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Winning Strategies for a Sustainable Future

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Contents

Preface	7
<i>Aart De Geus</i>	
Strategy and Action for Sustainable Development – A Global Search for Best Practices	11
<i>Andreas Esche, Armando García Schmidt, Céline Diebold, Henrik Riedel</i>	
Global Trends in Sustainable Development – A View from the RMP 2013 Global Search Process	19
<i>Darren Swanson, Mark Halle, Armando García Schmidt, Andreas Esche</i>	
Challenges and Opportunities for Sustainable Development in Germany	39
<i>Harald Heinrichs, Norman Laws, Henrik Riedel</i>	
Case Studies	53
Bhutan: Paradigms Matter	55
<i>Ingeborg Niestroy, Armando García Schmidt, Andreas Esche</i>	
Costa Rica: Pioneering Sustainability	81
<i>Marius Keller, Ingeborg Niestroy, Armando García Schmidt, Andreas Esche</i>	
Finland: Paving the Way toward a Social Contract for Sustainability	103
<i>Ingeborg Niestroy, Armando García Schmidt, Andreas Esche</i>	
Ghana: Staying on Track in a Challenging Environment	127
<i>Laura Burke, Armando García Schmidt</i>	
Tasmania: Sustaining an Island’s Future	149
<i>Morgan Williams, Ingeborg Niestroy, Céline Diebold, Andreas Esche</i>	

Contents

Factors Driving Strategic and Successful Sustainability Policy: What Can Germany Learn from the RMP 2013 Search Process?	171
<i>Klaus Jacob, Armando García Schmidt</i>	
The Set of Criteria	183
The Working Committee	193
The Authors and the RMP Team	197

Costa Rica: Pioneering Sustainability

Marius Keller, Ingeborg Niestroy, Armando García Schmidt, Andreas Esche



Introduction

Costa Rica's path to sustainable development

First-time visitors to Costa Rica might be forgiven for failing to recognize this small Central American country as a pioneer in sustainable development. For those landing at San José airport, the view from above and the subsequent taxi ride into the capital's center reveal a chaotic maze of urban space struggling with congested traffic, pollution and waste management issues. Even a visit to the (in some areas) breathtakingly beautiful countryside leaves the visitor with a mixed bag of impressions regarding the country's sustainability record. This is particularly true with respect to environmental sustainability in a country where river pollution is common, and the use of land often appears poorly planned. Costa Rica struggles with many problems that are typical for any emerging middle-income country.

But such an account ignores Costa Rica's economic, social and environmental achievements. In most areas of sustainable development, Costa Rica is far ahead of its neighbors who share the same geographical and geopolitical context. Such an account also ignores the impressive course taken by the country during the past seven decades – a course rooted in courageous decisions made at the highest levels of government that found support within civil society and the private sector.

Recently, this path culminated in the full mainstreaming of sustainable development into the legally binding National Development Plan (Plan Nacional de Desarrollo), which aims to consolidate and build on these achievements by consolidating and deepening its sustainable development framework. Costa Rica's domestic achievements in this regard have inspired policies and measures in many other places. Mexico and Ecuador, for example, have established systems similar to Costa Rica's innovative Payment for Ecosystem Services (PES) scheme, which has been proved so successful.

Peace and progress in a troubled region

Scholars estimate that Costa Rica's first inhabitants arrived around 8,000 B.C. Unlike those in many neighboring cultures, these first settlers never developed a strong native civilization. The Spanish colonists who arrived in the 16th century quickly assimilated much of the indigenous population into their society. Given the area's lack of natural resources and its distance from the colonists' regional capital (Antigua, in present-day Guatemala), it remained a relatively isolated and impoverished region under colonial rule. The absence of a large indigenous population also meant that the Spaniards could not, as they had elsewhere, apply methods of forced labor. They farmed the land themselves, which facilitated a more egalitarian society.

In 1821, Costa Rica, together with other Central American provinces, declared independence from Spain. Following a series of regional conflicts in the mid-19th century, the country held its first democratic election. Costa Rica has managed to avoid much of the violence observed in other Central American states, with its last civil war triggered by electoral fraud in 1948. Since then, Costa Rica has held free and fair elections every four years.

Bordered by Nicaragua to the northeast and Panama to the southeast, Costa Rica is slightly larger than Denmark with a landmass of 51,100 square kilometers, just over half of which is covered by forests. Costa Rica also has the highest density of biodiversity in the world (Obando 2000). Costa Rica's resident population doubled between 1980 (2.245 million) and 2011 (4.727 million). By 2011, income per capita reached \$8,647, a 32 percent increase from 2000 in real terms. In 2011, agriculture accounted for 6 percent of GDP, industry 26 percent and services 68 percent (World Bank 2013). Export revenues, which exceeded \$10 billion in 2011, derive primarily from agriculture, tourism, manufacturing (electronics, medical equipment and

Table 1: Costa Rica in regional comparison (key indicators)

Country	Human Development Index Rank	Income per capita	Gini index	Adult literacy rate	Life Expectancy (years)	Intentional homicides (per 100,000)	Forest cover	Greenhouse gas emissions per capita
Belize	93	\$ 4,059	N/A	N/A	75.8	42	61.1 %	2.4
Costa Rica	69	\$ 8,647	50.73	96 %	79.3	11	51.1 %	2.3
El Salvador	105	\$ 3,702	48.33	84 %	71.9	66	13.9 %	1.8
Guatemala	131	\$ 3,178	55.89	75 %	71.1	41	34.1 %	2.2
Honduras	121	\$ 2,247	56.95	85 %	73.1	82	46.4 %	2.2
Nicaragua	129	\$ 1,587	40.47	78 %	74.0	13	25.9 %	2.5
Panama	58	\$ 7,498	52.03	94 %	76.1	22	43.7 %	3.2

Sources: UNDP 2011; World Bank 2013; World Resources Institute 2013

Note: Gini index data from 2009, except for Guatemala (2006) and Nicaragua (2005); adult literacy rate data for 2010, except Nicaragua (2005); life expectancy data for 2011, except Belize (2010); intentional homicide data for 2010; forest cover data for 2011; greenhouse gas emissions data for 2005.

