

PROJECT ACHIEVEMENTS AND LESSONS LEARNED

Biodiversity Conservation in Coffee

Transforming productive practices in the coffee sector by increasing market demand for certified sustainable coffee 2006–2013



The livelihoods of more than 25 million people in the tropics depend on coffee, one of the world's most widely traded commodities. Coffee is farmed on approximately 12 million hectares worldwide, an area nearly the size of England. In Latin America, producers traditionally grew coffee under the canopy of old-growth forests. As logging, cattle grazing and more intensive agricultural production have degraded primal forest areas, these plantations have served as important sanctuaries for the region's original ecosystems.

The Biodiversity Conservation in Coffee (BCC) project aimed to transform global coffee production to support reforestation, wildlife, water and soil conservation, waste and pest management and responsible labor practices. The goal was to assist farmers with adopting a redesign of conventional, non-sustainable coffee practices—those that rely upon deforestation (full sun), chemicals and unsustainable yields—through a sustainability standard, certification criteria and marketplace demand. The basis for the standards introduced through the

Biodiversity Conservation in Coffee

Funding Agency:
Global Environment Facility (GEF)

Implementing Agency:
United Nations Development Programme (UNDP)

Executing Agency:
Rainforest Alliance

Ratio of Cost Share to Funding:
8:1 (\$106 million: \$12 million)

Increase in Rainforest Alliance Certified Coffee Sales:
400%

Increase in Rainforest Alliance Certified Hectares:
700%

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Project-Implementing Partners

Brazil: Instituto de Manejo e Certificação Florestal e Agrícola (IMAFLORA)

Colombia: Fundación Natura

El Salvador: SalvaNATURA

Guatemala: Fundación Interamericana de Investigación Tropical (FIIT)

Honduras: Instituto para la Cooperación y Autodesarrollo (ICADE)

The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior.
www.rainforest-alliance.org

"After eight years of certification, Finca Montecristo in Honduras has undergone a host of changes. Its workers, including women, now receive the minimum wage or higher. Wildlife such as deer and snakes are no longer hunted for food or as payment. There is now a water-management plan and farm workers benefit from locally grown food and opportunities for continued training and education. Finally, soil studies and focused fertilization have reduced costs and resulted in increased productivity."

Armando Cruz
manager of Finca Montecristo

project were the sustainable tropical agriculture practices developed by the Rainforest Alliance and its partners in the Sustainable Agriculture Network (SAN). Farms that meet these criteria are able to display the Rainforest Alliance Certified™ seal on their products.

By the close of the BCC project in 2013, the amount of coffee produced and sold as Rainforest Alliance Certified more than *quadrupled*—from just under 30,000 metric tons in 2006 to 168,000 metric tons. Sales of Rainforest Alliance Certified coffee now represent 4.5 percent of global sales. In addition, a much larger amount of coffee is being produced sustainably than is being sold as Rainforest Alliance Certified. The Rainforest Alliance worked to interject sustainability practices throughout the industry by contributing to the development of the Common Code for the Coffee Community and Nespresso's AAA Sustainable Quality™ Program. When other sustainable certification seals—including Utz, Fairtrade and organic—are factored in, certified sustainable coffee represents 12 percent of global sales (based on 2012 data).

The amount of Rainforest Alliance Certified farmland dedicated to coffee increased more than *sevenfold*—from 93,000 hectares to more than 830,000 hectares—between 2006 and 2013. Rainforest Alliance Certified coffee is now produced in more than 25 countries around the world, including Côte d'Ivoire, India, Rwanda and Vietnam. In Latin America, the BCC project has resulted in conservation set asides in biomes including the Atlantic Forest (25,000 hectares), the Cerrado (80,000 hectares), the Mesoamerican hotspot (40,000 hectares), and the Tropical Andes (185,000 hectares).

These activities have been supported by the more than 2,300 companies, including McDonald's and Mondelez, both of which source Rainforest Alliance Certified coffee. Companies that have committed to sustainability include Caribou Coffee, Second Cup, Green Mountain Coffee Roasters' Timothy's World Coffee brand, and Costa Coffee.

These corporate commitments contributed significantly to the additional \$106 million in co-financing

and leverage that the BCC project was able to attract over its duration.

A variety of studies have demonstrated the environmental, social and economic benefits of Rainforest Alliance certification, including the following:

- Certified farms in Colombia had significantly healthier streams than noncertified farms (Hughell & Newsom 2013).
- Migratory birds in El Salvador showed a significant preference for natural forest and certified coffee plantations over intensified coffee sites and open farmland (Komar 2012).
- In a survey of 197 coffee farmers in Latin America who had attained certification, 40 percent reported that their farms had become more productive as a result of the improvements they made to meet the SAN standard's social and environmental criteria (Tuinstra 2011).
- Rainforest Alliance Certified farms in El Salvador increased their yields by 76 percent, compared to 22 percent among noncertified farmers in a control group (Romanoff 2008).

Seventy percent of the farmers who attained certification through the BCC project are smallholders. These producers benefited from the model of group certification, whereby individual producers are included under one certificate, resulting in reduced costs. The development of a suite of training materials and tools, featured on the online training platform www.sustainableagriculturetraining.org, facilitated the outreach to producers. The online training platform features 19 courses covering the practices required to achieve the SAN standard.

In the focal countries of Brazil, Colombia, El Salvador, Guatemala, Honduras and Peru, the BCC team worked with national coffee organizations to raise awareness of sustainability issues and enable capacity building and collaboration on specific issues such as the management of water resources. The project engaged national policy makers and



About Us
Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior. We help farmers realize greater economic benefits by ensuring that ecosystems within and around their operations are protected and that their workers are well-trained and enjoy safe conditions, proper sanitation, health care and housing.

