

## The Rufford Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to [jane@rufford.org](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
Your name	Clay Plager-Unger
Project title	Dry Tropical Forest Revegetation and Bioregional Education Project
RSG reference	1116-C
Reporting period	June 27th, 2017 - June 26th, 2018
Amount of grant	£15,000
Your email address	<a href="mailto:planetdrumecuador@yahoo.com">planetdrumecuador@yahoo.com</a>
Date of this report	August 10th, 2018

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
<b>Main Greenhouse:</b> Improve and expand greenhouse infrastructure at the Catholic University (home of the original Planet Drum greenhouse since 2005.)				The main greenhouse has been significantly expanded and improved to increase production capacity by 300%. Two new elevated seedbeds were added, space was cleared and prepared to accommodate up to 15,000 saplings, a new welcome sign, entrance, benches, and fences were also constructed.
<b>Main Greenhouse:</b> Produce 5,000 saplings representing 40 different native species				7,750 saplings representing 42 different native species, including 16 forest and 26 fruit producing species, were grown at the main greenhouse.
<b>Main Greenhouse:</b> Distribute and plant trees with regional communities.				3,100 trees were distributed in a collaboration between the National Electric Company and Planet Drum's pilot program "El Árbol Eléctrico" (Electric Tree). The trees were planted with 1,000 families in 40 regional communities. After six months, there was an average survival rate of 75%. Additionally, Planet Drum distributed 1,250 trees to ten neighbourhoods in and around Bahía de Caráquez.
<b>New Greenhouses:</b> Improve and expand new greenhouse facilities in Bellavista, San Vicente, and in Los Algarrobos.				Greenhouses in the Bellavista community and Los Algarrobos school were successfully implemented. Instead of building a greenhouse in San Vicente, one was built in the Astillero community near Bahía de Caráquez. This change was made due to wavering support from the San Vicente community/local government and a high level of interest and support in the Astillero community. An additional benefit to the Astillero

				location is its close proximity to the daily Bahía food market, where organic waste was collected for compost production. More than 2,500 lb of finished compost were produced and an additional estimated 1,500 lb is in the process of decomposing.
<b>New Greenhouses:</b> Produce 1,000 (Bellavista), 6,000 (San Vicente) and 1,000 trees (Los Algarrobos)				It was only possible to produce 500 trees in Bellavista, 4,675 trees at Astillero (instead of San Vicente), and 750 trees at the Los Algarrobos school. Although interest and participation from locals at each location was high, time became a limiting factor in directing and coordinating activities and it was not possible to achieve the tree production goals that were hoped for at the greenhouses.
<b>New Greenhouses:</b> Distribute and plant trees with local communities.				Trees from Bellavista were donated to neighbourhood residents for planting. Trees from Astillero were distributed to landowners from Bahía and the surrounding region. Trees from Los Algarrobos were given to students to take home and plant with their parents and families.
<b>Revegetation:</b> Plant 2,000 trees at 5 sites.				2,575 trees were planted at 18 revegetation sites throughout the Manabí province with participation from local communities and schools.
<b>Revegetation:</b> Monitor and maintain trees.				After 6 months of monitoring and maintaining the trees, there is an average survival rate of 70%.
<b>Bioregional Education:</b> 1,000 booklets for students.				750 booklets covering five different topics (Bioregional Map Making, Compost Production, Seed Collection, Seed Germination, and Tree Planting) were designed, printed, and distributed to regional school students.
<b>Bioregional Education:</b> 30 classes at 4 or more schools.				21 classes were held at three different schools: Los Algarrobos, Catholic University, and Vicente Hurtado. After participating in the classes, students were evaluated for

				retention of the new information and there was an average grade of 88%. Planet Drum worked with fewer schools than expected due to complications related to administrative disruptions in the regional school district (more details in section 2 "unforeseen difficulties").
<b>Bioregional Education:</b> 400 handouts for community residents.				450 "Cycle of Fruit" handouts were distributed during bioregional education workshops. The handout explains how native fruits can be used for seed collection and compost production to grow and plant more trees.
<b>Bioregional Education:</b> 16 workshops at 4 or more communities.				26 Bioregional workshops were conducted in 16 regional communities (Bahía, Astillero, Los Arguellos, Bellavista, María Auxiliadora, Leonidas Plaza, Fanca, Chirije, Canoa, San Vicente, Menos Pensado, Ricaurte, Rio Muchacho, Puerto Velo, Crucita, and Calceta) with more than 450 national and international participants.