In 2010, Costa Rica elected its first female president, Laura Chinchilla Miranda, making it one of the few Central American countries to have done so. Costa Rica also boasts one of the region's highest percentages (39 %) of women in parliament, exceeded only by Nicaragua (40 %) (World Bank 2013).

other machines) and business services, such as call centers (Estado de la Nación 2012). Life expectancy at birth has improved in Costa Rica, increasing from 62 years of age in 1960 to 79.3 years in 2011. At the same time, infant mortality rates have dropped, falling from 12 per 1,000 live births in 1998 to 9.1 in 2011. All children in the country have access to primary education, and nearly 75 percent have access to secondary education. Despite these gains, unemployment and poverty rates have increased in the wake of the global economic crisis, with unemployment rising from 4.5 percent in 2007 to 7.7 percent in 2011 and the poverty rate rising from 19 percent in 2007 to 24.8 percent in 2011 (ibid.). Nonetheless, Costa Rica performs well in regional comparison on several key economic, social and environmental indicators (see Table 1).

Sustainable development policies and strategies in historical context

Early policy developments

Whereas Costa Rica and its neighbors share a similar geography, their performances on key economic social and environmental indicators differ considerably. This suggests that the gains made in Costa Rica can be attributed less to geographical than to sociohistorical factors. Indeed, the country's colonial legacy as well as a series of innovative policy decisions made since 1948 have helped make Costa Rica a pioneer in sustainable development policies and strategies in recent decades.

The roots of Costa Rica's lauded egalitarian social structures and early democratic development can be found in the absence of forced labor under Spanish colonial rule. Having established free and fair elections more than 100 years ago, well-organized elections are the norm in present-day Costa Rica. Shortly after Costa Rica's last civil war, in 1948, the victorious junta under the leadership of José Figueres Ferrer made a key decision with long-lasting consequences for the country. They abolished the army, promising a redirection of resources into education instead. This step, however, became more than just a promise. The current constitution, established in 1949, stipulates a minimum for public spending on education equal to at least 6 percent of GDP.

By taking this extraordinary step, Costa Rica laid two important cornerstones for its success. On the one hand, it was able to foster political stability, democracy and security instead of militarism, which dominated the politics of neighboring countries. Indeed, since 2008, Costa Rica has received consistently high marks for the quality of its democratic institutions and rule of law in the Transformation Index of the Bertelsmann Stiftung (Bertelsmann Stiftung 2014). On the other hand, the early and significant investments in education consolidated and extended previous educational achievements. It also facilitated a development model grounded in expanding citizens' economic, social and political participation.

In 1977, Costa Rica looked to the future once again with the establishment of its national parks system. At the time, forests were being cleared at the rate of 50,000 hectares per year, mostly to enable the production of beef for export to the United States. This represented one of the highest deforestation rates in the world. Inspired by the National Park Service in the



United States, Costa Rica began by declaring certain areas, such as volcano peaks, to be protected land. More national parks followed in quick succession, many of them during the presidency of Daniel Oduber Quirós (1974–1978). Today, there are 28 national parks in Costa Rica, representing over 12 percent of landmass. An additional 15 percent of the country is under partial protection, which at a minimum prohibits wholesale deforestation.

However these measures only served to slow the deforestation process, a tragedy that National Institute for Biodiversity director, Rodrigo Gámez calls “the striptease of Costa Rica.” Further policy changes were required, such as the phasing out of harmful incentives for intensive agriculture and cattle-raising during the 1980s and 1990s. The department now known as the Ministry for Environment and Energy was created in 1988, leading to a vital consolidation and broader implementation of conservation policies and an increase in public awareness of environmental protection issues (Conservation Finance Alliance 2003).

Evolution of sustainable development policies

Shortly after its creation, the Ministry for Environment and Energy published the Conservation Strategy for Sustainable Development in Costa Rica (Quesada Mateo 1990). This policy document was groundbreaking in its timing, diagnosis, scope and ambition. It was published just a few years after the Brundtland Report, at a time when few other countries could boast an official sustainability strategy of the sort. It identified many issues that other states acknowledged only later. Reaching well beyond purely environmental issues, it covered a wide range of sectors, including water, tourism, energy and health. And it also proposed ambitious actions that are still under debate to this day, such as those involving pesticide usage, waste treatment and land-use planning. Unfortunately, its failure to attract financial support “dimmed it down to good intentions” (Conservation Finance Alliance 2003). Nevertheless, it provided an early foundation for many policies introduced and implemented in later years.