Figure 1
The Rainforest Alliance online training platform.



regulators through the standard-setting process. Departmental governments in Colombia contributed more than US\$ 400,000 to facilitate the certification of 6,000 hectares of farmland.

The project also responded to the growing threat of climate change through SAN's development of the Climate Module. Farmers who receive verification against the criteria of the module understand the climate risks to their farms, create adaptation plans and reduce greenhouse gas emissions from fertilizers, pesticides, fossil fuels and animal husbandry. Climate-friendly farms also protect and enhance carbon storage on their land by conserving forests and planting trees. Close to 400 coffee farms in Latin America are verified as meeting the criteria of the Climate Module.

The BCC project also directly enabled significant developments in the Rainforest Alliance's operations that covered the key issues of traceability, cost-recovery, evaluation of results, and accreditation of certification bodies, as highlighted below:

- The online system **Marketplace** facilitates traceability by enabling the efficient management and monitoring of certified coffee as it passes through the supply chain.
- A participation agreement and related royalty for trading in certified coffee serves as a cost-recovery mechanism. This charge per pound of green coffee (charged to the importer/first buyer) supports the institutional growth structure for supply-chain integrity, communications, markets, evaluation and research, and the SAN.
- Finally, as part of our efforts to ensure continued integrity, the Rainforest Alliance has built a strong scientific team to carry out evaluation and research activities. In addition to leading project studies, the team is developing global indicators to measure progress and facilitate decision-making at the project level.

Success stories

Peru

As a direct result of the increased income received by obtaining and maintaining Rainforest Alliance certification, Don Julio Camaña of Peru's Nagazu

Villa Rica native community no longer extracts timber or hunts animals. He has even put up signs noting that these activities are prohibited on his farm. When asked about his experience with sustainable coffee production, he states, "I am convinced that when you work hard, coffee can enable you to have food and live a better life with your family. I can have more income thanks to those who have trained me in sustainable agriculture and the conservation of all of the natural resources that we have in our community."

Brazil

Biologists have found rare macaws, owls, jaguar tracks and a giant anteater in the protected areas of Daterra, a 6,000-hectare farm located in the Cerrado (savannah) of southeastern Brazil that is known as much for its superior beans as it is for its commitment to conservation and climate-smart agriculture. In 2012, the farm became the second coffee estate in the world to earn Rainforest Alliance verification for climate-smart agriculture. Fifty percent of Daterra's land is preserved in its natural state, which helps to keep carbon safely sequestered and provides shelter, migratory routes and forage for wildlife.

Guatemala

Jorge Bolañas, manager for Finca Medina in Guatemala, is outsmarting coffee rust disease through a combination of natural treatments, such as gypsum and lime and a single fungicide spraying. In contrast to his neighbors, who have experienced harvest losses of more than 25 percent despite spraying fungicides five or more times per year, Jorge and the dozens of smallholders who have applied his method reported a mere 5-10 percent reduction in harvest. Jorge has also instituted excellent crop-management practices, including pheromone boxes to control pests, the composting of coffee waste (which supplies more than 30 percent of the nutrients for his fields) and the reforestation of hillsides (creating potential habitat for pollinators). He also reports that his net income is higher than that of many of his neighbors.

Lessons learned

1. Certification is an important tool that complements biodiversity conservation efforts and sustainable farming practices. In order to be most effective it needs to incorporate both large and small producers and strengthen producer organization.



Figure 2
The Rainforest Alliance online Marketplace system.

Figure 3
This giant anteater was spotted on the Daterra coffee farm in Brazil.



Infestation rate of coffee leaf rust (roya)

■ farmers in the control group ■ farmers in the Nespresso AAA program

-20%

Figure 4 (left)

A farmer picks coffee cherries on a farm in Guatemala.

Figure 5 (right)

Farmers in the Nespresso AAA program (supported by the Rainforest Alliance) demonstrated an infestation rate 20% lower than in the control group.

Source: Monitoring and Evaluation of Nespresso AAA Sustainable Quality Trade Program™ in Colombia

- Investing in social and environmental sustainability leads to improved yields and improved net income. Producers need continued access to technical assistance.
- Buyers can encourage producers to adapt best practices by making commitments to source sustainable products. Trading companies can play a critical role in supporting farmers to implement best management practices. Even with the involvement of buyers and traders, it is difficult to plan supply of certified coffee according to projected demand because of the influence of various market factors.
- Biodiversity conservation requires a landscape strategy beyond individual farm practices. Water, soil and agrochemical management have a greater impact if they are adopted collectively or within a specific watershed. The potential for socio economic impact should also be taken into consideration when selecting project sites.
- As the destructive impacts of climate change grow, climate risk analysis will be an important component of any project. Climate change and variability are also associated with higher incidence of plagues and diseases, such as coffee rust. Implementation of best practices is associated with increased resiliency to climate change.
- NGOs and development agencies can partner to engage both the market and governmental institutions and a broader set of stakeholders to support the wider adoption of best management practices. Governments can assist with the uptake of procurement policies through regulation.
- Projects of this size and complexity require a fully dedicated manager and adequate staff resources. The first year of implementation for large-scale projects should be used to establish the basic implementation framework. This includes conducting baseline studies, establishing the local advisory board and establishing and validating the monitoring system. A strategy for cost-recovery or contingency funding should be explored as part of project design.
- As farmers may carry several seals to increase their potential of market access, their auditing costs may increase. A system of equivalence or benchmarking can reduce the audit costs.

Additional References

- Guirmand, M. and Orozco, A. (2014). BCC Project Terminal Evaluation.
- Tuinstra, A. (2011). *SAN Standard Implementation in Coffee Production: An Analysis of Related Costs vs. Price Premiums*.

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