**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

The disarray of the local school district due to continued complications in the aftermath of the 2016 earthquake made it difficult to coordinate programming with many of the local schools. In Bahía, all four of the most prominent schools (El Nocturno, Miguel Valverde, Montúfar, and Eloy Alfaro) were destroyed April 16th, 2016 by a 7.8 Richter scale earthquake. Miguel Valverde, Montúfar, and Eloy Alfaro schools were participating in Planet Drum projects before the earthquake. Two years after the earthquake none of the schools have been rebuilt. Miguel Valverde and Montúfar schools no longer exist; their students were absorbed into Eloy Alfaro School. All the students still attend classes in provisional classrooms at temporary locations.

Despite the difficulties related to the restructuring of local schools, Planet Drum collaborated with three schools (Los Algarrobos, Universidad Catolica, and Vicente Hurtado) and presented new bioregional education materials to supplement their regular class routine. During the workshops students engaged in fun and educational environmental activities. The collaboration produced such a positive reception, that a much larger and more ambitious educational initiative, that will engage more schools, is now under consideration by the school district.

### 3. Briefly describe the three most important outcomes of your project.

The three most important outcomes are bioregional education, habitat restoration, and native fruit tree propagation.

#### Bioregional education:

Quality education in Manabí, Ecuador is scarce, especially in regard to the environment. Many of the pressing ecological issues that threaten the livelihoods of the local population are poorly understood, rarely addressed, and hardly ever acted upon. One of Planet Drum's central objectives is to disseminate bioregional knowledge which provides children and adults not only with information about the vital importance of local ecosystems and their extremely precarious condition, but also with the skills to mitigate the damages caused by destructive human activities. Local ecosystems have been exploited to the brink of collapse. Forests are almost completely destroyed, soil has been depleted, and water systems contaminated. The abundance of nature, upon which subsistence populations depend, has been nearly exhausted. Without a change in human activities, the quality of life and the ability of the population to sustain itself is increasingly vulnerable. By reaching out to locals and educating them, Planet Drum provides the knowledge and skills to create positive ecological change.

Planet Drum engages school children in bioregional educational activities and endeavours to include the local adult population as well. During the past 19 years, thousands of school children have participated in the project. Field Foreman Orlando comments that children frequently stop him in the street to comment excitedly about how big the "Planet Drum tree" they planted has grown. In many instances, he doesn't remember exactly who they are or when we worked with them, but they remember him. Children also ask when they will have a chance to work with us again. The adults from the communities proudly recount how well their trees are growing, showing off pictures on their cell phones, and requesting additional trees to plant.

#### Habitat restoration:

The dry tropical forest is one of the most damaged, threatened, and fragile ecosystems on the planet. Its vast biodiversity is on the verge of disappearing before it has even been properly studied and documented by the scientific and academic communities. Since less than 1% of the original forest ecosystem remains at present, the only way to preserve it is through active habitat maintenance and restoration. Planet Drum has developed a model for dry tropical forest ecosystem recovery through native tree propagation and site revegetation implementation. Without this work, native species, with their often unknown uses and potential benefits, could be lost forever.

Planet Drum enthusiastically shares the innovative methods it uses with local, national, and international ecological organisations. Inspired by the habitat restoration work, other organisations based in the region have begun similar

projects. Global Student Embassy opened projects in Bahia after a board member volunteered with Planet Drum in 2007. Since then, they planted thousands of trees propagated by Planet Drum in the Cordillera del Balsamo, and then went on to develop their own greenhouses to produce trees which they plant based on the revegetation models that Planet Drum developed.

Erosion control is also an important outcome of habitat restoration. The hillsides least affected by landslides during the 2016 earthquake were in the places where Planet Drum has planted the most trees. The Bellavista community, where Planet Drum planted trees for 15 years, was one of the least impacted hillside neighbourhoods and none of the residents were evacuated. In comparison, portions of communities, which had fewer trees planted, were evacuated due to landslide risk. It is highly probable that the strong root systems of the trees planted in Bellavista helped minimise the earthquake damage on those steep, erosion-prone hillsides. When residents see first-hand the benefits of tree planting for erosion control, they are inspired to implement similar initiatives.