This influence is clearly visible in the area of tourism. Legislation passed in 1985 had introduced tax incentives, tariff exemptions and other measures aimed at promoting development in the tourism sector. Yet it was the Conservation Strategy for Sustainable Development that clearly laid out the actions and policies necessary to promote a model for sustainable ecotourism. It represented a system of sustainable development that built on national parks and other conservation efforts, an approach whose benefits included greater development and employment opportunities in poorer areas. Today, Costa Rica has a National Plan for Sustainable Tourism and uses certification tools to promote a range of sustainable development benefits associated with the sector.

The Conservation Strategy for Sustainable Development also identified the need for continued efforts in forest conservation and the containment of fossil fuel consumption. In the mid-1990s, the time was ripe for another policy breakthrough that addressed both questions. Combining ecological and economic thinking, the government of José María Figueres Olsen (son of former President José Figueres Ferrer) replaced existing subsidies for reforestation with the PES scheme administered by the National Foundation for Forestry Financing (Fondo Nacional de Financiamiento Forestal, FONAFIFO). Rather than simply subsidizing plantations, this scheme expresses the myriad services provided by the forest in terms of economic value. These services included ones related to climate regulation, the water supply, biodiversity conservation and the preservation of nature for tourism and research (FONAFIFO 2012).

Whereas the exact value of such services is impossible to calculate, the scheme nonetheless ensures that landowners receive payments greater than the opportunity cost of deforesting land and using it for activities such as cattle ranching. While payments to landowners are based on the type of ecosystem services provided by their plots, it is clear that they must exceed this opportunity cost, which at the time of the plan's initiation was estimated at \$42 per hectare, according to Director of the National Fund for Forest Finance Jorge Mario Rodríguez. The main source of funding for the scheme is a national sales tax on fossil fuels, which today stands at double its original rate of 3.5 percent. The government is also able to raise additional funding by selling carbon credits on the international market.

Since its inception in 1997, PES has steadily evolved to embrace new financial sources and protect more land. So, whereas the scheme initially applied solely to standing natural forests, it now also covers sustainably managed plantations that help reduce dependency on imported timber. Among the funding innovations is a green debit card that allots 10 percent of its commission to a Sustainable Biodiversity Fund. The PES concept has also been applied to organic agriculture, with the aim of remunerating farmers for the ecosystem services preserved through organic farming techniques.

By the end of the 20th century, Costa Rica had a strong foundation of policies and strategies supporting different pillars of sustainable development: economic, reflected in the push for sustainable tourism; social, shown in the country's forward-thinking emphasis on education; and environmental protection, best illustrated by the national parks system and PES. However, this structure lacked an overarching policy, as the Conservation Strategy for Sustainable Development proposed in 1990 was never explicitly implemented. Nevertheless, the existence of such a groundbreaking document proves that some decision-makers were thinking holistically, and the fact that many decisions have been carried over by successive administrations shows that this vision has been broadly shared and supported.

The next critical step, then, was to integrate sustainable development at the highest level of national planning. Each government in Costa Rica has a National Development Plan, valid throughout its four-year term. Sustainability has played an ever greater role in these plans. While the plan implemented by the Sánchez government (2006–2010) did not see sustainability as an overarching goal, it proposed environmental sustainability as a key pillar, with references to sustainable economic growth as well as sustainable human development (MIDEPLAN 2007). However, it is the current National Development Plan, covering the period 2011 to 2014, that is the first to propose sustainable development as a truly overarching theme.

Conceptual design and goals of the National Development Plan

Outstanding features of Costa Rica's National Development Plan 2011–2014 (MIDEPLAN 2010) include its holistic approach, the inclusion of specific and measurable indicators, its legally binding character and the compulsory assignation of a budget to each indicator. "Secure development, led by innovation, science and technology, strengthened by solidarity and committed to environmental sustainability" is the overall mission promoted by the plan. The balance "between economic growth and the state of the environment" forms a core element of its fundamental aspirations, as much so as the achievement of "more equality and solidarity" (ibid.). The key pillars of sustainability are also reflected in the plan's four main axes of strategic action:

- social well-being and family;
- citizen security and social peace;
- environment and land-use planning; and
- competitiveness and innovation.



The plan is characterized by more than 400 clearly specified national, sectoral and regional goals. The national headline goals are shown in Table 2.

Table 2: National Development Plan, goals and indicators

Goal	Indicator	Baseline
<i>Competitiveness and connectivity with global dynamics</i>		
GDP growth rate of 5% to 6% by end of period, with sustainable growth rhythm	GDP growth at constant prices	-1.1% (2009)
Improve ranking in the Global Competitiveness Index by at least 3 points	Global Competitiveness Index of the World Economic Forum	56 (2009/10)
Keep domestic inflation rate low and close to main trade partners' rates by 2014	Maximum deviation between local inflation rate, as measured by national price index, and main trade partners' average inflation rates in 2014	+1.68% (2009)
<i>Equity and solidarity</i>		
Reduce open unemployment to 6% by end of period	Open unemployment rate	7.8% (2009)
Provide integrated services for 20,000 households in extreme poverty	Number of households receiving integrated anti-poverty services	0
<i>Security</i>		
Reduce growth rate of serious offenses (homicides, rapes, robberies, etc.)	Crime rate per 100,000 inhabitants	138 per 100,000
	Delinquency rate per 100,000 inhabitants	1,529 per 100,000 (2009)
Improve citizen perception of security, and improve the image of the police forces in 40 high-risk districts (10 per year)	Measurement of security perception	Conduct survey in December 2010 (which will provide baseline)
<i>Balance between economic growth and state of the environment</i>		
95% of electric energy from sustainable renewable sources; make advances toward carbon neutrality	Percentage of renewable electric energy	93.5% (2009)
Maintain the country's 3rd-place rank in Yale's Environmental Protection Index	Environmental Protection Index (Yale University)	3rd out of 163 (2009)
<i>Democratic governance through political and social dialogue and modernization of the state</i>		
Improve public management, quality of public services and public participation through an increase of 25% in IADB's Managing for Development Results Index	Development Results from the Inter-American Development Bank (IADB)	2.6 (2009)
Improve the country's position in the E-government index to the 35th percentile (64 out of 183).	Index of E-government	71 out of 183 (2009)

