


# Conservation Panama

Exploring Options for the Future



Proceedings of the  
Panama Conservation and Ecotourism Workshop

Panama City, Panama  
February 18-19, 1998





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**Panama Conservation and Ecotourism Workshop**

Sponsored by:  
**Department of Defense Legacy Resource Management Program**

In Partnership with  
**Smithsonian Tropical Research Institute and  
The National Fish and Wildlife Foundation**

**Panama City, Panama  
February 18-19, 1998**



**Mission Statement**

To highlight resource stewardship of Panama's natural heritage and to provide a forum for future cooperative conservation efforts.

**Objectives**

1. Highlight conservation initiatives in the Panama Canal area.
2. Present information about opportunities for sustainability.
3. Foster cooperative ideas and partnership activities for resource conservation.

**Sponsor**

Department of Defense Legacy Resource Management Program

**Partners**

Smithsonian Tropical Research Institute  
The National Fish and Wildlife Foundation

**Contributors**

National Association for the Conservation of Nature (ANCON)  
Birdlife International  
Canopy Adventures  
Clemson University  
College of William and Mary  
EcoResorts International  
EcoTours  
Fundación Natura  
National Institute of Renewable Resources (INRENARE)  
Panama Institute of Tourism (IPAT)  
Interoceanic Regional Authority (ARI)  
Panama Audubon  
Panama City  
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# Executive Summary

These proceedings summarize the discussions held at a workshop entitled Conservation Panama: Exploring Options for the Future. The workshop was held in Panama City on February 18-19, 1998. The purpose of the workshop was to highlight resource stewardship of Panama's natural heritage and to promote the concept of conservation across social, political, and economic boundaries. By taking into account social involvement, economic reality, and political linkages, the conservation of vital natural systems becomes an integrated way of living, working, and recreating. By exploring options for obtaining the right balance of conservation and economic sustainability, we can bring together people, their economies, and their government in a non-threatening forum to present shared visions, concepts, and ideas that will shape the future of their country. We believe this workshop has helped create these linkages.

The discussions summarized in these proceedings reflect the growing interest of many people to better understand the interrelationship amongst conservation of resources, the use of these resources, and the politics that lay the foundation for sound management of these resources for current and future

generations. They demonstrate that real cooperation between sectors with superficially different interests is both possible and essential. As the year 2000 approaches and Panama again secures management responsibilities for all its land, decisions on how to use the land and for what purpose must be made by well-informed decision makers with an understanding of Panama as a country that forms a critical biological and socio-economic link between the Americas.

Panama is well positioned to develop a model for resource-based conservation and management that others could follow. We hope this workshop has given the attendees and others who will shape the future of Panama the foundation upon which to base these critical decisions.



L. Peter Boice  
Director, Conservation

Office of the Deputy Under Secretary  
(Environmental Security)





## Welcome

### Ira Rubinoff,

Director, Smithsonian Tropical Research Institute

I want to thank Jackie Howard and the National Fish and Wildlife Foundation for inviting me to speak at this symposium on developing ecotourism strategies for the Panama Canal area. I want to welcome the officials of the Government of Panama and all of you, my colleagues, to the Smithsonian Tropical Research Institute (STRI) this morning.

Several months ago, I had the pleasure of sitting in on a talk that Hana Ayala made to officials of the Panamanian Institute of Tourism (IPAT), and to the people from the Inter-Oceanic Regional Authority (ARI). She spoke about heritage, conservation, resort ecotourism, and global, information-based ecotourism. She was most persuasive, and I believe that if Panama becomes the first country to adopt heritage ecotourism as a national strategy, it will succeed, for few countries have greater natural and cultural resources on which to base such a strategy. The concept, as Hana described it, has several critical elements which appear to make success in Panama likely. First, it gives some of the custodial responsibility for tourist attractions, be they cultural, natural, or both, to the resort operator. This

is crucial, since it will help avoid the tragedy of a commons where the resources belong to everyone, but are owned by no one. Second, since the experience being offered is educational, the resorts would also have a stake in supporting research about the natural areas or the artifacts under their custodianship. Research will keep the information that tourists receive fresh and will encourage repeat visits to learn about the outcome of projects which were underway during previous visits.

