

Bioinvasion and Global Environmental Governance: The Transnational Policy Network on Invasive Alien Species

Costa Rica's Actions on IAS

Description⁸

Costa Rica, sandwiched between Nicaragua to the north and Panama to the south, is a democratic republic of approximately 4.2 million people. It is also one of Central America's most unique nation states for having gained its independence early (1838), maintaining a relatively peaceful history, and abolishing its military at the end of a civil war (1948). Recently, Costa Rica has made headlines by proclaiming its intention of being a carbon-neutral state by the year 2021, a highly ambitious scheme by global standards. To achieve this goal, Costa Rica's government intends to "clean up its fossil fuel-fired power plants, promote hybrid vehicles and increase tree planting to balance its emissions."¹

Costa Rica benefits from having a 1,290 km coastline along the Pacific. Its chief imports are petroleum and alcoholic beverages, while its exports include various agricultural produce, as well as electronics. Its tourism industry is also a pillar of its economy. Its top trading partners are the United States, China, Mexico, and the Netherlands. Its chief biological exports consist of bananas, pineapples, coffee, and seafood. Despite increased livestock production over the past two decades, most of it is intended for local consumption.

Unfortunately, despite its world class environmental policies², Costa Rica has experienced a peculiar absence of activities geared towards counteracting the effects of IAS. As of November 2006, Costa Rica has reported no national action plan to combat IAS, and has declared in its national report to the CBD the lack of any major public discussion of the issue on the domestic scene.³

Overview of Biodiversity

Costa Rica has a large diversity of ecosystems grouped into the following categories: forests, wetlands, marine areas and agricultural areas. Costa Rica has identified a little over 87,000 species, which represents 6.2% of the known species in the world. The species distribution among taxa is as follows: 10,979 plant species and 2,430 vertebrate species including 935 fish, 857 birds, 243 mammals, 235 reptiles, and 182 amphibians.

- [CBD Country Profile](#)
- [Earth Trends Country Profile on Biodiversity and Protected Areas](#)
- [INBio](#) (National Institute on Biodiversity)

Legislation relating to IAS

- The Forestry Law
- The Wildlife Law
- The National Park Law
- The Organic Environmental Law

- Decreto N° 26.435/MINAE - Reglamento a la Ley de Conservación de la vida Silvestre: this wildlife conservation law contains numerous provisions outlining the structure and purpose of the Directorate General of Wildlife including, variously, wildlife inspection (Article 5); the creation of a national database of registered flora and fauna (Article VI); wildlife protection (Article VII); and the preservation of wildlife refuges (Article IX).⁵
- Decreto N° 29.342/MINAE - Permisos de uso en áreas de manglar: stipulates that any renewal of permission for use of existing mangrove areas related to the production of salt or shrimp must be submitted by the person concerned a management plan at the time of the application. The plan must be approved by the Costa Rican Institute of Fishing and Aquaculture in the technical aspects of their legal competence.⁵

Government Agencies/Programs/Ministries dealing with IAS

- [Ministerio del Ambiente y Energía](#) [Ministry of Environment and Energy]
- [National System of Conservation Areas](#) (SINAC)

Major Invasive Alien Species⁴

Batrachochytrium dendrobatidis (fungus)	Oreochromis spp. (fish)
Bemisia tabaci (insect)	Pennisetum clandestinum (grass)
Ceratitis capitata (insect)	Poecilia reticulata (fish)
Herpestes javanicus (mammal)	Procambarus clarkii (crustacean)
Hypericum perforatum (herb)	Tapinoma melanocephalum (insect)
Leucaena leucocephala (tree)	Trachemys scripta elegans (reptile)
Micropterus salmoides (fish)	Tubastraea coccinea (coral)
Monomorium pharaonis (insect)	Ulex europaeus (tree, shrub)

Native Species Exported/Introduced to Non-Native Environments⁴

Acacia farnesiana (tree, shrub)	Psidium guajava (tree, shrub)
Bufo marinus (amphibian)	Rhizophora mangle (aquatic plant, tree, shrub)
Caiman crocodilus (reptile)	Solanum tampicense (shrub)
Chromolaena odorata (herb)	Solenopsis geminata (insect)
Eugenia uniflora (tree, shrub)	Wasmannia auropunctata (insect)
Ludwigia peruviana (aquatic plant)	
Oxycaryum cubense (aquatic plant, sedge)	

Table 1 Actions to prevent, detect and manage IAS categorized into three themes: biodiversity, human health, and economic

Note: Actions (such as projects, publications and programs) are classified according to the most obvious theme but may also fit into the dimensions of another.

