



Darwin Initiative: Final Report

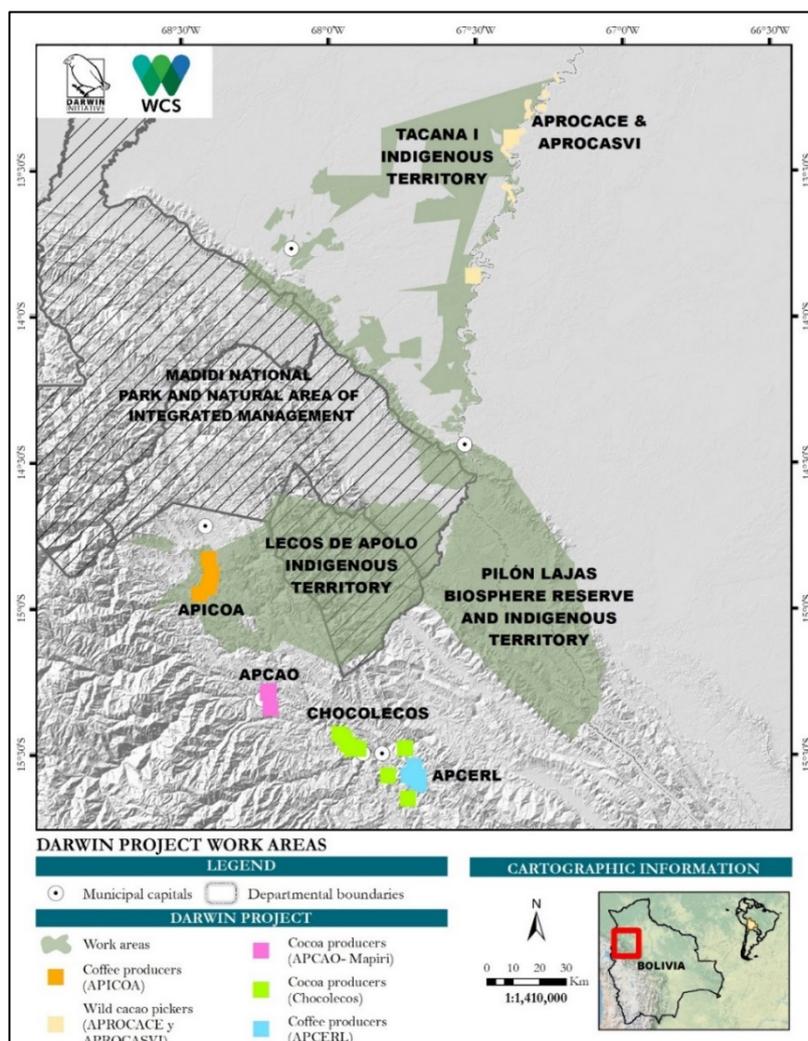
Darwin Project Information

Project reference	24-011
Project title	Wildlife-friendly agroforestry and sustainable forest management in Bolivian indigenous territories
Country(ies)	Bolivia
Lead organisation	WILDLIFE CONSERVATION SOCIETY
Partner institution(s)	TEKOKAVI FOUNDATION
Darwin grant value	£ 398,872
Start/end dates of project	July 2017, March 2021
Project leader's name	Oscar Loayza Cossio
Project website/blog/social media	https://bolivia.wcs.org/ https://origentienda.com/
Report author(s) and date	Ximena Sandy, Oscar Loayza, Lilian Painter, Jaime Ayra, June 2021

1 Project Summary

The project was executed in an area located in the north of the department of La Paz and southeast of the department of Beni in Bolivia. It covered the T'simane-Mosetene, Leco of Apolo and Tacana indigenous territories in Bolivia, with over one million hectares bordering and/or overlapping the Madidi and Pilon Lajas national protected areas, within the municipalities of Apolo, Guanay and Teoponte (see Map 1 below).

Map 1 Darwin project work areas



This region is globally important for its high avian diversity and stronghold populations of vulnerable wide-ranging species like jaguar and spectacled bear. Key threats to biodiversity are forest loss and degradation from third parties engaging in illegal agricultural clearing and settlements, timber extraction and gold mining. Indigenous communities also extract valuable timber and clear forestland for agricultural use and cattle pastures. This perpetuates a cycle of poverty since forest loss/degradation negatively impacts community livelihoods, which depend on forest resources, and renders them particularly vulnerable to climate change.

