id. Art. 2.001 (o)

<sup>91</sup> Id. Art. 2.001 (d) and (l)

<sup>92</sup> Id. Art. 2.001 (m)

<sup>93</sup> Id. Art. 2.001 (n)

<sup>94</sup> Id. Art. 2.001 (p)

<sup>95</sup> Id. Art 2.001 (q)



well as for the construction, repairs and maintenance of those municipal facilities<sup>96</sup>; and any necessary subvention, donation, monetary aid or service for purposes and activities of public interest to any non-profit organization that complies with the Laws of Puerto Rico<sup>97</sup>.

It is important to clarify that in the case of Marine Reserves and NR with marine ecosystems, the waters, submerged land, beaches and the coastal zone are public domain. The State is in charge of public domain, which means that it is not possible for any municipality to designate a Marine Reserve or a NR with marine ecosystems exclusively, because the management of these public domain resources is the responsibility of the DNER and not of the municipalities. Municipalities can designate protected areas in territories under their jurisdiction using as a base the land classification mechanism, implemented through the Autonomous Municipalities Act (for example Rural Specially Protected Soil), but they cannot do it with elements under exclusive State jurisdiction.

There is however no legal impediment for the central government to make agreements with municipalities to give them the authority to govern their public territories, as is the case of municipal public beaches. An example of this is the possible agreement between the DNER with the municipality of Peñuelas for joint management of Maria Langa and Caribe Cays.

### **III. CAN MUNICIPALITIES PARTICIPATE IN THE IMPLEMENTATION PROCESS?**

Municipalities can participate and render services in the implementation tasks for NR within their territorial limits and under their jurisdiction.

The Autonomous Municipalities Act of Puerto Rico<sup>98</sup> enhanced the powers and faculties of the municipalities. In general terms, municipal governments can exercise their legislative and executive powers in any municipal issue that results in the well-being of the community, as well as in its economic, social and cultural development<sup>99</sup>.

Under this law, municipalities have the necessary power to make agreements with any agency and/or private natural or juridical individuals for coordinated or delegated joint development, administration and management of facilities in order to render public service<sup>100</sup>. This includes the faculty to grant subsidies, donations and any other kind of monetary or service aid to non-profit entities constituted according to Puerto Rico laws, as long as they fulfill the established parameters of public interest<sup>101</sup>.

This means that municipalities interested in the conservation of their natural resources located within their jurisdiction could make NR management collaboration agreements with the DNER for land under their jurisdiction that they want to dedicate to conservation. An example for this is the recent co-management agreement for the Caja de Muerto NR between the Municipality of Ponce and the DNER.

### **IV. CONCLUSION**

Municipal governments can actively participate in the implementation of management plans for NR in their territorial limits, if they reach an agreement with the DNER.

---

<sup>96</sup> Id. Art. 2.001 (r)

<sup>97</sup> Id. Art. 2.001 (s)

<sup>98</sup> Id.

<sup>99</sup> Id. Art. 2.001(o)

<sup>100</sup> Id. Art. 2.001 (r)

<sup>101</sup> Id. Art. 2.001 (s)



---

In other countries, the decentralization of environmental powers and responsibilities has become an attractive alternative solution to promote the efficient, equitable and democratic reform of the current natural resource management practices. Nevertheless, decentralization should not be viewed as a panacea that will automatically solve all of the problems of environmental protection. Puerto Rico's current legal framework provides some basic tools to facilitate the decentralization process. But in order to make municipal decision-making and management of local-level MPA possible, the State has to intervene through the DNER and in order to make it effective and democratic it is necessary to involve interested citizens in all its proceedings.



## **RECOMMENDATIONS THAT WOULD STRENGTHEN THE EFFECTIVENESS OF PUERTO RICO'S NATURAL RESERVES WITH MARINE ECOSYSTEMS<sup>102</sup>**

### **RECOMMENDATIONS THAT MAY ENABLE APPROPRIATE LOCAL PARTICIPATION IN MANAGEMENT PLAN DEVELOPMENT AND IMPLEMENTATION OF NATURAL RESERVES WITH MARINE ECOSYSTEMS.**

#### **I Introduction**

Better technical decisions are not the only benefit or goal of public participation in the decision-making process. Participation also results in decisions that are 'socially' better, because they are more responsive to the needs of the directly affected communities<sup>103</sup>. (our translation)

Before we start to make recommendations directed at enabling appropriate local participation in the development and implementation of Management Plans for NR with Marine Ecosystems (MPNR) we have to answer the following questions:

- (1) What does the concept of 'local participation' mean? Why is it important to 'enable' local participation in natural resource management?
- (2) From a legal-formalist perspective, which participation opportunity does Puerto Rico's current legal framework provide or permit in the development and implementation of MPNR?
- (3) How has the concerned citizenry taken advantage of these participation opportunities?

#### **II. CITIZEN PARTICIPATION IN NATURAL RESOURCE MANAGEMENT**

Human beings maintain complex bonds with their surrounding natural environment. In the Puerto Rican government system management of natural resources has been nearly exclusively in the hands of the State. In some cases the citizenry participated in the development and implementation processes of important guidelines for environmental development and management plans.

