



Valuing Nature:

Why Venezuela's Protected Areas Matter for Economic and Human Wellbeing

INVESTING IN NATURE FOR ECONOMIC DEVELOPMENT

Human wellbeing across the globe depends intimately on the state of natural ecosystems, and any threat to nature runs the risk of imposing untenable economic costs to almost every sector and social group.

Far from being a luxury that governments and the international community cannot afford, nature conservation is something that they cannot afford not to invest in. It is absolutely fundamental to sustaining human development, now and in the future.

Unfortunately, nature is rarely appreciated as a productive economic asset which is a valuable public good and therefore requires high public investment. The flows of funds and other resources which are allocated to conservation remain pitifully low. In many cases they are actually declining.

In collaboration with key partners, the Nature Conservancy has conducted a study which compiles information about how natural protected areas in Venezuela generate extremely valuable goods and services for the benefit of the economy and the population.

The evidence that has been uncovered points to a clear conclusion. Investing in conservation yields tremendously high development returns, and there is little doubt that continuing to under-value nature will prove extremely costly in economic terms, not just for biodiversity-rich countries, but for the whole world.

KEY FACTS AND FIGURES

- Protected areas underpin the human and economic wellbeing of more than 28 million Venezuelans.
- There are more than 20 million hectares of forest land in protected areas available for climate mitigation, potentially storing carbon which would save global climate change damage costs of up to \$28 billion.
- At the national level protected areas protect the source of 530 thousand liters of water a second, serving 83% of the population, saving municipalities and industries hundreds of millions of dollars on avoided siltation and sedimentation, and generating energy worth \$12.5 billion a year.
- Protected areas with the most visitors generated between 30% to 50% of the local employment.
- More than 32 distinct indigenous peoples, with a population of 57,000 live in protected areas which contain traditional hunting and gathering areas, sacred sites and settlements.

The Value of Venezuela's Protected Areas: *from global to local*

Climate change has become one of the biggest concerns on today's international policy agenda. Forest conservation, in particular, helps to mitigate and avoid considerable climate change damage costs. Carbon storage is, for example, currently estimated to be worth \$1 billion in Canaima National Park, \$94 million in Imataca Forest Reserve, and \$4.5 million in Sierra Nevada National Park. Almost 20 million hectares of forest have been identified by the government to be available for mitigation - potentially storing more than 1.4 billion tonnes of carbon worth between \$7 billion and \$28 billion. This figure is up to twice as high as the investment costs required to conserve them, and equivalent to between 3% and 12% of Venezuela's annual GDP.



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Most of the freshwater in Venezuela comes from surface sources, and more than three quarters of protected areas protect strategically important watersheds. Eighteen National Parks supply water to 83% of the population, contributing more than 530 thousand liters per second. Deforestation is having devastating effects on urban water

security, at a high public cost - just in metropolitan Caracas, investments of more than \$100 million had to be made to increase water supply by 1,000 liters per second.

Industries and businesses, too, benefit from the watershed protection that Venezuela's natural ecosystems provide. Just under three quarters of electricity comes from hydropower schemes, many of which rely on National Parks to safeguard their water sources. Protected areas supply water which generates energy equivalent to 575 thousand barrels of oil a day or 23% of national oil production, worth \$12.5 billion a year or just under a quarter of the national budget. For the 20% of irrigated farms which depend on water originating in National Parks, conservation generates water supplies worth \$215 million and, by maintaining water quality and minimizing downstream sedimentation and siltation, saves farmers costs of around \$30 million over the schemes' lifespan.

National Parks act as a magnet for international tourists, as well as providing vital green spaces in which the increasingly urbanized Venezuelan population can rest and relax. Tourism and recreation is known to have significant economic multiplier effects at both local and national levels. Morrocoy National Park, for example, generates 5,000 permanent jobs, or about half of employment in the area. Its 1.5 million visitors spend more than \$20 million a year, contributing up to 80% of local tax revenues. Tourist spending in Canaima National Park meanwhile injects around \$6 million annually into the local economy, which is equivalent to minimum wage salaries for almost 30,000 workers or 14% of medical supplies in the Ministry of Health annual budget. On average, protected area tourism is thought to contribute an average of between 30%-50% of local employment in areas around National Parks.

THE VALUE OF CANAIMA NATIONAL PARK TO HYDROPOWER PRODUCTION

Canaima National Park protects the source of the Caroni River, which has the greatest hydropower potential (almost 25 thousand megawatts) in Venezuela. Without the protection of the National Park, the useful life and production of hydropower dams would be greatly reduced. Canaima helps to avoid costs of between \$90-134 million through preventing siltation and prolonging the lifespan of downstream dams.

VENEZUELA'S BIODIVERSITY AND PROTECTED AREAS

Venezuela is categorized as one of the world's ten most "megadiverse" countries. Although occupying only 0.7% of the earth's surface, Venezuela is home to 14% of the world's bird species, 10% of known plants and 7% of mammals. It also has an unusually high proportion of land devoted to nature conservation. Around 50 million hectares, more than half of the national territory, has been set aside in almost eighty National Parks and Natural Monuments.