Indigenous communities in Northern La Paz benefit from access to collective lands. Our project supports their efforts to maintain control over these areas, ultimately benefiting both biodiversity, by helping to address the abovementioned threats, and local livelihoods. We do so by coupling improvements in control and vigilance of illegal encroachments with investments to support sustainable agroforestry.

We are supporting a decentralized and cost-effective system for protection of indigenous lands, through improved support for sustainable agroforestry and with established communication protocols, event/threats mapping and developed capacity for rapid collective response against encroachments. Control and vigilance come with high transport costs because communities are widely dispersed. Cacao and coffee-based agroforestry, identified as strategic within indigenous land use plans, are important livelihood alternatives for indigenous communities. Given that the plantations and natural groves are widely distributed across indigenous lands, active involvement of small-scale local producer organizations in control and surveillance activities can greatly reduce the high transportation costs of protection.

Indigenous peoples have a very close relationship with the forest and the territory. It is there where they find their livelihoods through the use of resources, hunting and fishing. The development of additional sustainable economic activities such as coffee and cocoa production

under agroforestry systems, allow them to improve their territorial protection strategy and their income so the families can have access to other goods and services, mainly related to health and education and ensures that livelihoods can be available for future generations.

Indigenous territories are constantly facing threats that put their livelihoods at risk. By building technical capacity in sustainable agroforestry, we are able to improve productivity and access to niche markets, generating much needed income, while strengthening their capacity to exert territorial control to protect forests and biodiversity. Finally, marketing strategies, commercial alliances, and awareness building among urban cacao and coffee consumers will allow producers to visualize their role as conservation allies.

Cacao and coffee agroforestry, identified as strategic within indigenous land use plans, are important for indigenous communities. Small-scale producer organizations play an important role in strengthening territorial control and biodiversity protection. Building their technical capacity in sustainable agroforestry would improve productivity and access to niche markets, generating much needed income, while also increasing their incentive to actively protect forests and biodiversity.

2 Project Partnerships

The partner organizations involved worked together from the beginning to the end of the project:

WCS was the lead organization and was involved in both direct implementation through its staff; as well as coordination with the Teko Kavii Foundation, indigenous organizations and the productive associations.

Teko Kavi Foundation, was responsible for designing and implementing communication campaigns with the consumer public to awaken interest in responsible consumption and to value the efforts of indigenous people in the sustainable management of their resources. They also collaborated in the design of audiovisual and printed materials.

The indigenous and productive organizations that participated in the project were: Association of Ecological Coffee Producers of Larecaja (APCERL), Association of Organic Cacao Producers of Mapiro (APCAO MAPIRO), Association of Indigenous Leco Producers of Cacao (CHOCOLECOS); the coffee producers of Apolo in the Lecos Apolo indigenous land (APICOA); and the wild cacao producers of Carmen del Emero, in the Tacana indigenous land (APROCACE). Additionally, WCS implemented this project through agreements with three territorial indigenous organizations, the Lecos Apolo Indigenous Organization (CIPLA), the Tacana People Indigenous Council (CIPTA) and the T'simane Mosekene Regional Council (CRTM).

The indigenous organizations were involved mainly in the activities of result 1. The technical teams of the protected areas, especially Pilon Lajas, were also involved in this result. The productive associations were involved mainly in outputs 2 and 3, participating actively in production and post-harvest activities.

For the writing of the final report, telephone conversations were held to discuss the results of the project with the leaders of the indigenous and productive organizations, in addition to the technical field reports that were delivered monthly to the project coordination. Ideally, we would have liked to have a closing workshop for the project, but restrictions due to COVID-19 have prevented us from meeting physically.

The productive organizations responded to the challenges in terms of complying with protocols to improve practices from seedling production, soil management, implementation and improvement of plots under agroforestry systems, as well as compliance with post-harvest protocols. In both coffee and cocoa, the organizations have achieved quality profiles that are enabling them to consolidate special markets.