This philosophy of centralized natural resource administration has been slowly eroding during the past decades. Government agencies as well as communities have recognized the advantages of granting a greater participation to citizens who were previously excluded. Among the advantages recognized as fostering major participation of the concerned citizenry are:

1. legitimization of State actions;
2. more efficiency and effectiveness in management practices;
3. response to the problems of adjacent communities;
4. insertion of environmental issues in the context of socioeconomic development;
5. incorporation of popular knowledge to formal management systems;

---

<sup>102</sup> The recommendations presented in this section represent solely the opinions of the authors. Above recommendations are not necessarily endorsed by the DNER, even though they were discussed and shared with that agency.

<sup>103</sup> Better technical decisions are not the only benefit or goal of public participation in the decision making process. Participation also results in decisions that are 'socially better' in that they are more responsive to the needs of the affected community. 'Folk, Ellison, "Public Participation in the Superfund Cleanup Process." 18 ECOLOGY LAW QUARTERLY 173, 185 (1991)



6. fostering of more community and grassroots organization; etc.<sup>104</sup>

Most expert authors of citizen participation in environmental process topics assert that it is necessary to incorporate as many and diverse individuals and sectors in environmental decision-making processes as possible<sup>105</sup>. Even though, debates still exists not only regarding the appropriate identification of the people and groups to whom major participation should be granted, but also regarding the concept of *participation* itself: what exactly does it mean to *participate* in environmental decision-making?

For this report, we shall define the concept of *participation* as the active involvement of a person in each and every aspect of policy formulation and decision-making processes regarding the use and protection of a natural resource. It is not sufficient to merely ask for the public's opinion, it is urgent that interested individuals or sectors learn to compile information, push for an organized development and use legal mechanisms to fully *participate* in the investigation and analysis process, as well as identifying problems and options for their solution<sup>106</sup>.

Public participation in regulation processes is also important. Even though agencies have special knowledge, the public can often give specific information needed to help the agencies in the rules and practices developing process. Accordingly, we shall also contend that more 'participation' should be granted to individuals that do not work within the State apparatus, yet are legitimately interested and affected by the well-being of a particular natural resource. Such interest may be economic, social or cultural<sup>107</sup>.

It is important to point out that if we considered the act of 'preparing' the drafts of management plans a regulation act, we would find in the Uniform Administrative Procedure Statute is a juridical source that would make it necessary to incorporate citizen participation in this process<sup>108</sup>. This statute requires any government agency making regulations to incorporate citizen participation through public notice or written commentaries. The DNER would essentially have the public duty of publishing notices in a national newspaper, announcing the nature of the regulation to be approved and among other things, inform about the citizenry's right to submit written commentaries regarding the issue<sup>109</sup>.

### III. PUERTO RICO'S CURRENT LEGAL FRAMEWORK

In Puerto Rico, the responsibility of protecting and managing our natural resources is considered inherent to the State. Since 1973, the main agency in charge of the implementation of the management policies set forth by the PB is the DNER<sup>110</sup>. A structural and juridical analysis of Natural or Marine Reserve Management Plan (NRMP) development and implementation processes allows us to appreciate, in abstract, some of the various spaces and windows of

---

<sup>104</sup> Renard, Brown & Geoghegan. "Integrating Stakeholders in Natural Resource Management in the Caribbean: Guidelines for Stakeholder Identification and Analysis". Caribbean Natural Resources Institute, 2000; Cole & Foster, *supra*; Folk, *supra*.

<sup>105</sup> Lamelas, Rosa "Hacia el co-manejo de los recursos naturales en una region costanera: el CSBSE en la República Dominicana" Comunidad y Medio Ambiente: Lecciones del Caribe. CANARI, 2000

<sup>106</sup> Id.

<sup>107</sup> Renard, Brown & Geoghegan, *supra*, p.6

<sup>108</sup> Ley de Procedimiento Administrativo Uniforme, 3 L.P.R.A. §§ 2120 et. seq.

<sup>109</sup> 3 L.P.R. A. § 2121

<sup>110</sup> See: Bush, David M. et al. Living with the Puerto Rico Shore. Editorial UPR San Juan, 1995 "In effect, the DNER serves as the advocate for the island's natural resources while the Planning Board makes the final decisions that reconcile differences between parties with conflicting proposals." (139); Ley Orgánica del Departamento de Recursos Naturales y Ambientales. Ley Núm. 23 from June 20, 1972



participation that the current legal framework grants the concerned citizenry. This abstract analysis has been made the preceding reports. The most important conclusions are:

- (1) The process of NRMP *development* has three separate phases: NR designation, draft NRMP development by the DNER, and the PB's final approval of the NRMP.
- (2) Regarding the obligation of including public participation, there are only general public policy statements suggesting that the DNER should incorporate citizen input. For example when the DNER submits a management plan to the PB, citizen participation has to be incorporated via mechanisms of public notice and written comments.
- (3) Regarding the process of NRMP *implementation*, we are again confronted with general public policy statements that suggest that the DNER should incorporate citizen input, but there is no specific statute or regulation indicating the exact way the agency must make citizen input possible.