Planet Drum has also begun collecting and propagating traditional native medicinal plants, many of which have fallen out of favour with modern medicine and pharmacies. These indigenous plants represent an important part of the local ecosystem and also the traditional cultures of the dry tropical forest. Often times only a few samples remain and must be sought out from remote, rural areas, where only one elderly person can provide identification and remember the plant's importance and uses; examples include Hoja de Espanto, Valeriana Grass, Insulina, Oreganito, and Albaquita.

#### Native fruit tree propagation:

Native fruit tree production at the greenhouse has expanded dramatically in recent years due to its popularity with local residents. Originally Planet Drum focused almost exclusively on forest species for erosion control and habitat restoration. The native fruit trees were introduced beginning in 2010 partly as an experiment to understand how to propagate them and partly to educate and get local adults involved with bioregional revegetation. The trees proved to be very popular. Since then Planet Drum has responded directly to the interests of locals by propagating native fruit trees, many that have been specifically requested, to supply the growing demand for them. In 2012, the National Electric Company approached Planet Drum to collaborate on native fruit tree distribution (details in section 4, "involvement of local communities").

This focus connects the social and environmental aspects of the project in one tangible activity with a significant result. When someone plants a native fruit tree, the impact of that action has a myriad of positive effects. In addition to the ecological benefits, such as flora and fauna habitat creation, carbon sequestering, soil stability, and oxygen production, there are social benefits as well. With the act of planting a tree, each person takes a step towards improving their environment, commits to caring for the tree, and begins a history that they can share with others. They care for their tree, watch it grow, and eventually they will literally eat the fruits of their

labour. Friends and family can share in the experience and become a part of the narrative. And additionally, many of the native fruits are marketable and can provide an ecologically sustainable source of income. Thus a seemingly minor action can have an enormous impact.

Planet Drum has also worked to preserve traditional varieties of fruit species, such as Marañon, Pumarosa, Nispero, Zapote, Mamey Miparo, and Cauge that aren't necessarily the most marketable varieties, but represent an important part of the rich biodiversity of the regional forest ecosystem. As market forces push farmers to grow increasingly limited varieties of fruits, these lesser known varieties are at risk of disappearing entirely.

**4. Briefly describe the involvement of local communities and how they have benefited from the project (if relevant).**

Planet Drum's grassroots approach to ecological restoration ensures that local communities are the primary drivers and beneficiaries of the project's impacts. Through their participation, residents benefit from improved environmental conditions (more trees, increased soil stability, and improved ecological habitats), fruit harvests from native trees, and bioregional knowledge which aids them in becoming more involved with their natural surroundings.

Planet Drum has worked closely with the National Electric Company since 2012 and has planted approximately 20,000 trees with 7,000 families (benefiting over 30,000 people). When regional rural communities receive new electrical infrastructure, they also receive native fruit producing trees to plant on their properties. For each \$500 of new electrical infrastructure, the regional agency of the National Electric Company is contractually obligated to distribute and plant Planet Drum trees with community members. The work is documented and trees are monitored to maximize survival rates.

Community and school-based greenhouse operations bring tree production directly to the people who need it the most. Trees grown at Bellavista, Astillero, and Los Algarrobos Schools were planted in the immediate surroundings with assistance from the people who live there. In the process, Planet Drum can inform locals about the importance of ecological conservation and restoration.

Local communities benefit by stabilizing erosion-prone hillsides, planting fruit-producing trees, and restoring native habitat in the areas in which they live.

Bioregional education classes at local schools teach the importance of regional ecosystems and how to conserve and restore them. Traditional natural science classes at schools don't teach about local flora and fauna nor the threats to local ecosystems. Planet Drum's education work focuses on the issues that are directly related to students' (and their families') daily routines and provides practical methods for reversing ecological damage. Students, teachers, and school administrators are all involved in the work.