This was all very well, but then Hana explained that STRI, as an important player in the research community of Panama, could have an immediate impact on the development of the master plan and on its practical implementation. At this point I began to sweat. Wait a minute. Did she mean that STRI would be expected to give practical advice upon which other people would be making substantial financial investment? This would definitely require stepping out of the ivory tower. I've spent most of my professional career trying to persuade people that they should support basic research, the benefits of which would mostly

*"I believe that if Panama becomes the first country to adopt heritage ecotourism as a national strategy, it will succeed, for few countries have greater natural and cultural resources on which to base such a strategy."*

*Is it not important that tourists as well as those who are responsible for the canal's watershed should understand that the forest does not stand alone? Protecting its trees, without concomitant protection of the birds, mammals, and insects, will leave a forest without pollinators, seed dispersers, or assistance with germination of seeds."*

accrue to the next generation or perhaps to them in the next world. Here, our work is expected to have an immediate relevance to society. Well, why not? Do not the STRI scientists and their hundreds of students and visiting scientists from around the world have the information on which to base the programs of interest to tourists? Have the dozens of natural history documentary filmmakers only chosen to come to Panama because they like our brand of garrapatas? Aren't our scientists best qualified to identify the many cryptic species that inhabit the rain forest, and to share the incredible stories of interdependence, mutualism, and symbiotic relationships that are found in the forest or in a coral reef?

The first studies of nonhuman primates in the field were conducted on Barro Colorado Island's howler monkeys. These were precursors to the work of Jane Goodall on chimpanzees and Diane Fossey with gorillas. Pioneering work on army and leaf-cutter ants was done here. The fluctuations in abundance and responses of plants and animals to seasonal changes were described here. Is it not important that tourists as well as those who are responsible for the Canal's watershed should understand that the forest does not stand alone? Protecting its trees, without concomitant protection of the birds, mammals, and insects, will leave a forest without pollinators, seed dispersers, or assistance with germination of seeds. Without these organisms, the trees will live on perhaps for centuries, depending on kinds of

species. But you will have only adults, no juveniles—the living dead. And when the adult trees finally fall, a much different and decadent forest will remain, one less interesting to tourists, and most likely, less effective in the storage of water for the Canal as well.

Barro Colorado Island contains the original large-scale forest dynamics plot of the center of tropical forest sciences. Since 1982, this original plot has grown into a system of 13 plots in 12 different nations, with more than 3 million trees of 3,000 different species under study. These data are providing critical practical information to foresters.

Research on the island provided the basis for the domestication of pacas and iguanas. So in effect, we have long since left the ivory tower.

We have a 75-year history of research on Barro Colorado Island. Under the terms of the Organization of American States convention of October 12, 1940, for the protection of the flora and fauna of the natural areas of the Americas, STRI was designated custodian of the Barro Colorado nature monument. This custodianship has recently been extended by the government of Panama until the year 2020. It appears to me that we have a responsibility to learn how to make this expertise available to the tourist industry. Private enterprise, such as the ARI, IPAT, and the National Institute for Renewable Natural Resources (INRENARE) must in turn appreciate that STRI's principal responsibility is to continue to provide a base for first-class

research. We must protect the time and the research integrity of the scientists who pursue their work. Would Cambridge, Massachusetts be a tourist attraction if Harvard University and MIT were second-rate universities?

STRI is ready to help. We will need to employ and to train professionals who can translate the results of our basic research into the training of guides and naturalists. We will need to create forest trails, species checklists, guide books, tourism information, and all the myriad activities necessary to make this undertaking both a financial and an ecological success. Let me digress for a moment on this term, "ecological success." I do not for a moment believe that we have enough information to design a strategy whereby access to natural areas by large numbers of tourists will have no impact. Low impact, perhaps. That is certainly a goal we should strive for and it may be quite practical in view of the history of the area.

The Canal area has long been subjected to significant human interference. The footprints and the other parts of the anatomy of man have been altering the environment of this region for 11,000 years. In an article in the *Panama American* this morning talking about the American Association for the Advancement of Science (AAAS) meeting going on in the United States this week, I see that they're moving that date back to 30,000 years based on an archeological site in Chile. I suspect we'll be moving our 11,000-year estimate back as well.