#### **IV. EFFECTIVENESS OF THE PUERTO RICAN SYSTEM**

Although the structural and juridical analysis offers a clear picture of the current legal framework regarding public participation opportunities and mechanisms, it does not answer the following question: has the current legal framework been effective in fostering active participation?

From an empirical perspective, we can gather important information regarding the type and quality of citizen participation that has taken place. We have identified matters which need attention, in order to be able to perform a more detailed study regarding the degree of public participation:

- (1) *The public record that documents citizen participation.* The first opportunity for public participation occurs during the designation of the NR and during the draft plan development by the DNER. The record of this participation is in the custody of the DNER, and is supposed to be available for public inspection after the publication of the final management plan's adoption by the PB. This record of public participation in the development of management plans is important, because it is the basis for the PB to decide if it includes the management plan in the Land Use Plan or not.
- (2) *Only one NR management plan (NR Seven Seas) has been approved as an element of the Land Use Plan and none as a regulations.* To this date, no other NR management plan other than areas of special planning, has been approved by the PB, and it is therefore impossible to totally evaluate the degree of public participation during this phase.
- (3) *There are no specific regulations compelling the agencies to include public participation in the development and implementation of management plans.* The structural juridical analysis revealed the fact that there is no single statute or regulation compelling the DNER to involve the citizens in the implementation phase.

#### **V. Recommendations Public Participation**

- A. *Who should participate?* The DNER must give precise content to the concepts of 'citizenry' and 'public'. There must be some sort of preliminary identification of the individuals and groups that will be affected by the agency's management policies. A very rich and useful body of literature is being developed regarding the subject of stakeholder



identification in natural resource management, particularly in the Caribbean region<sup>111</sup>. The DNER could perform this identification process in all NR, in order not to leave out important citizen groups or sectors.

- B. *How to summon potential stakeholders?* Once the affected or interested citizens have been identified, the communication mechanisms must be improved. Instead of using the typical *public notice* required by the UAPA, the agency could make a major effort to include stakeholders in the decision making process. The DNER could use alternative mechanisms, such as e-mail notices, telephone calls, written communications, personal interviews, etc. These alternatives seek to capture the early interest and attention of the largest number of interested and affected parties, making public participation more effective.
- C. *When should public participation begin?* Regarding the moment when citizen input should occur, it is important to point out that it can happen from the very beginning of the management plan developing process, or if possible, from the NR designation process. Waiting until the NRMP's final approval could be ineffective: if the agencies have already invested valuable time and effort drafting the Plan, they would have to put in extra efforts altering it because of a 'written commentary' submitted by a citizen before its approval<sup>112</sup>.
- D. *Education.* The DNER could continue to invest time and resources informing and educating the citizenry about the NR designation process and the basic management principles underlying its policies and actions. If the public is informed regarding its participation and the agency's mandates, it is more likely to participate.
- E. *Directives.* It is necessary to implement general directives regarding the definition of the elements to be evaluated by the DNER at the moment of starting an NR management collaboration agreement. These directives could include a detailed description of the steps a community has to take in order to apply for participation in an NR management. Even though this evaluation is done step by step, any expression by the DNER as to which tasks or activities can be delegated or not, would help in implementing standard criteria to be evaluated by the agency.
- F. *A decision for each individual case.* After having received the applications of the community for management participation, it could be decided for each individual case which management activities could be delegated depending on existing human resources in the NR area and their capacity. In some cases, for example, the drafting of management plans could be delegated to external entities, but they have to be in constant collaboration and communication with the DNER, and they need its approval for all drafts of the Plan.

---

<sup>111</sup> See Renard, Brown and Geoghegan, *supra*.

<sup>112</sup> Cole & Foster, *supra* – Opportunities for public comments most often come only *after* the decision making process has been going on for some time, often years. By the time an agency solicits comments from the public or holds a hearing, the decision maker has often made an initial decision [...] without input from the interests of those (usually the community) who have not found a way into the decision making process prior to the formal comment period. The decision maker has already expended considerable energy, resources and expertise [...]. Since community participation comes so late in the process, the decision making process becomes an 'announce and defend' approach. Many communities conclude that the public participation process is designed not to hear and address their concerns but instead to manage, defuse and ultimately coopt community opposition."



## VI. NRMP Development Phase

### A. Adoption as a regulation.

If NRMP management plans were adopted by the PB and registered as regulations, they could be important in the implementation phase. Their approval by the agency would give management officials a powerful tool to establish and implement those management uses and activities. In the areas where a non governmental entity is interested in collaboration in the implementation of a management plan, the same document approved as a function that can be delegated, and to establish, for example, conditions for the use of one specific NR exclusively.

The UAPA defines the regulation as “proceedings followed by an agency to formulate, adopt amend or derogate a rule or regulation.”<sup>113</sup> It defines a regulation as “any norm or group of norms of an agency which is of *general application* and which execute public policy or the law or regulate the requirements of an agency’s proceedings and practices<sup>114</sup>. NR management plans establish public policy for their use, and management ideas for the NR management official to clarify objectives, mission and purposes within the area.

