

Nectandra Institute (NI)

NI promotes the conservation and restoration of the montane cloud forest ecosystems of Costa Rica through public education, scientific research, and watershed stewardship. Land ownership in Costa Rica does not include water rights, which belong to the State. Most rural communities gain access to water, be it from springs or wells, through legal concessions for their water on private properties. Many communities form legally constituted associations known by the acronym in Spanish ASADAS (Asociaciones Administradoras de los Sistemas de Acueductos y Alcantarillados) to administer, manage and service their water supply, often with no outside assistance. These rural organizations collectively provide potable water service for approximately 25 % of Costa Rica’s population. Many of these associations do not own the properties where the springs are located, nor the corresponding watersheds or groundwater recharge areas, which may be pastures or agricultural land. We provide ecological loans to ASADAS, to acquire these lands and restore the forest on it. Although ASADAS are not conservation organizations per se, they rely on well-managed, forested areas to ensure the quality and quantity of their water supply. Tropical forest filters air and ground contamination; its foliage and roots capture and store precipitation, the release of which helps maintain water flow and thus facilitate ground water recharge that supplies the life sustaining springs.

Instead of paying monetary interest on the ecological loans from Nectandra Institute, the benefited water associations repay the principal plus a negotiated eco-interest consisting of labor, time, and other resources toward the reforestation, watershed management, and progress monitoring on the respective purchased properties. For the duration of the loans, Nectandra Institute provides technical support and follow up, as well as organizes educational workshops, various citizen science projects and collaborative community events with our partner ASADAS to maintain public awareness on the importance of the forest-water relationship.

I confirm that I am fully aware of the eligibility criteria, and based on its description, I am eligible to apply to the CSV Prize 2017.

- Evelyne T. Lennette, Co-founder Signature _____

Preferred language

- English

Organization name

Nectandra Institute

Year founded

1999

Initiative stage

- Operational

Annual budget in 2017 (USD)

- US\$ 100,000

Number of beneficiaries impacted so far

- Currently, approximately 16,000 residents in rural agriculture or dairy farms in the upper Balsa Watershed on the volcanic slopes of Central Volcanic Mountain Range (Cordillera Volcánica Central). Each resident is a water-using member of his/her community water association. Each is affected by the eco-loans from the Nectandra Institute.
- Each rural community must provide its own potable water. As a matter of survival, each community organizes its own ASADA. Currently there are some 1500 legally recognized ASADAS distributed in the Costa Rica. Generally, they are governed and staffed by community volunteers to manage all aspects of potable water services. ASADAS receive little to no financial and management support from the government. Being semi-autonomous, ASADAS set their own governing and operating policies, supported by metered water users' fees. Each water meter, one per household, holds the power of one vote in the ASADA's general assembly.

Organization type

- Non-governmental, U.S. 501(c)(3) not-for profit conservation organization.

Secondary Focus Area

- Environmental education and awareness building are integral components of the ecoloans and are absolutely critical to the program's effectiveness. Nectandra Institute organizes workshops for the partner communities on a number of topics, including but not limited to: forest regeneration, watershed management, hydrology, water analysis, legal issues associated with potable water distribution etc. These workshops are provided free of charge to the communities.
- Nectandra Institute initiates and coordinates a number of scientific studies in the community properties, many in collaborative efforts with ASADAS and individual community volunteers. The investigations involve long term monitoring and sampling for stream contaminants, mapping of waterways, as well as surveys of fauna and flora as environmental indicators. The collected data are collated into the Institute's Geographic Information System, eventually to be shared with our partner communities after analyses. The information should help the ASADAS to plan, protect and provide clean water for the present as well as future generations.

Headquarters location: Country

- US non-profit operating exclusively in Costa Rica

Headquarters location: City

San Ramon, Alajuela Province, Costa Rica, Central America

Location(s) of impact

The immediate target area is the higher watershed of the Balsa River, an area encompassing 280 km² ha and approximately 12 to 15 of ASADAS. The potential area for future eco-loans expansion includes most of the San Carlos River Watershed (populace 170,000) with some 200 ASADAS.

Website

<http://www.nectandra.org/>

Facebook URL

<https://www.facebook.com/Nectandra/>

Problem: What problem is this initiative trying to address?

Water quality and quantity are both affected by deforestation. In our targeted area, dairy/beef ranching, cultivation of tropical plants for export, light manufacturing, and other agro-industries are the main causes of deforestation and contamination of freshwater sources.

The ASADAS in the region are diverse in size and strength, but all must provide clean potable water to their members. These associations must find a way to do it wisely and mostly unassisted — an increasingly difficult task in light of the threats to the health of water supplies from environmental and economic pressure. In Costa Rica, water rights belong to the state. By law, spring water on any property is shared (through permits) among users in its vicinity. The property owner is legally obligated to keep contamination from the spring within a 200m radius, a land-use restriction that is often ignored in practice by landowners looking to use every square meter possible for agriculture, ranching, etc. Few ASADAS actually own the land on which the water-supplying springs are located and are at the mercy of the landowner's land ethics. The associations are especially vulnerable to changing land-uses, necessitating them to find ways to purchase and do ecological restoration on those properties. Many more associations would like to do the same but lack the financial resources.

Solution Summary: What is the proposed solution? What do you see as its most promising aspects for creating shared value?

Through ecological loans, Nectandra Institute enables our partner communities to take ownership of the land on which their sources of water reside, to restore the forest on it, and to improve protection for freshwater springs as well as groundwater recharge areas. We are assuring community water resources are protected for generations to come.