The long-term sustainability of the project is supported by the consolidation of the company Origen-Chomateo SRL for the production of value-added products (roasted coffee, chocolate, bars, etc.); as an export channel and as a space for meeting with consumers. The productive organizations are involved in Origen-Chomateo, as owners of the company, but also as suppliers of inputs for the production of value-added products (<https://origentienda.com/>).

The productive organizations are linked to their grassroots organizations and their contribution for the monitoring and control of the territory is part of their contribution to the common good.

All the activities planned in the project have been framed within the comprehensive territorial management processes led by the indigenous grassroots organizations. The productive initiatives promoted by the project have been prioritized in the life plans developed by these grassroots organizations. The actions to strengthen the protection of the territory have also been framed in the comprehensive monitoring programs that the grassroots organizations have. The grassroots organizations addressed the challenges of the project in a proactive and participatory manner, supporting the productive enterprises of their communities as they strengthen their territorial management.

The information generated by the territorial control and monitoring was shared with the park guards and protected area monitoring staff for their consideration and, when required, to take joint actions, such as inspections, patrols or, even follow, administrative processes in areas of overlap between the indigenous lands and protected areas.

3 Project Achievements

Outputs

Output 1: Producer organizations and their representative territorial organizations have developed and implemented systems for control and vigilance of their territorial lands.

We provided assistance and training, as well as evaluated the applicability tools, protocols, and the use of Android apps to report encroachments over more than 636,406 hectares of indigenous lands (Tacana and Lecos of Apolo TCOs). We also identified vulnerable areas in the three indigenous territories, over an area of 1,036,406 hectares, which serve as the geographic reference for monitoring illegal activities and establishing control points in accordance with each community's Life Plans (Lecos Apolo, Tacana and Pilon Lajas). During this process, there has been coordination between these indigenous territorial organizations and the protected areas of Madidi and Pilon Lajas, to exchange information on the results of territorial monitoring and control and, when appropriate, take joint actions to counteract threats that arise and that affect both, the indigenous territory and a protected area.

Finally, with additional funds WCS supported the CRTM indigenous organization to update their Life Plan for the Pilon Lajas indigenous territory and in this process the information on the areas under highest risk of encroachment and illegal activities was used.

Together with the Tacana and Leco organizations we explored different technological alternatives to help improve their control and vigilance systems, specifically: 1) To increase access to key information, such as maps, limits, legal documents of their territories, and 2) Increase reporting and action in response to illegal encroachments.

The first part has been very useful and widely used by the local leaders, while the second component faced difficulties with the initial design that was too heavy to be uploaded to the basic systems of the local mobile phones. However, this was resolved by the use of [Avenza Maps®](#) app. This lighter alternative offers offline maps, GPS location and digital and georeferenced maps in mobile devices. It also uses the device's built-in GPS when located out of range of a network or internet connection, and enables attachment of georeferenced photos. The mapping app was complemented with the [KovoCollect](#) (KovoToolbox) app to allow registration of encroachment events through the use of a specifically designed reporting form. All information reported using both these apps is now centralized in a control panel accessed by each grassroots organization (CIPTA and CIPLA) and stored in a [server](#) to be able to retrieve complaints and store evidence of the associated encroachments ([Annex 1. App and Kovo Collect manuals](#)).

Indicator 1.1 *By the end of Year 1, areas vulnerable to illegal encroachment in three indigenous territories are identified and mapped in a participatory process (Baseline = no such participatory mapping has yet been done in these areas).*

Based on the information generated on areas vulnerable to illegal encroachment within the three indigenous territories: Tacana, Lecos Apolo and T'simane Mosekene, we produced vulnerability maps for each indigenous land and socialized them with the communities, including representatives from the producer organizations.

Indicator 1.2 *By the end of Year 1, three training workshops are held between producer organizations and their territorial organizations on formal documentation of infractions, with 45 participants overall. (Baseline: no such trainings are currently held with these groups)*

CIPTA and CIPLA leadership and local technicians, received training on the use of the app in their mobile phones and have tested the tool in the field to report illegal activities inside their territories. We conducted at least four training sessions with the monitoring technicians from the indigenous organizations and grassroots organizations' leaders on the response process that needs to be followed when an encroachment is reported, taking advantage of opportunities such as community meetings. In total 10 technical staff of the indigenous territorial organizations have received training. In addition, training sessions were conducted in six Tacana communities located along the road between San Buenaventura and Ixiamas. The sessions had an average participation of 20 people in each community, adding up to an additional 120 participants ([Annex 2: Report on training sessions](#)).