In order for a regulation to be legally valid, the notifying agencies could follow UAPA mechanisms in use when it was created. In order to approve or amend a regulation, the agencies are obliged to:

- (1) Notify their intention to adopt or modify a regulation in English and in Spanish in a national newspaper and on the Internet. In case the regulation affects a specific residential community, the agency has to publish an additional notice in Spanish and in English in a regional newspaper. All notifications have to include:
  - a) A short summary or explanation of the proposed action.
  - b) A citation of the legal disposition which authorizes the proposed action
  - c) The way, place, dates and time to submit comments in writing regarding the proposal or requesting an interview in writing; and
  - d) Place where the complete text of the regulation is available to the public<sup>115</sup>.
- (2) Provide a term of not less than 30 days from notification date for the citizens to submit written comments.
- (3) Present the original regulation at the State Department in Spanish with two (2) copies for its approval and publication.
- (4) Present the regulation at the legislative Library<sup>116</sup>.

The notification applies to every action to be undertaken by an agency related to the formulation, adoption, amendment or derogation of a rule or regulation. The requirement to notify the public is essential for compliance with the due diligence legal process to which any citizen is entitled. Usually the citizens have thirty (30) days to submit their comments after the notification is published.

The agencies interested in publishing a regulation have to have official documentation available for public inspection, including all the information regarding the regulation. This file has to include:

- (a) Copies of all publications regarding the rule or proceeding;

---

<sup>113</sup> 3 L.P.R.A. § 2102 (m)

<sup>114</sup> 3 L.P.R.A. § 2102 (l)

<sup>115</sup> Id.

<sup>116</sup> 3 L.P.R.A. § 2121





- (b) All petitions, requirements, briefs or commentaries filed with the agency and any material that the agency considers relevant regarding the adoption of the rule and the proceedings followed.
- (c) Any report prepared by the official presiding the hearing with a summary of the presentations.
- (d) A copy of any regulatory analysis prepared for the proceedings to adopt the rule.
- (e) A copy of the rule with an explanation of its terms.
- (f) All petitions for exceptions, amendments, derogation or suspension of the rule<sup>117</sup>.

Apart from the text, all rules and regulations adopted or amended by an agency have to include the following information:

- (a) A quotation of the legal disposition authorizing its adoption or amendment;
- (b) A short and concise explanation of its purposes or the reasons for its adoption or amendment.
- (c) A reference to all the rules and regulations to be amended, derogated or suspended during adoption ;
- (d) The approval date, and
- (e) The time they are in force<sup>118</sup>.

The regulations approved by the administrative agencies which are not approved according to the previously defined requirements, are not legally binding, and so their compliance is not mandatory for the affected citizens. To these requirements the suggestion to publish the draft on the DNER web page could be added, so that it can be downloaded and printed.

## B. Strengthening of the present proceedings

If the goal is effective co-management (that means the collaboration of State and the public during the implementation phase) we would recommend that the concerned citizenry be incorporated during the NRMP development phase. Interested citizens would have a stronger civic commitment working towards the implementation of an NRMP that it has contributed to develop. The suggestions include:

- (1) *Citizen assistance during preliminary research.* One of the most important obstacles faced by the DNER during NRMP development is the lack of personnel within the agency. As a viable alternative, the DNER can seek the assistance of citizen groups. DNER specialized personnel could request academic participation with the purpose of including them in research tasks. A captive audience exists in the island's many public schools close to the NR. Agreements could be reached with the Department of Education in order to grant extra credits to college and high school students willing to actively participate in DNER programs. Citizen education and capacitating could also be a specific project for management strategies (capacitate and educate the communities adjacent to the NR, as well as school integration, even though many of them visit NR and participate in the dynamic and projects they entail. It is important

---

<sup>117</sup> 3 L.P.R.A. § 2126

<sup>118</sup> 3 L.P.R.A. § 2125



- to point out that all these strategies will have long term positive effects because they will create consciousness about the importance and the value of the island's NR.
- (2) *Foment multidisciplinary analysis.* DNER technicians could contact the Social and Natural Science Faculties of the islands' universities in order to suggest new areas of graduate and postgraduate research and analysis in order to satisfy the scientific (biophysical and social) needs of the NR. Citizens unrelated to the academic university cycles could be involved as volunteers in the data gathering processes.
  - (3) *Law of NR.* Establishment of a Law of NR in order to strengthen the Law of Management Plans.

## VII. NRMP Implementation Stage

### A. *Why improve the public's input during NRMP implementation?*

Natural resource management schemes seek to incorporate interested citizens in processes traditionally delegated to the State. This goal is met not only by sharing important custodial and monitoring duties, but also by creating consciousness about the important resources available in our surrounding natural environment. The public's involvement in daily management routines not only guarantees the conservation of the resource, but also the strengthening of the bonds between the natural environment and the communities which depend upon it.

### B. *What is to be done?*

The simplest way to enhance public participation during NRMP implementation is to foster and strengthen public participation during the NRMP development process. The DNER can also identify routine management tasks that can be undertaken by volunteers and concerned citizens, such as sign posting, educational conferences, monitoring activities, maintenance, supervised assistance with scientific tasks, public assistance in the development of NR financial strategies, etc. The alternatives of citizen assistance identified in the section regarding NRMP development can be used in the NRMP implementation phase in order to minimize operational costs and lack of personnel.