Source: MIDEPLAN 2010

Many of these national, sectoral and regional goals are quite ambitious. As Minister for National Planning and Political Economy Roberto Gallardo says, "Reducing infant mortality from 25 to 10 per 1,000 births is easier than reducing it from 10 to nine. Costa Rica has achieved a level of development where progress becomes much harder." The generation of electricity is a case in point. In 2009, 93.5 percent of the country's electric power was produced through the use of renewable sources. Increasing this further will be difficult; indeed, simply maintaining this high level under conditions of rising energy demand may itself represent a success, although one more difficult to regard as progress.

Nevertheless, big improvements are still both necessary and possible in areas such as land-use planning, waste treatment and transport-related pollution. The first two topics fall largely under the responsibility of local governments, which means the national government's role is limited to the promotion of plans and strategies that are enacted at a different level. For example, the government aims to have land-use plans in place in all 81 municipalities by 2014. The issue of transport pollution is mainly addressed through climate change mitigation goals. By 2014, for example, the goal is to reduce the use of fossil fuels overall by 5 percent.

Climate change is in many respects becoming the polestar of Costa Rican development planning. Former President Oscar Arias announced in 2007 that Costa Rica would become carbon neutral by 2021, the year of its 200th anniversary. Gallardo agrees today: "Carbon neutrality is the most important goal." Though the National Development Plan does not explicitly identify this as an overarching goal, many of its core topics and indicators relate to reducing carbon emissions.

The plan is rendered doubly credible by its legally binding nature and its associated financial support. Its goals and indicators represent more than a voluntary statement of good intentions; in fact, the government is obliged by law to produce such a plan and to monitor its implementation under the National Planning Act. Each indicator must be associated with a specified budget; these individual budgetary items then comprise the overall budget proposed by the government. These are powerful mechanisms to hold the government accountable to its promises.

Implementation process

Institutionalizing sustainability

Implementation of the National Development Plan and other sustainable development policies is facilitated by a set of formal and informal factors. These include clear institutional mandates for coordinating and monitoring policy implementation, a strong rule of law, policies accompanied by funding proposals, and a broad consensus among the main political parties on many sustainability issues. This sub-chapter examines each of these four factors.

The first factor involves institutional mandates such as the National Development Plan, which is a guiding document for the entire government and finds support at the highest political levels. Its implementation also benefits from a clear institutional structure that coordinates and monitors the planning process. Though the Ministry for National Planning and Political Economy (MIDEPLAN) does not stand above other ministries in the operational hierarchy, it holds a special status as the entity that supports President Laura Chinchilla Miranda in organizing and coordinating the government's work across multiple sectors, in assigning responsibilities and in monitoring and evaluating the country's progress toward the government's stated goals.

A further example is provided by the fact that each of the central government's 170 ministries and agencies contains a unit for institutional planning. These entities regularly report progress on goals according to clearly defined methodologies to the Secretariat of the National

Planning System, which is hosted and coordinated by MIDEPLAN. By aggregating these reports, MIDEPLAN provides the president with a biannual overview of the state of goal implementation. This enables the government to take corrective action if insufficient progress in a specific area is seen. MIDEPLAN also maintains contacts with lower levels of government, providing support for the development of local development plans and coordinating national government interventions at the local level.

With the aim of keeping the public informed, MIDEPLAN prepares an Annual Report on the Achievements of National Development Plan Goals. This document reports on progress for each of the hundreds of national and sectoral goals. There is no formal external review body, but the National Council of Rectors, drawn from the country's public universities, publishes a high-profile State of the Nation report (e.g., *Estado de la Nación 2012*) each year, which provides an external and critical perspective on development progress. Though these reports do not directly evaluate National Development Plan implementation, they do assess the status of sustainable development in detail and provide policy recommendations. The reports are respected by the government, which is represented by several ministers on the consultative committee that reviews the reports' content.

The rule of law provides a second important factor in plan implementation. Costa Rican courts are well respected, and their rulings have tended to support the cause of sustainability, especially in the area of the environment. In 2010, the constitutional court halted an attempt to open a gold mine in a national park in the northern area of Crucitas, near the Nicaraguan border. The mining company involved said there were at least 1.2 million ounces of gold (Leff 2011), but the court ruled that the planned open pit mine was not in the "national environmental interest."

However, the strong rule of law has some downsides as well. Good proposals have also sometimes fallen victim to a slow-moving legal system and to decisions that run counter to political intentions. This has been especially true in today's political system, which is more fragmented than in earlier years and has allowed decisions backed by broad support to be defeated by bringing before the constitutional court decisions that should be made in the political arena, as was the case with a recent proposal for tax reform. On balance, however, the rule of law has acted as a safeguard for sustainable development.