Theme	Action
Biodiversity	<ul style="list-style-type: none"> • Costa Rica has identified some IAS within its borders and the risk posed by them, but has yet to establish a system to track introductions.³

	<ul style="list-style-type: none"> • The issue of invasive species has been discussed by SINAC (Sistema Nacional de Areas de Conservation) in collaboration with the IUCNs Regional Office for Mesoamerica, with a focus on invasive plant species.³ • There has been work done specifically on IAS and their eradication in the Cocos Islands, which is a marine protected area and World Heritage Site – there is currently a strategy proposal for the management of introduced species on the island which is undergoing the consultation and funding needed for its implementation.³ • The development of the Cocos Island project was done using consultation with other nations with more experience in the issue.³ • Establishment of a Cocos Island feasibility group, together with IUCN, The Friends of Cocos Island Foundation, and the Ministry of Environment and Energy, “to assess the methods and viability of the proposed eradication plan and to develop a plan to manage other invasive species on the island.”⁶ • Establishment of areas free of the Mediterranean fruit fly, <i>Ceratitis capitata</i> (Phase I and II of TCP/RLA/0172) (Oct. 2001- Sept. 2003): Critical review of the current.⁷ • Control of red rice in rice producing areas (Sept. 2003 – May 2005).⁷ • The National Biodiversity Institute (INBio) of Costa Rica: Biodiversity informatics: This area of work develops and applies computer tools to support the processes of generation, administration, analysis and dissemination of information on biodiversity. The information on each specimen in the biodiversity inventory is entered into a database called Atta, which the public may access through INBio’s web site.
Economic	<ul style="list-style-type: none"> • Commodity treatment to satisfy quarantine regulations in trade in agricultural goods (July 1992- June 1993).⁵

Table 2 Actions on IAS in cooperation with other countries

Multilateral meeting	Countries/ Organizations	Action
Regional Workshop on Invasive Species: Meeting the Challenges Posed by their Presence in Mesoamerica and the Caribbean ¹⁰	IUCN, the US Department of States, the Swiss Agency for Development and Cooperation (SDC), & GISP. Antigua and Barbuda, Bahamas,	Workshop Report: Invasives in Mesoamerica and the Caribbean ¹⁰ The experts participating in the Workshop produced recommendations for a Plan of Regional Cooperation: <ul style="list-style-type: none"> • In the sphere of developing policies and institutions, Mesoamerica and the Caribbean possess regional platforms such as the Central American Commission on Environment and Development (CCAD), the International

	Barbados, Brazil, Canada, Costa Rica, Canada, Cuba, El Salvador, U.S., Guatemala, Honduras, Mexico, Nicaragua, New Zealand, Panama, Puerto Rico, and Trinidad and Tobago	<p>Regional Organization for Plant and Animal Health (OIRSA), the Caribbean Forum (CARIFORUM), and the IUCN Office for Mesoamerica along with national institutions and agencies.</p> <ul style="list-style-type: none"> • With respect to science and technology there are many methods for controlling invasives, but the best is preventative measure and every country should ensure that they have preventative measures in place. • The problem of IAS presents 3 areas of action: the sources of transportation, the vector of transportation, and the destination of the specie. <p>Four working groups formed at the Workshop listed eight areas of priority: local and regional capacity; education; legal aspects; policies and institutions; information management; economic aspects; research; and technical aspects.</p>
Draft Environmental Cooperation Agreement (US-DR-CAFTA) ⁹	The Governments of the United States of America, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua	<p>ARTICLE V — Program of Work and Priority Cooperation Areas</p> <p>1. The program of work developed by the Commission shall reflect national priorities for cooperative activities and shall be agreed upon by the Parties. The program of work may include long, medium and short-term activities related to:</p> <p>(a) strengthening each Party’s environmental management systems, including reinforcing institutional and legal frameworks and the capacity to develop, implement, administer and enforce environmental laws, regulations, standards and policies;</p> <p>(d) the conservation and management of shared, migratory, and endangered species in international commercial trade and management of marine parks and other protected areas;</p> <p>(k) any other environmental cooperation areas that may be agreed by the Parties.</p>

Case Study

[Managing Beyond the Borders: The Costa Rican National System of Conservation Areas \(SINAC\)](#)

Christopher Vaughan and Carlos Manuel Rodriguez

The Ramsar Convention, 7th Conference of the Parties (May 1999)

Main Points: National planning can contribute to successful management of conservation areas by facilitating the coordination of resource and development agencies, involving the civil society and participation by private land owners in conservation decision-making, and by supporting decentralized and flexible regional planning. Stable, long-term funding is essential so that national planning can be implemented.