### C. *Public participation model for the NOAA MPA Program*

This model could be taken into consideration and adapted to Puerto Rico in order to assure organized and regulated public participation. Each MPA has a Sanctuary Advisory Council (SAC) which gives the management official advice and recommendations. SACs are established by law and are formed by volunteers representing different interests including: user groups, people interested in the resource, companies, tourism, education, investigation and government. Each SAC has its by-laws detailing its functions and operations. For example, goals and objectives are detailed, as well as membership composition and duration, member recruiting and selection, election process and other details. The advantages of this system have been:

1. Increasing awareness and understanding of sanctuaries;
2. Facilitate communication between the interested parties and the personnel of the sanctuaries
3. Provide a forum for discussion and act on important issues pertinent to the resource.
4. Increase citizen participation and compliance with goals and objectives.
5. Expand resources, experience and skills beyond those of their personnel.

Challenges of SAC implementation have been:



1. It requires intensive use of existent human resources;
2. Realistic expectancies regarding membership experience and composition;
3. Obtain representation and “correct” combination of users and interested public;
4. Find the “correct” person to represent his/her constituents and communicate with them effectively.
5. Leadership and guidance of the advisory board.
6. Attempts to exceed its legal authority.

#### VI. Some benefits of municipal designation of MPA.

During the last decades, many Latin American countries have implemented important reforms in their environmental public policies, among which the gradual decentralization of their natural resource management stand out<sup>119</sup>. That is, central governments have begun to delegate their environmental powers and responsibilities to protect, take care of and manage natural resources. But they still retain the power to make the main decisions and formulate public policy<sup>120</sup>.

Among the main reasons that justify the decentralization trend, are the need to reduce the gigantic central government bureaucracy, reduction of its operational costs and the adoption of environmental management schemes that grant more participation opportunities to the civil society and the primary users of the resources<sup>121</sup>.

It is possible to identify at least three decentralization models, all according to the recipient of the delegated power: (1) delegation to a private trust or NGO, (2) delegation to a municipal government, and (3) delegation to a community organization. It has been suggested that the last option is the most democratic and conducive to public participation, as long as it involves the participation of municipal governments and the necessary decision making powers are delegated, which has not been achieved up to now<sup>122</sup>. The delegation of environmental powers to private trusts and NGOs is the least democratic option, because of its lack of transparency, low citizen participation and long term commitment<sup>123</sup>.

In the Latin American context, Costa Rica is the country with the most centralized environmental regime<sup>124</sup>.<sup>124</sup> On the other hand; Guatemala is the only country where the central government is actively directing the decentralization process<sup>125</sup>. But in all the countries central state environmental agencies have resisted the decentralization process, expressing consent to the delegation of mere administrative duties, but openly opposing any delegation of decision making powers<sup>126</sup>.

It has been suggested that in order to effectively and completely decentralize environmental powers, the following axioms must be met<sup>127</sup>:

---

<sup>119</sup> Ferroukhi, Lyes (Editor) Municipal Forest Management in Latin America. Center for International Forestry Research Bogor, Indonesia 2003.

<sup>120</sup> Id. page 219

<sup>121</sup> Id. page 9

<sup>122</sup> Id. page 9 and 219

<sup>123</sup> Id. page 9

<sup>124</sup> Id. page 15

<sup>125</sup> Id. page 12

<sup>126</sup> Id. page 215

<sup>127</sup> Id. page 9



1. It is not sufficient to delegate mere administrative powers to municipal governments, it is also necessary to grant ample decision making authority<sup>128</sup>.
2. When the State delegates its powers, it must assure itself that the local governments possess the necessary infrastructure, human resources and material wealth necessary to implement its newly acquired duties and responsibilities.

In order to assure the democratic nature of the decentralization process, strict measures must be taken to prevent local economic elites from capturing and dominating the newly delegated powers, because this would frustrate the democratization process.

## VII. Conclusion

The agencies involved in the management plans for MPA, specially the DNER, have to make a real and conscientious revision effort, not only of management plan elaboration proceedings, but also of their internal proceedings, where important decisions are made which affect the NR, in order to foster and take into consideration in the decision making process the collaboration of citizens interested in those specific resources. This effort t requires that the agencies change the way they view public participation and interact with the citizenry. On the other hand, the public needs to get educated about inter-agency proceedings which affect their natural resources, and above all the communities have to get organized and demand that the agencies grant them space for genuine participation in the decision making process.

---

<sup>128</sup> Id. page 9 and 221.



## RECOMMENDATIONS FOR FINANCING MECHANISMS THAT WOULD STRENGTHEN NATURAL RESERVE MANAGEMENT

### I. INTRODUCTION

The effective management of MPA depends, among other things, on its financing. Substantial amounts of money are required to manage and protect these areas. Without sufficient funding to finance effective management, there is a great risk that many MPA may become protected areas in name only and not in reality.

Throughout the last two decades in the Caribbean, there has been a significant increase in the number of declared protected areas. A 1992 survey identified one hundred seventy five (175) protected areas in the Caribbean<sup>129</sup>. That number is likely to have increased in the superseding years. However, only a very small percentage of these declared protected areas are actively managed.