Planet Drum is diligent in its effort to reach as many different people and communities as possible. Dozens of local communities, thousands of families and tens of thousands of individuals throughout the region have been direct beneficiaries of tree donation campaigns, revegetation workshops and bioregional education activities conducted by Planet Drum during the past year. In nearly every instance, the interest, participation, and collaboration develops into a long-term relationship where contact with Planet Drum is maintained well into the future.

### **5. Are there any plans to continue this work?**

Planet Drum plans to use the past 19 years' experience as a foundation to continue to expand and restore more dry tropical forest and to educate both locals and international visitors about the importance of ecological conservation. Locals frequently seek out assistance in revegetation and reforestation initiatives, and Planet Drum has established itself as a hub for international volunteers who want to learn about local ecology and work restoring the biosphere.

There are presently more than 6,000 saplings growing at the main greenhouse and the three satellite greenhouses which will be big enough for planting soon. In the next 2-3 months, Planet Drum and the National Electric Company will distribute 4,000 more trees to 47 new communities.

On July 24th Planet Drum and the National Electric Company hosted a revegetation conference with local community members and students from the University of Oregon (USA) to showcase the work that has been accomplished and to continue planting more native trees!

The new educational materials that were developed during the past year are the basis for a teaching proposal that is being considered by the county school system, and which could reach up to 17,912 students in the school district.

Planet Drum's work in Ecuador has always depended on volunteer participation. The positive reviews on international websites for volunteers such as Workaway (100% positive reviews) indicate the popularity of the programme and generate additional volunteers. International volunteers stay for an average of 4 weeks to participate in the work. In the past year, over 20 international volunteers from 10 different countries visited. More volunteers are already confirmed for the coming months, including interns who will be spending 4-5 months working for the project.

### **6. How do you plan to share the results of your work with others?**

An important aspect of the project is the creation of working models for dry tropical forest restoration and sharing them with locals and foreigners alike.

Visitors regularly see first-hand the results of the project at Planet Drum revegetation sites and the greenhouses. When people see recovered landscapes and/or harvests from fruit-producing trees, they are often inspired to become involved in bioregional activities.

Project results are published on the new website and blog: <http://planetdrumecuador.weebly.com/> and on the Planet Drum Foundation Facebook page: Facebook "Planet Drum Foundation"

Planet Drum Foundation in San Francisco publishes a semi-annual newsletter, PULSE, which also covers project developments in Ecuador (700 copies per printing).

The regional newspaper El Diario Manabita (<http://www.eldiario.ec/>), with a daily distribution of approximately 16,000 copies, occasionally features Planet Drum's projects and activities. Most recently, on July 21st 2018 the paper published an article showing a community project near Bahía in the Los Arguellos neighbourhood, where Planet Drum constructed two large elevated seedbeds and planted trees with families that were relocated after the 2016 earthquake.

Interviews that feature Planet Drum's projects on their programmes are conducted on a regular basis by local radio stations, which reach a regional population of approximately 30,000 residents.

Cordillera del Bálsamo is increasingly promoting its projects and nature reserves. On July 26<sup>th</sup> 2018, Planet Drum participated in an Eco-Fair for three regional biological corridors. The Eco-Fair took place in Portoviejo, the capital of Manabí, and hundreds of visitors partook in the events. Many visitors were intrigued by the exhibition of Planet Drum's native trees in repurposed plastic bottles, and several of them requested contact information in order to visit the greenhouse in the future.

Planet Drum also works with national and international universities to showcase the results of the project as a model for ecological restoration that can be adapted for use in other threatened environments world-wide.

**7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?**

As anticipated, The Rufford Foundation grant funded the project for 12 months— from June 27<sup>th</sup>, 2017 through June 26<sup>th</sup>, 2018. The funds were integral to the successful operation and expansion of the project during that time.