Third, Costa Rica has generally supported the policy implementation process with ample funding. To be sure, the case of the 1990 Conservation Strategy for Sustainable Development shows that some well-intentioned policies have in fact failed due to a lack of funding. However, in contrast to other countries, Costa Rica has been able to overcome this problem in many cases. Its success in this regard is attributable to its level of economic development, which has increased the available tax base, and a political willingness to commit the necessary funding to such policies. For example, Costa Rica's constitution requires that at least 6 percent of GDP be spent on education. Notably, according to some interviewees, the government plans to set 8 percent as its new target, although this is not currently reflected in the National Development Plan. Nonetheless, its education budget per capita is three times higher than the regional average (World Bank 2013).

The specific assignment of funds to development goals is also a fundamental principle of the National Development Plan. Each of the hundreds of goals has a clearly defined budget,

which allows for coherent government planning and enables an early reality check to be performed during the planning stage. However, this does not mean that planned funding is certain. In 2012, for example, a proposed tax reform was rejected by the constitutional court for procedural reasons, thereby depriving the government of an expected \$900 million in revenue that was already slated to fund many of the development objectives (NZZ 2012).

Costa Rica's sustainable development pioneers have often found ways to protect important policies from the unpredictability of daily politics, however. The constitutionally mandated educational spending target is one example. The funding mechanism for the Payment for Ecosystem Services (PES) program is another. PES is directly funded by a tax on fossil fuels, with the fund administered by FONAFIFO, itself governed by a board that includes both private and governmental actors.

Costa Rica has also been adept at tapping international funds to achieve its sustainability goals. Official development assistance inflows decreased from over 5 percent of gross national income in the mid-1980s to 0 percent only 10 years later, but the country has used its green credentials to access new international funding sources, such as bilateral and multilateral climate-change mitigation and adaptation funds. Thus, Costa Rica has managed to secure a relatively stable financial foundation for its sustainability agenda despite the vicissitudes of political cycles and a changing international context.

Finally, the implementation of sustainable development goals is also facilitated by an informal consensus on broad goals and policies among the political elite. As former Environment Minister Carlos Manuel Rodríguez says, "There is a high degree of resilience of sustainability in government." Key policies have survived many government changes unharmed. A case in point is the Payment for Ecosystem Services (PES) program. In the 1994 election, Rodríguez and current Environment Minister René Castro were the prospective environment ministers for their opposing parties. They agreed on key goals and policies before the election. In the event, Castro's National Liberation Party won the election, but Rodríguez became a key advisor to Castro in the Ministry for Environment and Energy. Together, and in cooperation with civil society and the private sector, they established the PES scheme and its institutional home, FONAFIFO. Such cross-party collaboration on shared goals has taken place in other important areas, too, and has ensured the sustainability of intelligent and innovative solutions.

Probably the biggest obstacle to policy implementation has been the lack of local governance capacity along with the difficulties of coordination between the national and subnational levels. Apart from the central government, Costa Rica has only one other important layer of government, made up of 81 directly elected municipal governments. These are in charge of many relevant sustainability issues, including land-use planning and waste management. However, local governments often lack the financial and human resources to deal with these issues adequately and sometimes have uncomfortably close links to large landowners who oppose tighter regulation.

In addition, there is a lack of coordination at the regional level. While land-use planning, for example, is important in the context of watershed conservation, municipal borders rarely match ecological boundaries. This means that coordination between local governments is essential. MIDEPLAN is trying to address these problems by establishing formal mechanisms

to improve coordination between the central and local governments, and it has a goal of ensuring that all 81 municipalities have local land-use plans in place by the end of 2014.

Participation

As the government's plan for the current legislature, the National Development Plan is primarily a tool for public administration. However, its elaboration was shaped by a process of public consultation. While the plan's main areas of activity were defined by today's governing party during its successful electoral campaign, a series of public consultations by sector and by region were held with the aim of refining and complementing the plan. Gallardo sees this consultation process as a work in progress. "It was the first time we held such consultations. Next time we can conduct the exercise more systematically and rigorously," he says. However, a trade-off between time and level of participation is inevitable. National Development Plans are often finalized a year after an administration takes office, leaving just three years for their implementation. The challenge is therefore to organize an efficient and effective participation process.

To be sure, participation takes forms other than direct involvement in the planning process. Most importantly, Costa Rica has a longer democratic tradition than most other Latin American countries. With a break of only a few years, free and fair elections have been held for more than 160 years and continuously since 1948. Furthermore, civil society and private businesses take part in many decision-making and governance processes that are not directly related to the National Development Plan. For example, the Costa Rican Tourism Board is com-





prised of several representatives of the tourism sector and is headed by the minister of tourism. The FONAFIFO board, the entity responsible for administering the PES program, consists of three representatives from the public sector and two from the private sector.

Many private companies appear to engage in productive cooperation with the government on sustainability issues. This may be most obvious in the tourism sector, in which environmental conservation represents a vital competitive advantage. Through the tourism board, businesses have started to implement a comprehensive certification scheme relating to various aspects of sustainability. However, interesting examples can be found in other sectors, too. The country's largest beverage company is not only trying to become carbon neutral in line with the government's vision, but also water neutral in its production process by reducing consumption and investing in water catchment areas. The company has tied its employees' salaries to social and environmental objectives as well as financial benchmarks. The basis for all these initiatives is a common vision that sees sustainable development not only as an additional cost, but also as a unique asset undergirding the country's competitiveness. In other words, businesses have understood that sustainability sells.