One possible reason may be that the initial motivation to establish protected areas is based on the perception that such areas enhance a country's competitiveness in the tourism sector. Even if the political will to establish protected areas may be strong, the will to assign a necessary budget for their management is not, in the face of urgent national priorities and continuous fiscal crises<sup>130</sup>.

In Puerto Rico the lack of effective funding is a major obstacle for the management of NR. Many of the NR, especially those designated through legislation, lack adequate funding for their management. Often, special legislations designating a new NR are not accompanied by the proper funding for their management. Among the last special legislations for the designation of new NR, Tres Palmas Marine Reserve is the only one where the designation law mentions a \$100,000 MP development fund. However the allocation of this fund has not been achieved. Regarding all NR management, each new designation adds new responsibilities for the DNER, which lacks the human and financial resources for the management of the existing NR. The DNER has to manage the additional NR with the same funds and the same personnel. Situations which present a financing challenge for NR in Puerto Rico are:

1. Concession quotas go to the general government funds and not the NR.
2. NR do not have separate accounts money allocated specially to them.
3. At present it is not possible to charge for NR use as it is done in National Parks.
4. There is no mechanism to accept donations directly to the NR account.

### II. FINANCING SOURCES

Research shows that government is the dominant source of funding for MPA's in developed countries, whereas in developing countries foreign assistance and park entry fees provide the main resources.<sup>131</sup> However, in Puerto Rico government funding through budget assignments is by far the biggest source of financing for NR. No self financing mechanism is in place at any NR on the Island.

---

<sup>129</sup> Putney, A.D. Protecting nature: regional review of protected areas. IUCN. Gland, Switzerland. 1994

<sup>130</sup> Tighe, Geoghegan. Financing Protected Area Management: Experiences from the Caribbean. CANARI: Caribbean National Resources Institute. January 1998

<sup>131</sup> Phillips, Adrian (Ed.) Financing Protected Areas Guidelines for Protected Area Managers. Financing Protected Areas Task Force of the World Commission on Protected Areas (WCPA) of IUCN, in collaboration with the Economics Unit of IUCN.



Nonetheless, in Puerto Rico, public financing through budget assignments is the main source for NR funding. Up to this date there are no self-financing mechanisms for NR in Puerto Rico.

A wide variety of financing mechanisms already exist and are being used in different parts of the world that can easily be implemented in Puerto Rico to help improve the level of management in marine NR and other protected areas. Next we will present a list of different financial mechanism examined in the available literature about MPA. The list is not exhaustive, but covers a wide range of alternatives, which could be explored in the future. Financial mechanisms can be grouped in two major categories: (A) external and (B) self financing sources.

## **A. External Financing Sources**<sup>132</sup>

### **(1) International Financing Sources**

A series of international organisms created following conventions and/or treaties provide financing mechanisms for the development and management of protected areas. Some examples are:

- Convention on Migratory Species<sup>133</sup>
- World Heritage Convention<sup>134</sup>
- Ramsar Convention on Wetlands<sup>135</sup>

### **(2) United States Federal Government Sources**

Puerto Rico, due to its political relation with the United State, can benefit in some cases from grants and programs available through different Federal Agencies, such as National Oceanographic and Atmospheric Administration (NOAA), Fish and Wildlife Service and the Environmental Protection Agency (EPA).

### **(3) Government Revenue Allocations**

It has been the experience in many developing countries that funding for conservation is often one of the first government budget items to be cut in times of economic hardship<sup>136</sup>. Political and public policy issues also play an important role in the budgetary process. The importance of marine biodiversity conservation and sustainable resource management is often only recognized after fish stocks have become depleted, reefs and wetlands have been destroyed, and ecosystems no longer provide the goods and services that people used to take for granted. Nevertheless, governments be persuaded to increase their annual budget allocations for conservation and sustainable management of marine ecosystems if it can be shown that marine resources generate substantial economic benefits not only short term, but also medium and long-term.

Some of governments financing sources are:

1. Direct allocation from the Government Budget and legislative projects
2. Emissions of Government Bonds and Taxes Earmarked for Conservation

---

<sup>132</sup> Id. note 1

<sup>133</sup> This convention, which is implemented through regional agreements between Range States, provides protection for endangered species throughout their range by protecting both the species and their habitats. Protected areas play a vital role in conserving habitat for migratory species. The convention also administers financial support to agreements between nation for the portection of migratory species

<sup>134</sup> The World Heritage Convention has a funding mechanism to assist in preparing management plans or training for protected area managers of World Heritage Sites. More information about this fund is available on the Internet at <http://economics.iucn.org>

<sup>135</sup> World Heritage Convention has a funding mechanism to assist in preparing management plans or training for protected area managers of World Heritage sites.

<sup>136</sup> Id. note 3.