**8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.**

Item	Budgeted Amount £	Actual Amount £	Difference	Comments
<b>Personnel</b>				
Program Director	2,320	2,320	0	
Field Foreman	1,160	1,160	0	
Bioregional Teacher(s)	840	840	0	
Revegetation Labourer(s)	480	480	0	
<b>Greenhouse</b>				
Infrastructure Materials	1,880	1,971	91	Improving greenhouse operations at the Catholic University, Astillero community, Bellavista community, and Los Algarrobos school were slightly more costly than originally planned. (Materials included bamboo, thatch, shade mesh, plastic ground cover, paint, and signs, among others)
Transportation	1,020	1,089	69	Transportation went over-budget due to the numerous trips that were required to the various greenhouse locations.
Operational Supplies	860	921	61	More operational supplies were needed than expected to ensure tree production at the greenhouses. Supplies include: 12,000 recycled plastic bottles, rice hulls and soil ingredients, such as animal manure and organic waste, as well as sacks, and water.
Tools	848	848	0	
<b>Revegetation</b>				
Site Transportation	840	896	56	More visits to the revegetation sites were required than expected.
Field Supplies	768	816	48	More materials for revegetation sites such as organic fertilizers, bamboo stakes, signs, paint, and buckets were needed than were budgeted for.
Site Watering Supplies	716	716	0	

Tools	520	520	0	
<b>Bioregional Education</b>				
School Programs	632	411	- 221	Fewer school programs were conducted than had been hoped for.
Workshop Transportation	592	592		
Community Workshops	536	536		
Supplies	00	400		
Booklet Publishing	416	312	-104	Fewer copies of booklets were published than expected.
Handout Publishing	172	172		
<b>Total</b>	<b>15,000</b>	<b>15,000</b>	<b>0</b>	

### 9. Looking ahead, what do you feel are the important next steps?

On the local level, the goal is to continue to increase the impact of the revegetation and education initiatives. Planet Drum's goal is to operate with more schools in order to reach more students. Interest in bioregional education service-learning workshops has reached administrative levels within the school district. An important next step will be to coordinate with the Sucre School District to organize and implement a district-wide bioregional education program.

Planet Drum is also collaborating with Bahía de Caráquez city officials to design a project proposal which would be a massive expansion of Planet Drum's original revegetation site (1999) El Bosque en Medio de las Ruinas (The Forest amidst the Ruins), which Planet Drum has maintained as a model urban wild park with examples of habitat restoration and hiking trails.

Other connected hillside communities in the area were evacuated after the April 2016 earthquake and have been declared as high risk zones that face immediate erosion threats and are prohibited from building development. Planet Drum is drafting a proposal to revegetate the entire area with native trees and implement a trail system so it can become a large urban park. Approximately 8 ha of hillsides surrounding the urban centre of Bahía de Caráquez have been prioritised for forest restoration and Planet Drum is currently the primary ecological project advisor.

Planet Drum needs to continue strengthening alliances with volunteers and interns, national and international organisations, universities, and foundations, to maintain interest, collaboration, and financial support.

Planet Drum recently completed its fourth study abroad programme with the University of Oregon, "Sustainable Development in Latin America," and planning for next year's programme will begin soon. Planet Drum is actively seeking partnerships with new universities and educational institutions to expand this programme.



Planet Drum is working closely with the Cordillera del Bálsamo promoting conservation, restoration, and ecological tourism. Cordillera del Bálsamo is in the process of launching new restoration projects and tourism packages and Planet Drum continues to be an active member in this protected biological corridor.

**10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?**

The Rufford Foundation logo is displayed prominently in the "About" section of the new project website, which was launched in June, 2016 and continues to be updated with regular blog posts:

<http://planetdrumecuador.weebly.com/about.html>

The logo is also displayed on the original "Eco Ecuador" page of the Planet Drum Foundation website:

[http://www.planetdrum.org/eco\\_ecuador.htm](http://www.planetdrum.org/eco_ecuador.htm)

The Rufford Foundation logo is featured prominently on all of the Planet Drum bioregional education booklets and handouts. 750 educational booklets were designed, printed, and distributed to regional school students. 450 "Cycle of Fruit" handouts were distributed during bioregional education workshops.

In the past year, these materials have been presented to numerous government officials, educators, and school administrators and are being considered in proposals that would reach thousands of new students and project participants.

Credit is given to The Rufford Foundation for supporting the project in conversations, presentations, and workshops with national and international volunteers, students, and visitors. In April, 2018 Clay Plager-Unger travelled to San Francisco, CA, USA where he met with representative from other ecologically oriented non-government organisations (Literacy for Environmental Justice and Global Exchange) and university professors (University of California, Berkeley and San Francisco State University) to discuss program development and during those discussions, Rufford Foundation was credited as having funding the Planet Drum projects since 2011.