Although not quantifiable in monetary terms, cultural values are perhaps the most important and yet least appreciated benefit of Venezuela's protected area system. National Parks act as repositories for historical relics and artifacts, they host endangered species, and contain iconic landscapes and natural features which are renowned across the globe.

National Parks areas are also home to an estimated population of 57 thousand from 32 distinct indigenous peoples, mostly in the southern part of the country. Their rich cultures and traditions play a key role in Venezuela's national identity and human diversity. For the Ye'kwana and Yanomani, as well as for the Pemon and Hoti groups, territories within protected areas constitute community livelihood spaces, including hunting and gathering areas, sacred sites and settlements. Local peoples source most of their day-to-day needs from the natural ecosystems around them. Their mythologies and religious beliefs, as well as traditional knowledge and practices, are also tied intimately to the land and its resources.



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PARK		VALUE IN \$	SOME "WELLBEING" EQUIVALENTS
PN Canaima (Kamarata)	Average Income per person from tourism activities (1996)	103	36% of Minimum wage for 2007
PN Canaima Eastern Sector	Total expenditure in the park: (2002)	608,756	1% of expenditures in medical supplies
PN Canaima Gran Sabana	Total expenditure in the park: (2002)	719,376	1.3% of expenditures in medical supplies
	Revenues from hand-crafts sales (2002)	627,806	Cost of minimum food basket for 221 households
PN Canaima	Community based tourism (PAT)		
	Cooperative revenue (2006)	13,998	Minimum food basket for 5 families
	Total average income per person	246	7% annual minimum wage
PN Sierra Nevada and La Culata (Community based Tourism)	Direct revenues of posaderos y baquianos (30 households)	70,023	
	Annual income per household	2,334	82% of annual cost minimum food basket
PN Morrocoy (buffer zone)	Tourism expenditure in 2002	22,402,469	16 schools to house 4,810 students
	Mollusc extraction by local people during the low season	108	38% of minimum wage
	Mollusc extraction by local people during the high season	648	2.26 minimum wages
PN Morrocoy (local settlements)	Average income per month / person:		
	High Season	606	2.12 minimum wages
	Low Season	270	94% of minimum wage

Figure 1: Visitor spending is known to have significant multiplier effects, acting to support and stimulate both local and national industries and job opportunities

Sustaining Protected Area Values: *what policymakers and funders can do*

Clearly, Venezuela's 28 million inhabitants depend heavily on nature. The protected area system also plays an important role in the global fight against climate change. Local, national and international communities all stand to lose out in economic terms if this valuable asset is degraded.

Currently, one of the greatest threats facing nature conservation – in Venezuela, as in most other countries – is *lack of funding*. Even though there is an extraordinarily high proportion of land devoted to nature conservation (around 15 million hectares or about 16% of the national territory), protected area budgets currently stand at a paltry 0.03% to 0.04% of total government spending (around \$16 million a year) or just 3% of the Ministry of Environment's assigned budget. As a point of reference, it is estimated that Venezuela's National Parks save the country between \$185 million and \$312 million a year, and generate global carbon benefits worth \$150 million.

A key question then arises: what can (and should) policymakers and funders do to ensure that the value of Venezuela's nature and protected areas for human and economic wellbeing is sustained?

An important conclusion from the study is although investments in nature and protected areas bring proportionally greater benefits than costs, the view persists that nature conservation is a cost or a barrier to development, rather than a net benefit or form of social and economic savings. Yet, if governments and the international community are really serious about improving human and economic wellbeing, then it is imperative that they allocate sufficient funds and improve management in protected areas. Yet, if governments and the international community are really serious about improving human and economic wellbeing, then it is imperative that they allocate sufficient funds to conserving nature and protected areas. This includes:

- At the *international level*, to abide by the obligations that are embodied in international agreements to fund

protected areas and biodiversity conservation, in their own right (for example the Convention on Biological Diversity 2010 Target and Programme of Work on Protected Areas) or as part of efforts to support sustainable development and alleviate poverty (for example through the Millennium Development Goals).

- At the *national level*, to allocate sufficient budgets to protected areas and generate enabling policy and participatory governance structures. This requires a greater commitment to increase and generate new sources of funding, harmonize the legal frameworks with competing and contradictory legislation, and strengthen participatory management schemes.
- At the *local level*, generate participatory management that include sustainable resource access, generation of low impact economic activities and integration of distributional and equity concerns. Considering that in many cases, the people directly affected by the restriction imposed to access natural resources in protected areas, subsidize the provision of economic benefits to the broader society; it is important to consider compensation schemes and incentive mechanisms to benefit the local population. Protected areas should count with sufficient management and investment budgets that also include social and economic development projects.

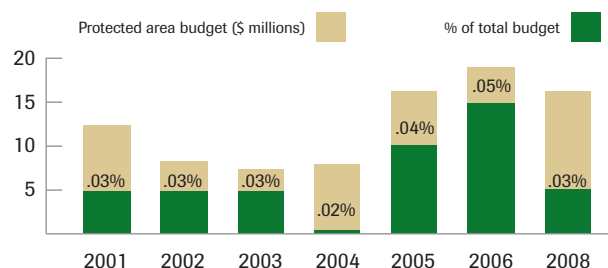


Figure 2: Funding to Venezuela's protected areas comprises only a tiny amount of overall public budgets

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