3. Motor Vehicle License Plates with NR program logo
4. Legislative Allocation, better known as ‘pork barrels.’ These funds come from legislators’ allocations made through House of Representative Joint Resolution for specific projects.
5. Mitigation programs for construction projects with possible environmental impact, agreements with the EQB in the environmental impact assessment process.
6. Voluntary donation through individual electricity and water bills. Contributions can be deposited in a special bank account and administered by a trust fund destined to finance conservation projects.
7. Charge a portion of the Port Fees.
8. Establish an account for the deposition of revenues from RNs which at present go to the coffers of the State.
9. Concession (e.g. licence plates, kayak trips, etc.)
10. Voluntary taxes in guest houses close to the NR which would give the guest house an Eco-Labeling.
11. Municipal hotel taxes
12. Diving shop fees

#### **(4) Grants and Private Donations**

Grants and donations from foundations, nongovernmental organizations (NGOs), private sector investors promoting biodiversity, and conservation trust funds are a great source of financing for the development of protected areas.

#### **B. Self Financing**

Self financing sources provide an attractive alternative to external funds on the road to sustainability. The implementation of mechanisms for financial sustainability has become a routine conditionality of loans and grants for protected areas. The experience in the Caribbean region demonstrates that self-financing is a viable option for many of the region’s protected areas, especially those that attract large numbers of visitors. The following areas are particularly noteworthy for having achieved and maintained financial self-sufficiency over a period of years: Nelson’s Dockyard National Park, in Antigua; Bonaire Marine Park, British Virgin Islands system of MPA, Saba Marine Park, Brimstone Hill Fortress National Park, St. Kitts, and Pigeon Island National Park, St. Lucia<sup>137</sup>.

In addition, recently established protected areas in Jamaica (Blue and John Crow Mountains National Park) and St. Lucia (Soufriere Marine Management Area) are working towards full or partial financial self-sufficiency. And in Belize, Dominica, Grenada, Trinidad and Tobago, and the Turks and Caicos Islands revenue generation strategies based largely on user fees are now being developed<sup>138</sup>.

One of the major obstacles faced by government departments in Puerto Rico and other countries in implementing revenue generating mechanisms such as user fees, public donations, or gift shop sales, is that it is generally difficult to segregate such revenue from the general budget for management of a NR or protected area, since all government income is expected to be paid into the consolidated fund and allocated according to annual budget.

---

<sup>137</sup> Id. note 3

<sup>138</sup> Id



On the other hand, non-governmental organizations may not have adequate accounting systems, and consequently their authority as management agents and revenue collectors may be questioned by users, management partners and collaborators. The creation of partnerships between the government and NGOs could overcome the problems faced by both government and non-governmental organizations. The experience in Puerto Rico with the Conservation Trust of Puerto Rico and Casa Pueblo in Adjuntas has proven that it can work.

The following are a few financing sources for marine NR.

**(1) Tourism Revenues**

- Protected Area Entry Fees
- Diving and Yachting Fees
- Commercial Concessions
- Airport Passenger Fees and Cruise Ship Fees
- Hotel Taxes
- Voluntary Contributions by Tourists and Tourism Operators

**(2) Real Estate and Development Rights**

- Purchases or Donations of Land
- Conservation Easements
- Real Estate Tax Surcharges inside or adjacent to protected areas
- Tradable Development Rights and Wetland Banking
- Conservation Concessions

**(3) Fishing Industry Revenues**

- Eco-Labeling and Product Certification for seafood and ornamental products
- Fishing Area Access Payments
- Recreational Fishing License Fees
- Fines for Illegal Fishing
- Form “Friends of the Reserve ”groups who donate money, time and collect funds
- Educational Tours (including snorkeling)
- Sale of Logo products
- Summer camps

**Strategies for the implementation of user fees**

**A. Multi-tiered user fee system.**

In order to achieve major social justice, some countries have opted for the implementation of sliding scale user fees, also known as ‘multi-tiered fee systems’. Its purpose is to charge fees according to the user’s socio-economic status. Some examples are student and elderly discounts and higher tariffs for foreign tourists<sup>139</sup>.

The charging of lower entrance fees for residents is justified for various reasons<sup>140</sup>. The residents of the country which administers the RN have already contributed to the maintenance of the area through their taxes. Apart from that, most NR consider recreation and environmental

---

<sup>139</sup> Lindberg, *supra*, 7 – “It often is possible to devise fee systems to facilitate visitation by groups that might be disadvantaged such as through 1) lower fees for students or the elderly or through 2) annual passes, off-peak fee reductions, or open days with no fee which implicitly favor local residents.”

<sup>140</sup> Kreg Lindberg & Elizabeth Halpenny, *Tourism User Fee*, 5 (2001)





education for adjacent municipalities as one of their priorities, and this objective would be affected if they are forced to contribute a significant amount in order to be able to access the NR.

### **B. Reduce collecting costs**

One way to reduce the collection cost of entrance fees is to sell tickets through tourism stores. This way, already existing personnel and infrastructure from the private sector can be used. Another possibility is to use an ‘honor’ system in which the user deposits the fee voluntarily without an NR employee asking for it. This system is called ‘voluntary user fee system.’

### **C. New opportunities for the local economy.**

Even though the tourism industry is preoccupied that fewer people will visit NR with an entrance fee, this does not have to be a necessary consequence. A well designed quota system could generate revenues which permit an improvement in the area, which would make it more attractive for potential tourists.

## **III. BUSINESS PLAN**

Experts in financing of MPA conservation agree that this aspect should be evaluated as part of a strict business plan<sup>141</sup>. The plan should be based on the operational cost evaluation of a protected area.