I believe that man played a big role in the extinction of ground sloths, giant armadillos, glyptodons, and mastodons. Much like myself, they probably ate everything that didn't move faster than they did. As for deforestation, we have clear evidence from fossil pollen that agriculture practiced by Paleo Indians resulted in extensive deforestation between 7,000 and 500 years ago. With the decimation of the indigenous peoples after the arrival of Europeans, a natural reforestation occurred. Certainly one of the largest deforestation events in the Canal area was caused by the damming of the Chagres River. The establishment of Gatun Lake in 1910 destroyed 133,000 acres of forest. And then Madden Lake in 1930 sacrificed another 7,900 acres.

We are thus dealing with disturbed areas, not pristine areas by any definition. They are nevertheless natural areas of enormous diversity, changing continuously in response to fluctuations in biotic and physical environments. We need them in this state for watershed protection, for climate control, for recreation, for potable water, for the protection of resident and migratory fauna, and for tropical research. I am very skeptical about the notion of sustainable use of tropical rain forest and coral reefs. They are far too complicated ecosystems for us with current knowledge to describe the long-term extractive output that can be sustained. I believe, rather, that we need to encourage non-use areas. However, the Canal area, with all its history of manipulation, is not a particularly

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good region for non-use status. Its proximity to major population centers essentially precludes this. It has, nevertheless, been substantially protected by the management of the Canal and the corresponding areas reserved for military protection. These circumstances now provide us with a unique opportunity to develop a tourism component that can be compatible with the Canal's operation, with international research efforts, and with the primary functions of the watershed. I am happy to pledge STRI's participation. All that is required is a comprehensive plan, a sensitivity and appreciation of the needs of the various interest groups, as well as a willingness on the part of the key players, IPAT, INRENARE, ARI, the National Institute for the Arts and Culture, the Panama Canal Commission, the National Secretariat of Science and Technology, the City of Knowledge, non-governmental conservation organizations, and new partners from the private sector, to cooperate with the new agenda. This is a formidable group to get to work together. But if they do, a significant positive change is possible. I hope this symposium will be the first step in getting them together. Thank you very much.

*Ira Rubinoff is Director of the Smithsonian Tropical Research Institute (STRI), a position he has held since 1974. He holds a Ph.D. from Harvard University and began his career with STRI as a marine biologist. Dr. Rubinoff is a Fellow of the Linnean Society of London, the American Association for the Advancement of Science, and the American Academy of Arts and Sciences. He has served on the Board of Directors of Earthwatch, the National Association for the Conservation of Nature, Fundación Natura, and the Charles Darwin Foundation for the Galapagos Islands. He was decorated with the Order of Vasco Núñez de Balboa by the Republic of Panama.*

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## Economic Imperative of a National Heritage Master Plan for Panama

**Hana Ayala,**

President, EcoResorts International

Ladies and gentlemen, good morning. Jackie, thank you very much for the kind words of introduction, and I also want to thank Dr. Rubinoff for his kind remarks.

There is a strong argument for including conservation in policy decisions. It features an estimated economic value of 17 services provided by 16 different types of ecosystems. On a global scale the value of these services, ranging from erosion prevention to air and water purification, averages \$33 trillion a year, which is nearly twice the world's annual gross national product. The Panama Canal watershed is an excellent example of the economic worth of ecosystem services. The economic value of the Canal is intertwined with that of the watershed ecosystem that feeds the Canal and that is also responsible for provision and quality control of drinking water for Panama City and other urbanization.

Panama is a treasure trove of biological diversity. And human migrations triggered a great cultural diversity amidst a stunning variety of landscapes. All these factors have combined to make Panama an unparalleled research laboratory and a mega-reserve of

knowledge for deciphering the past and planning for the future. This remarkable mixture of conservation and research significance of Panama's heritage, from border to border, endows Panama with spectacular tourism potential. Here is why.