Costa Rica would not be where it is today, however, without broad popular support for many of its key sustainability policies and actions. In parallel with this public support, civil society has often served as a guardian of past achievements. For example, the Crucitas gold mine project, which was eventually stopped by the courts, was opposed by 86 percent of the population (Leff 2011); civil society played a key part in articulating this opposition and in forcing the government to abandon its support for the mine. The population has also been able to participate in key policy decisions through referenda, as in the case of the free trade agreement with the United States that was narrowly approved after a vigorous campaign.

In sum, there can be no doubt as to the very high level of participation in key policy debates and decisions on the part of the private sector, civil society and the population at large. Inter-

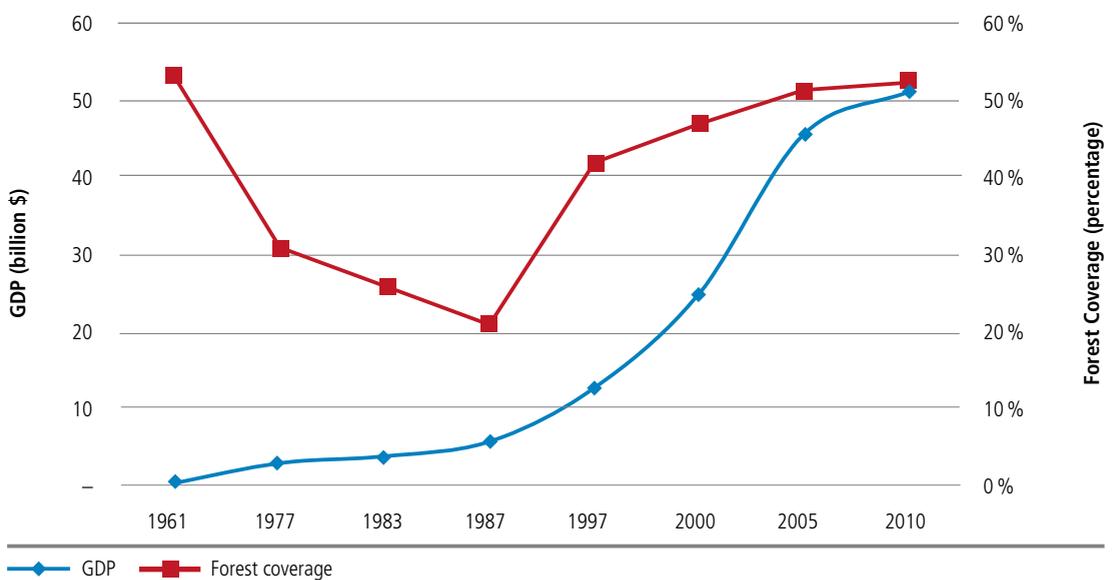
estingly, this is both a foundation for current and future success and the result of Costa Rica's early decision to invest in education, without which such participation would not be possible.

Outcomes and achievements

Costa Rica's success story can best be understood as the interweaving of three pillars of sustainability: economic, social and environmental progress. It is quite evident that the country's model has worked well economically. Costa Rica's per capita income is more than double the Central American average and approaches the level of OECD member countries such as Chile and Mexico. But this economic success has only been possible in the context of parallel social and environmental achievements. The tourism sector, which contributes 8 percent of GDP, 20 percent of employment and 22 percent of all export earnings, has built its entire marketing strategy around Costa Rica's natural heritage. According to Alberto Lopez, head of the Sustainability Program at the Costa Rican Tourism Board (ITC), more than half of all tourists in the country visit national parks during their trip.

Agriculture, a key sector both in terms of food security and export revenues, is also intrinsically linked to the environment. In many cases, initiatives to reforest water catchment areas have been triggered by owners of small and medium-sized farms noticing a reduction in water quality and quantity in rivers and aquifers. Many of the new export-oriented economic sectors, such as electronic equipment, medical devices and outsourced business services, would not exist today if not for the sustained investments in education that have occurred over previous decades.

Figure 1: Forest cover and gross domestic product growth in Costa Rica, 1961–2010



Source: Index Mundi 2013; FONAFIFO 2012



The results of Costa Rica’s development model, with its significant investments in health and education, have been equally positive on the social side. The average life expectancy of the country’s residents is several years longer than that of their Central American neighbors. The literacy rate is higher. Although crime rates have recently risen, they remain significantly lower than in neighboring countries. As highlighted above, these conditions are partly a result of economic progress. Thanks to higher per capita incomes, funding the public services that underpin these social indicators is easier. But the same social factors have also had beneficial effects on the economy and the environment.

Without peace, it would have been much harder to achieve economic prosperity and to preserve the environment. The many civil wars and latent violence that have featured prominently in other countries in the region, such as Nicaragua or Honduras, over the past century provide for a striking counterfactual, with such countries suffering from low economic growth, meager social progress and continuous deforestation. Education has played a similarly important role, not only for the economy, as described above, but also for the environment. As Victor Valle, associate vice-rector at the U.N.-mandated University for Peace in Costa Rica, explained during an interview conducted with the RMP project team in January 2013, “When the government started to create national parks in the 1970s, the population was already educated enough to understand and support conservation.”