After an initial year of testing in the Tacana territory and six months in the Lecos Apolo territory, we adjusted and corrected the app, and presented it to potential additional users, including the Marka Cololo Copacabana Antaquilla (MCCA) and CRTM

Indicator 1.3 *By the end of Year 2, a digital platform (eg. SMART) and clear protocols for coordination of actions against encroachments in three indigenous lands are under implementation (Baseline = such a platform and protocols do not currently exist).*

During the third year of the project, we have focused on training, testing and adjusting the territorial control digital app through feedback from initial use by both the Tacana and Lecos indigenous people. An evaluation on the use of the app was carried out with CIPTA's and CIPLA's board of directors, a coordination protocol was established for the use of the control and monitoring devices under the leadership of each community chief "Corregidor" in the case of CIPTA and "Cacique" in the case of CIPLA ([Annex 3: App and KoBo presentations](#)).

As a result of this process, during the last year of the project, quarterly reports of territorial monitoring and control have been generated that are submitted to the indigenous leadership for consideration and, in the case of reports that are produced in areas of overlap with protected areas, also they are put into consideration by the monitoring technicians and Park Rangers of the same. The last two quarterly reports are attached, as examples of the application of the territorial monitoring and control systems of CIPLA and CIPTA. Due to the changes in the CIPLA and CIPTA directories, as well as the sanitary limitations due to the pandemic, the monitoring and strengthening of capacities for the use of the territorial monitoring and control system has been assumed by the organizations' own indigenous monitoring technicians, with remote support from the WCS team.

Based on the experience with CIPLA and CIPTA, the development of protocols for CRTM and the MCCA has also been promoted, however, it is still necessary to strengthen capacities in these organizations for their practical application ([Annex 4 KoBo Collect reports of CIPLA and CIPTA](#)).

Output 2. Pre-harvest management of agroforestry plots and native cacao forest groves is improved, and local capacity built for sustainable agroforestry that is wildlife friendly

The project focused on improving and implementing agroforestry systems in the coffee and cocoa chains with the productive associations involved in the project. The field technicians carried out the training processes and promoted meetings between producers through field schools.

The following actions were carried out in the existing coffee plots: plant renewal using seedlings produced with certified seed of rust-resistant varieties; soil management, based on the analysis of samples and preparation of bio-inputs, sanitary management, pruning, and shade diversification. In the cocoa plots, we worked mainly on the diversification of shade varieties and other companion species, renovation of dead or unproductive trees with seedlings produced in the nursery, as well as soil and sanitary management of the plots.

The installation of new plots under agroforestry systems was carried out in fallow areas with the Apolo coffee and cocoa organizations. The establishment of new plots involved the production of strong and healthy seedlings, the design of the agroforestry system that included the planting system of the main species (coffee and cocoa) and the companion species, pitting and transplanting. Once the agroforestry system had been implemented, management activities included formation and sanitary pruning, biofertilization and weeding.

Cocoa producers use native cocoa varieties, thus promoting the valuation and conservation of native varieties that have proven to have a very special organoleptic profile and are recognized in the fine and aromatic cocoa market. In addition, these varieties are resistant to diseases such as monilia, but have low productivity, an aspect that has improved with the application of good management practices. For the renovation and implementation of plots under agroforestry systems, the organizations have produced a total of 176,500 seedlings (154,500 coffee and 22,000 cacao).

A total of 38 coffee producers are now certified as organic, 13 of them are also certified as Bird Friendly. The organic certification is renewed annually and Bird Friendly every three years (2017-2020), but due to the complications of COVID-19, the Smithsonian's bird-friendly certification commission established that the certificates will have an additional year of validity. Hence, this July 2021, 20 producers will be ready to be certified as Bird Friendly, 13 already certified and 7 additional producers ([Annex 5. Organic and bird friendly certification](#)). These certifications are important because they set sustainable production guidelines and requirements and have access to a market with better prices. The Bird Friendly certification promoted by The Smithsonian's National Zoo and Conservation Biology Institute's Migratory Bird Centre encourages producers to diversify their shade and canopy height to create favourable habitat for resident and migratory birds.