International tourism and international ecotourism are merging. The quality of a destination's natural and cultural attractions, and the quality and the learning value of these attractions, are now the key factors that motivate international leisure travel and that define the competitive strength of the tourism product. The World Tourism Organization and the United Nations Environment Program are now teaming up to jointly pursue sustainable tourism development. The International Hotels Environment Initiative has made the "green," or environmentally sound, hotel the prototype for a successful hospitality operation for the 21st century.

More and more countries are redefining their national tourism products as ecotourism products. For example, the Australian Tourist Commission now positions the entire continent of Australia as an ecotourist's

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paradise. This is not a passing fad. This is an irreversible trend. The tourism and hotel industry is responding to the consumer's changing demand, which reflects increasing concern with physical fitness, health, and state of mind. Enrichment and learning are at the very core of the shifting demand in international leisure travel.

Panama is full of outstanding tourism, conservation, and research values. The priority Panama has given to developing its leisure tourism industry and the presence in Panama of the prestigious Smithsonian Tropical Research Institute superbly position Panama to enter the new millennium through a groundbreaking partnership that would integrate tourism, conservation, and research into a catalyst for Panama's national well-being. The time to do it is now, while Panama enjoys the momentum created by the fast-approaching reflagging of the Eighth Wonder of the World—the Panama Canal. This is the premise of the Tourism-Conservation-Research Master Plan for Panama's national development and international leadership that I have devised in concept and proposed to develop for Panama and with Panama. The Panama Canal watershed will be given priority attention by this project which I now call the TCR Action Plan, so as to encompass also the implementation component that is a very important part of it.

This presentation is the first time I have the honor and delight to replace the word "proposal" with the words "project in progress."

The TCR Action Plan sets to establish, very ambitiously, Panama's leadership on several fronts of sustainable development. On the front of tourism-research teamwork, the target is to distinguish Panama as the first country in the world that prioritizes excellence of experience management in developing its national tourism product. Let me explain. Knowledge about heritage resources is becoming the centerpiece of the quality of the tourism product. Why is that? Well, knowledge is the pillar of interpretation, which mediates the quality of the heritage experience. Countries around the world are embarking on a strategy of developing their tourism as heritage-centered tourism, but no country has yet recognized the enormous need for knowledge that such a strategy raises. Neither has any country recognized the formidable opportunity for boosting scientific research on its natural and cultural resources through the business interest that the tourism and hotel industry now has in accessing such research. I want Panama to be the first.

Panama is a wonderland of heritage, from Altos de Campana and Bocas del Toro, to the World Heritage wonder of the Darien and the cultural splendor of Portobelo, another World Heritage Site. It abounds in clues to deciphering the mysteries of the natural world and the human world. The relationships among these heritage resources are as remarkable as the resources themselves. With this in mind, the TCR Action Plan will devise a network of heritage themes that will

crisscross Panama and will simultaneously profile and strengthen the outstanding tourism, conservation, and research values of Panama's heritage. Every project we talk about today and tomorrow I am sure will benefit from linkage to this powerful heritage identity that no country can repeat or imitate. In coordination with the National Institute of Renewable Resources (INRENARE) and the National Association for the Conservation of Nature (ANCON), these themes will be used to consolidate Panama's national system of protected areas and give it a long-term direction for growth. These themes will also be used to direct the development of the accommodation and interpretive infrastructures for Panama's leisure tourism, including hotels and resorts, so as to maximize opportunities for combining a high standard of hospitality with a high standard of experience management. In cooperation with the National Secretariat of Science and Technology (SENACYT), the University of Panama, and other entities, the TCR Action Plan will also supply a strategy for systematically engaging the hotel and tourism industry in underwriting research that will benefit the quality of the tourism product, and at the same time whose value will spill into agriculture, forestry, health, education, and other sectors of Panama's economy.

Is there any evidence to support the viability of this strategy? Yes, there is. Experience management that stimulates learning is now recognized as a new priority within the international hotel

industry in general, and the international resort industry in particular. An excellent example of this profoundly new direction in which the industry is evolving are Amanresorts, which are a group of luxury hotels scattered throughout Southeast Asia, the South Pacific, and Europe. Reading this group's magazine, brochure, and other materials is more like reading the National Geographic. This emphasis on enrichment and learning combined with cultural and environmental sensitivity have become the keys to this group's great business success.