The protection of the environment, in particular the preservation of forests, is one of the most impressive achievements of Costa Rican policymaking. Costa Rica’s forest cover fell from 75 percent in 1940 to just 21 percent in 1987. From this point, it recovered to 42 percent in 1997 and stands today at over 52 percent (FONAFIFO 2012). Costa Rica was the only country in the region to increase its forest cover in the first decade of the 21st century (Estado de la Nación 2011).

Other countries are still cutting down forests, mainly due to the expansion of agriculture and livestock production, while Costa Rica has reversed the trend through a series of policy changes, including the establishment of the national park system, the PES program



and the reversal of perverse incentives for deforestation. This feat has taken place in the context of rapid population and economic growth. As such, the case of Costa Rica also offers impressive proof that it is possible to decouple economic growth and environmental degradation.

PES, in particular, has had a considerably more substantial effect than what was initially expected. Since its inception, the program has grown to encompass a combined area of 866,000 hectares, or nearly one-sixth of the country's land area (FONAFIFO 2012). Even so, FONAFIFO Director Jorge Rodriguez says that two-thirds of applicants have to be rejected, as the currently available funding base of \$35 million per year is not sufficient. However, PES has inspired others to start buying up sensitive land around water catchment areas on their own in an effort to reforest former farms.

In other cases, additional government policies have promoted the use of PES money to leverage other investments in sustainable development by offering to top up PES funding with additional government support if it is used for building schools or hospitals. This holds true mainly for indigenous communities in the country's southern regions.

A number of other examples could underscore how Costa Rica's model builds on mutually reinforcing linkages between economic growth, social progress and environmental protection. This is not the product of a single national plan, but rather of a holistic vision of development adopted by successive Costa Rican leaders and decision-makers. Their decisions have often inspired action in other countries, as well, as PES systems have been imitated in Mexico and Ecuador.

More recently, Costa Rica's pledge to become carbon neutral by 2021 has caught the interest of many other countries even as global climate change negotiations have stalled over disagreements between developed and developing nations over who must reduce emissions first and by what amount. Costa Rica's bold move demonstrates a proactive way to address issues that concern everyone.



Challenges ahead

Costa Rica needs to take big steps not only in the reduction of greenhouse gas emissions, but also in many other areas. As the introduction noted, not everything is perfect in Costa Rica. The latest State of the Nation report (Estado de la Nación 2012) offers a comprehensive overview of the critical sustainable development challenges faced by Costa Rica today. Some of the most important ones are summarized in this section.

Economically, the country's yawning fiscal deficit is of fundamental concern. Originally a product of the worldwide economic crisis, the failure of a tax reform plan meant to increase government tax revenues by \$900 million compounded the deficit, which stood at 4.1 percent of GDP in 2011. If left unaddressed, the lack of sufficient revenues could eventually put at risk future investments in

areas, such as education, health and environmental conservation, that ensure the sustainability of the Costa Rican model.

The recent increase in inequality is one of the main worries on the social side. Even though many countries in the region have more unequal distributions of income and wealth, Costa Rica's Gini coefficient, a measure of income inequality, has recently increased from already fairly high levels. In a possibly related development, the support of Costa Ricans for their political model has dropped to a 30-year low. Although not alarming at this point, these are signs that need to be taken seriously if the country's broad popular support for important sustainability policies is to be maintained.

On the environmental agenda, the pressing issues are more and more "brown" rather than "green," as Costa Rica has shown substantial success in reforestation but has failed to address air pollution, water contamination and waste management comprehensively. "Blue" issues, which refer to the protection of both freshwater bodies and seas, are also rising on the agenda. More than one interlocutor referred to polluted rivers as "Costa Rica's badge of shame." Only 0.7 percent of Costa Rica's marine area of over 500,000 square kilometers is protected, with large sections threatened by excessive exploitation and pollution.

One persistent water- and land-pollution issue derives from the excessive use of pesticides in agriculture. There is no comprehensive data on their application in fields, but the State of the Nation report (Estado de la Nación 2012) finds an increase in agricultural exports of 430 percent between 1978 and 2008. By comparison, the total area devoted to agricultural activity increased by just 42 percent over the same period. Pesticide use is mostly associated with the large production of export-oriented crops, such as bananas and pineapples.

Tighter environmental standards in the destination countries for these exports appear to have had some effect, but there is a strong need for better monitoring, tougher rules and more effective punishments for illegal contamination within Costa Rica. Pollution and contamination also result from inadequate management of liquid and solid waste. As a result, rivers are often heavily polluted. The main stumbling blocks for better waste management seem to be the high investment cost associated with waste treatment plants as well as the lack of awareness and capacity in local governments, which are responsible for monitoring this issue.

Other environmental problems are more closely related to changing lifestyles among the local population. For example, transport pollution and energy use are increasing with rising car ownership rates. About 59 percent of all energy use already stems from the transport sector, and given the high share of renewables in electricity generation, transport accounts for a large majority of fossil fuel consumption and thus greenhouse gas emissions. But increasing electricity demand will also pose new challenges. Opportunities to expand geothermal energy production, for example, are mainly found in national parks. The country's willingness to make trade-offs between conflicting sustainability goals – forest conservation and renewable energy, in this case – will likely soon be put to a tough test.