Protected natural areas have traditionally been viewed as islands, independent of and protected from their surroundings. However, natural areas both affect neighboring lands and are impacted by external ecological, physical, cultural, and social influences. If protected areas are to survive in the long-term, they must be managed complementary to, and not isolated from, the general landscape, and must include human influences and needs. Integration of protected areas into regional development plans as multiple-use areas is necessary to obtain maximum sustainable natural resource conservation and production without losing future use options. The case of Costa Rica's attempt to integrate protected areas into regional land-use programs is explored here, and the management challenges of such an approach are emphasized.

[...]

A second major step was to promote participation of the civil society in SINAC evolution. In general, local communities were never consulted about changes greatly affecting their lives, such as prohibiting their use of a resource (hunting, firewood extraction, etc.). This resulted in misunderstandings and hostility towards conservation efforts. SINAC promotes participation of all groups, public and private, national and international, who share the common objective of preservation, restoration and protection of ecological equilibrium and biodiversity. Eventually SINAC aspires to have the civil society be in charge of most aspects of management, concessions, and research, with the state involved in facilitation and sharing financing matters with civil society. SINAC now functions as a technical organization decentralized from MAE with a legal mandate which permits a great amount of flexibility in carrying out its mission.

[...]

The Control sector focuses on the promotion and execution of programs of natural resource control in ACOSA. The greatest work ahead is to coordinate protection activities with the persons in charge of the operational centers, similar institutions, and NGOs in the region. The functions of this sector are to work both inside and outside of protected areas in ACOSA. Also ACOSA will train employees and civilian groups so they will be able to protect natural resources in the region.

References

1. Reuters Alertnet (June 8, 2007), "Costa Rica pledges to be 'carbon neutral' by 2021" (date accessed: October 28, 2008) <http://www.alertnet.org/thenews/newsdesk/N07289157.htm>

2. Yale University Office Of Public Affairs (January 23, 2008) “Switzerland Tops 2008 Environmental Scorecard at World Economic Forum” (date accessed: October 10, 2008) <http://opa.yale.edu/news/article.aspx?status=301&id=2004>
3. Costa Rica’s Third National Report to the CBD, pp. 92-96. Available from the CBD’s website (date accessed: October 10, 2008) <http://www.cbd.int/countries/?country=cr>
4. Global Invasive Species Database. Brazil. (date accessed: September 30, 2008) <http://www.invasivespecies.net/database/species/search.asp?sts=sss&st=sss&fr=1&x=0&y=0&sn=&rn=Brazil&hci=-1&ei=-1>
5. Cooperative Initiative on Invasive Alien Species on Islands, Cocos Island Feasibility Study (date accessed: October 10, 2008) http://www.issg.org/cii/cocos_island.htm
6. International Portal on Food Safety, Animal & Plant Health: Country Profile: Costa Rica: Cross-sectoral Issues: Invasive Species. (date accessed: October 10, 2008) <http://www.ipfsaph.org>
7. International Phytosanitary Portal, National database: Costa Rica: Projects (date accessed: October 10, 2008) <https://www.ippc.int/servlet/CDSServlet?status=ND1ucHBvY3ImNj1lbiYzMz1wcm9qZWNOcyYzNz1rb3M~#relateds>
8. Country descriptions are compiled from the Central Intelligence Agency’s World FactBook, available at <https://www.cia.gov/library/publications/the-world-factbook/>, and Wikipedia: The Free Encyclopaedia, available at http://en.wikipedia.org/wiki/Main_Page.
9. Bureau of Ocean and International Environmental and Scientific Affairs. (June 6 2004) Draft Environmental Cooperation Agreement. (date accessed: 15 January 2009) http://www.bilaterals.org/article.php3?id_article=792
10. IUCN. (June 2001) Invasives in Mesoamerica and the Caribbean. (accessed November 5, 2008) <http://www.gisp.org/publications/reports/MesoAmerica.pdf>