There is another assurance of viability of this strategy, and that is the support I have been privileged to secure from the executives of the American Association for the Advancement of Science. They view this project—the TCR Action Plan—as a model for the whole Latin American region, and have committed themselves to active participation and help.

There is one point I want to emphasize in particular. In the presence of the Smithsonian Tropical Research Institute (STRI), Panama has a priceless opportunity to develop its tourism and hotel industry in a manner that will make this industry unique in the whole world, and central to long-term advancement of national well-being. STRI's ongoing research that continuously pushes the frontiers of our understanding of Panama's unique ecosystems carries an outstanding business value in view of the global recognition and lasting appeal it would lend to Panama's heritage product. The TCR Action

*"Panama is full of outstanding tourism, conservation, and research values...and the presence in Panama of the prestigious Smithsonian Tropical Research Institute superbly positions Panama to enter the new millennium through a groundbreaking partnership that would integrate tourism, conservation, and research..."*

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*"The target is to master-plan conservation sponsorship into a prestigious trademark of Panama's entire leisure tourism industry with a special emphasis on making patronage of Panama's world class heritage a passport for all incoming tourism and hotel projects."*

Plan will give utmost priority to capitalizing on this business value on the basis of reciprocity of benefits. A positive and prominent image fueled by the Smithsonian's world renown will empower Panama as a leisure destination to out-compete the growing number of national and regional heritage tourism mega-projects. One of them, the Silk Road, features some 50 countries and their spectacular natural and cultural heritage from Italy to Thailand. This mega-project is co-sponsored by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the World Tourism Organization.

Also, in a strategic alliance with the Smithsonian that is built from the planning stage, and I emphasize planning stage, of the accommodation infrastructure, Panama's industry will gain the capacity to dwarf the marketing approaches that predominate throughout the world but do nothing to protect the heritage resources to which both the industry and the destinations now entrust their aspirations.

The teamwork of tourism and conservation is another front on which I will strive to assist Panama to set an international precedent by integrating the development of the leisure tourism industry with the development of the economic foundations for conservation. This is a realistic goal, given the tremendous marketability and therefore business value of conservation sponsorship. The target is to master-plan conservation sponsorship into a prestigious trade-

mark of Panama's entire leisure tourism industry with a special emphasis on making patronage of Panama's world class heritage a passport for all incoming tourism and hotel projects. This will be an outstanding guarantee for choosing the very best.

In Panama, however, I will not want to stay at a level of marketing as it is done elsewhere. In Panama we will go beyond marketing. Can we do it? Certainly, because Panama has yet to develop most of its accommodation infrastructure for leisure tourism. Therefore, Panama has the luxury of combining planning, design, and management approaches to give its hotel and resort industry the capacity to support conservation and energize sustainable development. Such approaches have been a prominent focus of my work and publications, and they will be developed into a blueprint for developing the accommodation infrastructure for Panama's leisure tourism industry.

Will the industry pay attention? Well, I am confident it will. The Regent Resort Chiang Mai, which is a member of the prestigious Four Seasons-Regent Group, is an example of the top segment of the hotel industry featured in Architectural Digest and the like. This resort has chosen the guidelines I have developed to refine its resort product and enter the competition for the breakthrough Travel Asia Eco-Award. And there is another source of my confidence, and that's the support I have been most fortunate to receive from the leading journal of the hospi-

tality industry, the Cornell Quarterly. Following the publication of my vision for Panama in the journal last August, the editors expressed interest in publishing updates on the action plan's implementation and thus letting this prestigious journal become a tool for engaging the highest quality projects. Last October's issue of *Hotels*, which focused on Latin America, profiled the Millennium Vision by the World Travel and Tourism Council. This vision identifies the pursuit of sustainable development as a key strategy to move the tourism industry into the 21st century. And it urges the hotel industry to find a way to lead in this effort. The TCR Action Plan for Panama takes up this challenge with the goal of crediting Panama with successfully meeting this challenge. At the same time, the TCR Action Plan is intended to transform Panama into an international leader in 2 areas that the World Tourism Organization prioritizes for the next 2 years, namely public-private partnerships, and tourism help to protect the world heritage for the next millennium.