As mentioned earlier, many issues relate to a lack of adequate land-use planning. This seems to be a consequence of inadequate political structures, which is manifested in a lack of political authority at the regional levels, where many land-use issues should be addressed, in powerful private interests that are opposed to tighter regulation and in insufficient political will. One stark example is the failure to approve and implement a land-use plan for the San José metropolitan area that took eight years to prepare and was provided with €20 million in European Union funds. As noted earlier, the strengthening of capacities and coordination at the local level is a necessary condition for improvements on this front.

Governance is a broader question mark hovering over the future of Costa Rica's sustainability agenda. Though the rule of law and political stability are certainly part of the country's success story, they increasingly threaten to take on the role of a stumbling block. Legal cases can take years to be resolved. Increased rates of appeal to the constitutional court, even for minor issues, point to a lack of ability to reach consensus at the legislative level, a factor also reflected in the increased political fragmentation (Bertelsmann Stiftung 2014). As previously noted, the lack of capacities within local governments as well as the lack of coordination between center and subnational levels remain issues. It remains to be seen whether the current government's efforts in this regard will have their desired effect.

Echoing Planning Minister Gallardo's words, the latest State of the Nation report predicts an "end of easy gains" in Costa Rica's sustainable development. Today's issues are more protracted and possibly less appealing to solve. They may require more fundamental changes in human behavior and choices that have a more immediate bearing on people's lifestyles than in the past, such as moving from private to public transport. However, the successes of the past should give all actors involved faith in the country's ability to tackle these issues.

Abolishing the army was certainly no easy task, and neither was increasing forest cover from 21 percent to 52 percent of the country's landmass. The new overarching goal of becoming carbon neutral by 2021 may yet turn out to be a very useful point of reference given that – like climate change – most of today's problems are more intrinsically related to the totality of the current development model and thus require fundamental shifts in behavior and policy.

Costa Ricans may well rally behind carbon neutrality as they have behind other great missions. But it will be an increasingly complex task for governments to create the awareness, political will and institutional structures needed to put the necessary solutions into practice.

What we can learn from Costa Rica

The story of each country is highly context-specific, limiting the potential for transference of isolated successes to other nations. Costa Rica is no different. Its success is owed in great part to the specifics of its natural resource endowment and colonial institutions established hundreds of years ago, as well as to the actions of a series of visionary leaders over the past century. Yet, at the same time, it has developed many practical solutions that can and do inspire other countries, including the PES approach. This final section identifies three key lessons that other countries can learn from Costa Rica.

The first and most fundamental lesson is that sustainability works. Economic, social and environmental goals can go hand in hand in practice, and not just in the very long term. Instead of being regarded simply as necessary trade-offs, the goals can often mutually reinforce one another. Costa Rica's tourism industry would not be what it is today if not for the investments in education and environmental protection that began decades earlier. Moreover, economic success today makes it easier to sustain such social and environmental investments.

To be sure, this virtuous circle does not operate in every case. But Costa Rica demonstrates that social welfare and environmental protection are not simply costs, but can be key assets for development. Again, the PES scheme is probably one of the best illustrations of how economic and environmental logic can be combined in a practical and successful solution. But other policies, including those in the areas of education and other social welfare spending, have been equally important and successful.

Second, it can pay off to be a pioneer. Many of today's globalized problems are discussed under the assumption that individual countries have an interest in acting only in the context of an agreement compelling everybody else to act as well. In climate change, for example, reducing emissions represents a cost that no wise country should incur without the certainty that others will do the same. Costa Rica's success is largely attributable to the fact that its visionary leaders rejected this logic. They abolished the army, invested in education, reversed deforestation and recently declared that they would become carbon neutral by 2021.

This behavior has given Costa Rica two first-mover advantages: The country's policymakers have managed to sell these strategies domestically as something fundamentally positive and unique, thereby creating a sense of a national mission that has united the population and the business sector. This is no small feat considering that sustainability and environmentally and socially conscious action are frequently seen as obligations rather than aspirational goals. Simultaneously, Costa Rica has managed to project a very positive image externally; this has helped it forge strong and useful relations with other nations and has given the country access to funding that it would likely otherwise have lacked. For example, the goal of carbon neutrality has secured millions of dollars in climate finance for Costa Rica just as traditional overseas development assistance is fading out.



A third and final key lesson is that sustainability is not an achievement of the government alone. Costa Rica's success cannot be explained by a single government plan, nor even by the combined actions of consecutive governments alone. It is the result of an entire country uniting behind big ideas. Civil servants, businesses, nongovernmental organizations, academia and the population at large have all played their part. For example, charismatic figures – such as Álvaro Ugalde, who later served as head of the National Parks Service for several terms – stood behind the establishment of the national parks. These individuals did need visionary leaders who took up their ideas, but without their initial work and powerful motivating force, the ideas may not have been realized.

Carbon neutrality is already inspiring dozens of businesses to develop their own zero-emission plans even before government regulation kicks in. Academia and civil society have often served as the guardians of sustainable development by issuing critical reports, engaging in protests and filing lawsuits. As noted earlier, key policies have also been maintained by governments of different political tenor, thus ensuring the necessary continuity over time. The important lesson is to frame sustainability as something positive that benefits society at large rather than turning it into a party manifesto.

These lessons may inspire people in other countries, convincing them that sustainability is possible even in difficult economic or geopolitical circumstances. They should also give Costa Ricans confidence that they will be able to face the challenges of the future.

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