Local technicians encouraged farmers to value the importance of biodiversity conservation. APCERL has a database with 241 recorded birds, including 17 migrants and one endangered and endemic species, *Phibalura boliviana* ([Annex 6. Bird registry database](#)). As a way to promote the importance of diversity of birds in this region, a book with the birds of the coffee plantations of Teoponte was developed with photographs taken on site ([Annex 7. Birds of the coffee plantations of Teoponte](#)).

The achievement of the outputs indicators is described below.

Indicator 2.1 *By the end of Year 2, 283 hectares of existing agroforestry plots and native groves are restored via the implementation of agroforestry systems (pruning, soil management, diversifying canopy shade trees) (Baseline = no restoration work has been done so far).*

According to the database of the coffee and cocoa organizations with which the project worked, the area under restoration/renovation management of agroforestry plots is: **404** hectares, which includes 177 hectares of forest that is part of the coffee plantation ecosystem (142% of the goal).

Indicator 2.2 *By end of Year 3, 200 new hectares of agroforestry systems are established (100 by Year 2) (Baseline = 0).*

At the end of the project, **176.8 hectares** of agroforestry systems have been established, 123 in coffee and 53.7 in cocoa. (88.5% of the goal). ([Annex 8. Coffee and cocoa area report](#))

Indicator 2.3 *By end of Year 4, 12 training workshops are implemented (2 in Year 1, 4 in Year 2, 4 in Year 3, and 2 in Year 4) and 280 indigenous producers (including 60 women) are trained in seedling nursery management, shade trees and canopy for bird diversity, soil fertility, pruning, and implementation of the management plan for wild cacao groves (Baseline = 0).*

Ten field schools have been implemented with coffee and producers (8 in year 2, 9 in year 3 and the last year 2). Total **19 field schools**. (158% of the goal). These schools were attended by a cumulative total of **528** people (**158** women and 370 men). ([Annex 9. Pre harvest field school sheets](#))

The improvement of agroforestry management skills was reflected in higher annual coffee and cocoa production. The annual production of cocoa was 1.4 ton of dry beans / year (2017), at the end of the project was 1.5 tons, which put us almost as at the beginning but, we have to consider that 2021 harvest was difficult to collect because of the pandemic restrictions. However, in the years of project implementation the annual production was 2.5 tons (2018), 2.35 tons (2019) and

2.32 tons (2020). APCERL increased its annual production from **28 tons** of green gold coffee in 2017 to **41.6 tons** in 2020. Apolo coffee producers increased from **2.8 tons** (2017) to **14 tons** (2020) ([See Annex 22](#)).

Output 3. Post-harvest management of cacao and coffee is improved, and local capacity built for diversification of products.

Post-harvest processes are crucial to maintain the natural quality of the products. An adequate infrastructure and equipment is necessary as well as proper protocols to reduce the risks involved in the post-harvest process. It is also important to develop capacities in the proper use of the modules and strict follow of protocols. By implementing these actions, it was possible to significantly improve the quality of coffee and cocoa beans and to be able to access markets with better prices ([Annex 10. List of cocoa and cacao buyers](#))

The number and size of post-harvest modules were adjusted to the characteristics of the productive organizations and producers. The cocoa producers delivered the fresh beans to the local technicians, who then transferred the beans to the post-harvest centres. This is possible because the production is not so voluminous and it allows them to homogenize the quality of the dry cocoa beans. On the other hand, Apolo's coffee producers have their plots far away from their homes, so they pulp the coffee (ferment, wash and dry) in family or bi-family modules so they transport less weight. The APCERL producers have collective post-harvest infrastructure in place and the emphasis was placed on training in post-harvest coffee protocols.