In return, as a non-profit organization dedicated to the conservation and regeneration of cloud forest ecosystems, Nectandra Institute creates shared value with our partner communities by facilitating the

conservation and restoration of forests to protect water resources, while simultaneously helping us achieve our mission.

Ultimately, the communities, through their water associations, and Nectandra Institute work as equal partners to accomplish their respective missions and to derive mutual benefits.

Impact: What is the impact of the work to date? Specify both the social and the environmental impact of your work

Since 2007, NI has helped 13 water associations invest US \$1.26 million in land acquisition of 227 hectares of forest to guarantee water resources for approximately 16,000 people. The impact of the loans on the communities was immediate. The ASADAS became owners of permanent assets critical for the health and welfare of the community. Through ownership they can now do what was impossible before — to rid sources of contaminants (e.g. cattle and agrochemicals) within the watershed property, establish and execute optimal management plans, keep out development and regenerate native forests through prudent tree transplantation.

Through Nectandra Institute's educational workshops, members of the communities learn firsthand the basics of good watershed management, get training in water and stream scientific monitoring, and become part of the Ecolans Network. Nectandra Institute carefully cultivated the latter by inaugurating a month-long annual New Culture of Water Celebration. Many social and semi-educational activities are now part of the festivities, which have included an inter-community soccer championship, inter-school academic competitions, and even youth beauty pageants centered on the themes of water and forest conservation. The annual celebration has become a popular venue for the communities to fund raise for future land purchases as well.

Financial sustainability plan: How is this initiative financially supported? How will you ensure its financial sustainability long-term?

The sustainability of the ecolans initiative depends on the financial health of both the lender and borrowers. Both hedge their financial vulnerability by using a combination of a steady income stream and supplemental fundraising.

For the community borrowers, the water users' fees are the primary source of ecolans repayments. Additional loan costs are raised through community-wide auctions and other fund raising activities.

Nectandra Institute relies on a combination of private philanthropic support from several sources: a) tax deductible US donor-designated donations to the Ecolans Capital Fund, b) separate donations for the administration of the ecolans, c) regular principal repayments of ecolans from the water associations, d) funds generated by the institute's sister for-profit organization Nectandra S.A. through entrance fees to its Nectandra Cloud Forest Reserve. Nectandra S.A. also provides support through the use of its facilities to host Nectandra Institute's workshops and conferences. Our ecolans initiative began in 2007 and remains viable today.

There is no stronger bond than a partnership through the shared financial burden toward mutual goals. This concept is clear to all.

Unique value proposition: What makes your initiative innovative? How does your project differ from other organizations working in the same field?

The Ecolans Initiative's uniqueness is (ironically) multifaceted. It springs from the usage of revolving loans (not new), that are interest free (not new), but coupled to eco-interests (perhaps new) that are designed to produce lasting educational and social benefits for a broad segment of rural communities represented by ASADAS.

The initiative's financial effectiveness is associated with the recyclability of the revolving loans. Every dollar repaid is recycled as new ecolans, not once, not twice, but as many times as inflation allows. (Between 2010-2017, the Costa Rican inflation rate has been $\leq 5\%$). In each loan cycle, a large proportion of each dollar generates natural capital (land + environmental services) for the borrowers, which then morphs back into financial capital (future loan funds) for the lender. The rapid generation of alternating natural and financial capital amplifies the shared values immeasurably.

The land purchases totaling \$1.26 million USD and the additional cumulative 64000 people-hours of sweat equity paid as eco-interest represent an enormous cost to the cash-strapped communities. Yet, their repayments have been 100% and on time, their participation in Nectandra Institute's educational programs continues, and the enthusiasm for the ecolans concept has not waned — a testament to the communities' acceptance and appreciation for the values received from the loans and associated programs.

Other important shared values are not easily quantifiable and do not show up on balance sheets. For example, community leaders are gradually discovering that the activities organized as part of their eco-interest payments frequently involved family volunteers of all ages, thus providing valuable venues to instill lessons on social responsibilities and transfer cross-generational knowledge and attitudes. Another example is the increasing networking among ASADAS triggered by the loan program. Adjacent ASADAS, previously separated by district boundaries, now realize they share the same watershed and are immensely dependent on each other for clean water.

Last but not least, the ASADAS now see the advantages of networking and collaboration. Nectandra Institute not only encourages this development but is also assisting with the formation of a federation of ASADAS, to initiate ecolans. The ultimate goal is to clone the ecolans concept to other regions of the country while remaining a small, but agile organization.

Founding story: Share a story about the "Aha!" moment that sparked the beginning of this initiative.

During the first five formative years of the Nectandra Institute, it became clear that lasting cloud forest stewardship could not be accomplished without the involvement of our Costa Rican neighbors. In searching for a mechanism to recruit them, our founders by chance met the president of a local ASADA, who casually mentioned that his community had just been forced to abandon a spring that had been contaminated by the land owner for one located 16 km further. Community volunteers manually dug and piped the 16 km long trench. The ASADA president lamented the trouble and the expense of the move and wished his community could find a way to prevent another occurrence by buying the property on which the new spring was located. Aha! Nectandra Institute needed local partners, who better than the community representative standing in front of us, asking for help after a painful experience. Within a few short weeks, we presented the eco-loans concept to the ASADA general assembly, and offered to make the loan free of interest. Our offer was accepted: the ASADA became the proud owner of the property, and also the first in a series of loyal partners.

Where did you hear about the Nestlé Creating Shared Value Prize?

- From AVINA Foundation.