The choice of which financing mechanism or combination thereof should be used in a particular case should be based on analyzing the following feasibility issues:

### **Financial**

- How much money will actually be needed each year to support the particular marine or natural reserve conservation programs and planned activities?
- How much revenue is likely to be generated each year by the new financing mechanisms?
- Will the revenues generated be worth the cost of setting up the new system of user fees?
- Could the revenues vary substantially from year to year depending on global and national economic, political, and natural conditions?
- How will a highly variable revenue flow affect the conservation programs that the financial mechanism is intended to pay for?
- What other sources of funds might be available, either on a long-term or one time basis?

### **Legal**

- Can the proposed financing mechanisms be established under the country’s current legal system? In Puerto Rico, there may be constitutional problems with the Dormant Commerce Clause in the United States Constitution, which establishes that it can have an effect on interstate commerce.
- Will new legislation be required in order to establish the proposed financing mechanism?
- How difficult and time-consuming will it be to pass such legislation?
- Could the new financing mechanism be established under current legislation, by simply issuing an administrative or executive order?
- Does the new mechanism comply with current DNER regulations regarding concession?

### **Administrative**

- How difficult will it be to administer, enforce, collect, or implement a particular type of user fee, tax, or quota and trading system?
- How complex and costly will it be to implement?

---

<sup>141</sup> Id., note 1



- Are there enough trained personnel to implement the system? How difficult and costly would it be to train people?
- Will implementing the particular user fee, tax, or quota depends too much on the discretion of individual officials and therefore present too many opportunities for corruption?
- How difficult would it be to devise safeguards to limit potential system problems?
- How difficult will it be to collect, verify and maintain the data upon which a particular user fee, tax or trading system is based? For example, how difficult will it be to keep track of the amount of fish that are caught each day or each month by particular individuals, or commercial fishing vessels; or the number of people who visit an MPA?

### **Social**

- What will the social impacts of implementing a particular system of generating revenues for conservation be?
- Who will pay, and what is their willingness and capacity to pay?
- Will the new financing mechanism be perceived as equitable and legitimate?

### **Political**

- Is there government support for introducing the new financing mechanism?
- How much security is there that the revenues will only be used for the purposes intended?
- Can this be monitored by a group, organization or board of directors?

### **Environmental**

- What will the environmental impact of implementing the new financing mechanism be? For example, for tourism-based mechanisms, will the desire to increase revenues from tourism compromise conservation objectives or exceed the carrying capacity of the MPA?

According to Adrian Phillips in Financing Protected Areas Guidelines for Protected Area Managers<sup>142</sup>, the experience in the Caribbean region over the past decade suggests some general guidelines that should be followed in developing revenue generation strategies for protected areas or protected area systems:

- (1) Fundraising strategies should begin with the development of a budget for managing the area or system at the desired level. The aim of the strategy should be to completely cover the management costs based on the proposed budget.
- (2) The preparation of a fundraising strategy should be a consultative process that involves all interested parties, particularly representatives of major user groups. Consensus among all involved should be reached before any elements of the strategy are implemented. The lack of consultation has created numerous difficulties in implementing fundraising strategies. In the case of the Bonaire Marine Park, an initial attempt to implement a user fee had to be abandoned because of resistance from the island's diving operators, who were not consulted. A fee system was developed and successfully established several years later with the full participation and cooperation of all groups.
- (3) A diversified funding base provides greater security and flexibility than reliance on a single source of funding. Especially strategies that rely heavily on entrance fees and other revenues from visitors can be severely threatened by often unpredictable downturns in the tourism industry. The most effective revenue generation strategies aim to bring in a surplus in years of high visitation that can cover shortfalls in times of difficulty.

---

<sup>142</sup> Id, note 3



- 
- (4) Strategies should aim to reduce, but not eliminate, the level of direct government support. It is only through reducing dependence on this inadequate source of support that protected areas can succeed in meeting the costs of proper management. However, complete financial independence from government can result in reduced policy and technical support as well, and should therefore be avoided. Even a small annual financial or in-kind contribution secures the government's stake in the protected area and its management.
  - (5) Partnerships and co-management agreements can increase management efficiency and reduce costs. Since the aim of revenue generation is finance management, other approaches that reduce management costs can be as valuable as money. Beneficiaries of protected area management are often willing to contribute time and services to carry out management functions at a lower cost than the designated management agency.
  - (6) The principle of equity should apply in allocating the costs and distributing the benefits from revenue generation strategies. It is generally agreed that those who benefit most directly from protected areas and the services they provide should bear most of the cost of their management. If a protected area is well managed, entry fees and fees for the use of infrastructure and services are generally perceived by users as reasonable and fair. By the same token, benefit sharing can provide a way to compensate those who have been negatively affected by the protected area's management activities.

#### **IV. CONCLUSION**

Well managed protected areas may provide a measure of protection against development pressures in the coastal zone and provide an attractive alternative to traditional tourism. In recent years there has been increasing interest in the management of MPA and their benefits. Given the limited ability of the government of Puerto Rico to meet the cost requirements to manage NR, alternative sources of revenue need to be explored to strengthen conservation efforts on the Island.