**11. Please provide a full list of all the members of your team and briefly what was their role in the project.**

**Clay Plager-Unger** has been the Planet Drum Foundation Ecuador Program Director since 2007. He is responsible for overseeing all daily and long-term activities related to the project. He oversees program logistics including program development, community outreach, education initiatives, volunteer and intern recruitment and training, drafting grant proposals and reports, as well as directing the house and office space.

**Orlando Arias** volunteered intermittently for the project between 2005 and 2010. In 2010 he was hired as the Field Foreman and has maintained that position ever since.

Orlando grew up in a rural sector of the Manabí Province (San Isidro) and has an intimate knowledge of regional vegetation, trees, fauna, and medicinal plants. He manages the Planet Drum greenhouses and his local knowledge is vital to the successful propagation of native trees and plants.

**Margarita Avila Napa** has a teaching degree from the Universidad Técnica de Manabí (2015) and has assisted with the bioregional education program development and educational workshops since 2010. She also assists with coordinating international volunteers who work on the project and share a living space at the Planet Drum house and office.

**Anthony Paris** was a project volunteer from October to November 2017. He is a professional ecological consultant from France and in addition to assistance at the greenhouses and participating in community workshops, he helped to draft bioregional education materials related to composting, tree planting, and seed germination. Anthony travelled throughout South America after working with Planet Drum in Ecuador and shared bioregional practices that he learned here with other organizations where he volunteered during his travels.

**Claudia Weiss** was a Community Outreach Intern from December, 2017 through February, 2018. She is an honour student who is studying a Global Pathways Program at the University of Montana and she assisted in developing bioregional education materials and in coordinating educational workshops at regional schools.

**Mikaela Gerkman** (Finland), **Alisa Schättin** (Switzerland), **Kate Gutjahr** (England), and **Colleen Schmitt** (USA) were among the more than 20 volunteers who participated in the projects for more than a month each. They helped coordinate and participated in bioregional education workshops, worked in the greenhouses, and assisted in community outreach. Colleen Schmitt is a high school teacher in Iowa (USA) and her professional experience in education was of great assistance for coordinating the bioregional education program and evaluating local student participation.

Volunteers contributed an estimated 5,000 hours of labour to the project from June 27th, 2017 to June 26th, 2018. Other volunteers:

**Janis Arrojado (USA), Paul Belz (USA), Peter Brastow (USA), William Broomer (USA), Joerg Burkhard (Germany), Michael Gazal (USA), Francois Harivellerie (France), Molly Kauffman (USA), Cynthia Legault (Canada), Laura Lucas Loo (Ecuador), Aya El Megharbel (USA), Nicholas Powell (Spain), Kate Roark (USA).**

## 12. Any other comments?

Planet Drum continues to be an active member and participant in the Cordillera del Bálsamo (a nationally recognised biological corridor that runs from Bahía de Caráquez south along the coast for 40 km). Cordillera del Bálsamo has 10 active members who own nature reserves in the designated region and have all been working diligently since 2008 to develop restoration and ecologically sustainable activities on their properties and in the surrounding areas. Over the years, Planet

Drum has planted and donated thousands of trees in cooperation with most of the Cordillera members.

In October 2017, Planet Drum collaborated with the Bosque Verde Reserve to implement the first project for honey bee protection and management in the region. These pollinators are essential in the propagation of trees and for efficient agriculture. Unfortunately they are threatened by humans who frequently kill them (with chemicals or fire) when they are considered a dangerous nuisance and/or when the hive is destroyed during honey collection using unsustainable harvesting practices. The project is part of a Small Grants Programme and is supported by the United Nations Global Development Fund.

Planet Drum and Bosque Verde have rescued four hives from locations where they were at risk of being exterminated. These four hives are home to approximately 80,000 bees that are pollinating trees and plants in a radius of up to 6 km and are producing sustainably harvested honey. In the next few months four more hives will be installed, and there are plans to implement up to 50 hives at the Bosque Verde Reserve.

The project is a pilot programme to demonstrate the importance of bees and we are already hosting tours to teach others about apiculture practices. In the future, the plan is to help others set up hives throughout the region to produce honey and protect the bees.