My goal is not only to advance in Panama the flagship cross-sectoral alliance of tourism, conservation, and research, but also to lay foundations in Panama for continued strengthening of this alliance and its expansion throughout our region and beyond. I view the City of Knowledge as an outstanding asset for successfully pursuing this goal, and I will recommend a strategy for developing this ambitious, wonderful project into an interdisciplinary engine for building in Panama and throughout

Latin America the capacity to excel in sustainable development that is driven by tourism quality.

Panama is uniquely endowed to set a course for tourism-driven economies of the 21st century. Panama's magnificent heritage provides the basis for this claim. This workshop is a great step toward assuring that this basis is protected and further strengthened. The presence in Panama of the Smithsonian Tropical Research Institute and the Institute's keen interest in assisting Panama in protecting this unique heritage, promises to make the flagship alliance of tourism, conservation, and research a model of international collaboration in fostering prosperity through sustainability. Thank you for your attention.

**Hana Ayala** is president of *EcoResorts International*--a research and development company based in Irvine, California. She was formerly on the faculty of the School of Social Ecology of the University of California, Irvine. Dr. Ayala's expertise is in master-planning strategic alliances of tourism, conservation, and research in the context of national and regional economies, with a special focus on concept design of hotel developments for [REDACTED]. Her concepts and guidelines have been published in a number of international journals; prominent among them are the *Cornell Hotel and Restaurant Administration Quarterly*, *International Journal of Hospitality Management*, *Hospitality Research Journal*, *Tourism Management*, *Annals of Tourism Research*, and UNESCO's *Insula*, *International Journal of Island Affairs*.

*"My goal is not only to advance in Panama the flagship cross-sectoral alliance of tourism, conservation, and research. My goal is also to lay foundations in Panama for continued strengthening of this alliance and its expansion throughout our region and beyond."*

*"Panama is uniquely endowed to set a course for tourism-driven economies of the 21st century. Panama's magnificent heritage provides the basis for this claim. This workshop is a great step toward assuring that this basis is protected and further strengthened."*



## Vision, Mission, and Development of an Ecotourism Plan in Panama

**Cesar A. Tribaldos, Jr.,**

General Manager, Panamanian Tourism Institute

Good morning. I'd like to share with you the new vision of the Panamanian Tourism Institute, or IPAT. This vision is based on the sustainable use of our national heritage, and gives us a role in these procedures as a privileged audience, so to speak. I want to give you some background information as to how this vision came to be.

In 1996, more than 591 million tourists in the world generated \$423 million related to tourism. For each \$100 generated in entire world production, tourism accounted for \$11, and for each \$100 exported in goods and services, \$8 were provided by tourism. One of every 9 positions worldwide was related to tourism. Can you imagine that? There are almost 212 million persons in the world who have found work in the tourism industry! But, the spectacular figures are found in the prediction by the World Trade Organization (WTO) that for the year 2000, international tourism will reach revenues of \$692 million. In the year 2020, 1.6 billion tourism dollars will move around the earth. This means that in only 22 years, tourist revenues and income will have tripled.

The beginning of the next century will find those of us within the tourism industry at the forefront of international trade. Tourist revenues will exceed oil exports, car exports, steel exports, and electronic exports. In Panama, these figures are encouraging.

According to information given by the comptroller's office, tourism expenditures in Panama have grown by an annual rate of 12 % between 1992 and 1997. That is more than twice the average growth of the gross national product (GNP) during the same period. This translates into an increase in the resident participation in tourism relative to GNP. In 1990, the tourism industry contributed about \$171 million, that is, 3.6 % of the Panamanian GNP. In 1997, this contribution increased, according to preliminary figures, to \$368 million, equivalent to 5.6 % of the GNP. Expenditures by visitors to Panama are one of the sources of capital the country uses to finance its deficit. In 1997, 482,000 visitors came to Panama--more than 9 % more than the number of tourists entering in 1996 and more than 74 % more than the number of visitors in 1990.

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