The two community modules for the Chocolecos and Mapiri cocoa producers were sufficient for the productive capacity of the productive organizations. These fermentation and drying modules consist of a closed fermentation area with 10 wooden crates, of dimensions 1 x1 x 1. An area covered with polycarbonate with 3 tables for cocoa pre-drying and 6 tables for cocoa drying). A warehouse for the shaking of cocoa beans and bagging of dry beans. The Chocolecos association has improved this infrastructure with the support of an additional FAO project. The family modules for Apolo's coffee producers consist of one coffee pulping machine, two fermentation and washing ponds, a drying channel and two drying tables ([Annex 11. Modules construction report](#))

Field schools and workshops improve farmers' post-harvest capabilities and help them produce consistent, high quality grain. Post-harvest workshops and field schools were conducted continuously until the third year of the project. The workshops were conducted with emphasis on post-harvest handling of coffee and cocoa beans: Fermentation (monitoring temperature and pH indicators), drying (control of humidity of the beans) and storage conditions of coffee and cocoa beans.

Cocoa bean quality was monitored through physical and sensory analysis of the beans collected. This analysis was carried out in the laboratory of Origen-Chomateo SRL. These data are recorded in a database that allows quality monitoring by harvest, lot and producer. In the 2021 harvest, the grains were again catalogued as first quality by the main buyer (Solur SRL) ([Annex 12. Cocoa bean analysis document](#)). In October 2017, the Chocolecos association was awarded a prize among the best beans at the Salon du Chocolat in Paris.

The coffee beans of each producer were tasted and qualified according to the SCA protocol by the cuppers of Origin and invited buyers. The cupping was carried out by each producer and recorded in a database that allows the quality of the coffee to be monitored. There are producers such as Benito Huallpa from APCERL with a cup of 87 points and Sabina Calcina from Apolo with 86.5 points ([Annex 13 APCERL and APOLO coffee cupping report 2017-2020](#)).

The Origen laboratory is managed by young second generation coffee and cocoa producers and the technical advice of WCS. In this laboratory, we developed and diversified products derived from chocolate beans such as: 100% native cocoa bars, 70% native cocoa chocolate bars and chocolates. At the same time, the cocoa producers were trained in the production of these products for sale in local markets and fairs. Coffee cupping and roasting also takes place in this laboratory ([Annex 14 Origen and products photograph record](#)).

The achievement of the outputs indicators is described below.

Indicator 3.1 5 community processing infrastructure “modules” for cacao fermentation and drying

and 5 community processing infrastructure “modules” for coffee fruit pulping and fermentation are in place (3 by Year 2, and 2 in Year 3), training 280 producers (Baseline = 0).

Two community cocoa modules and 16 family coffee modules were built. Total **18** modules. These modules and those already built before the project benefit 97 cocoa producers and 84 coffee producers. Total **181** beneficiary producers. However, 349 producers were trained see indicator 3.2.

Indicator 3.2 12 training workshops are implemented for 280 indigenous producers (including 60 women) in quality control protocols for post-harvest processing (2 workshops in Year 1, 4 workshops in Year 2, 4 workshops in Year 3, 2 workshops in Year 4) (Baseline = 0).

Post-harvest workshops and field schools were conducted continuously until the third year of the project. Four in 2018, four in 2020 and four in 2021. A total of **12** training events were held for a total of **316** coffee and cocoa producers (**1201 men** and **115 women**). ([Annex 15 Field school post-harvest report](#))

Indicator 3.3 By end of Year 2, women producers develop an artisanal chocolate bar that allows access to local markets fetching prices of 90Bs/Kg. (Baseline = 35 Bs/Kg for raw cacao).

The production of chocolate bars is an ancestral activity in the indigenous cocoa-producing communities. Through Origen they have diversified the forms and chocolate products. Improving the processing and presentation of the products has allowed them to improve the price in local markets and national fairs. One kg. of cocoa dry beans can be used to produce 6 bars weighing 110 grams of 100% cocoa. These bars are sold in the local market at Bs. [REDACTED]. Six bars allow them to sell Bs. [REDACTED] 133% of the project goal. This strategy of adding value to the product is an activity led by women, they have an interesting local market in Guanay and Mapiri (gold producing areas), which allows them to have a viable alternative to improve their income.

Output 4: Marketing strategies for cacao and coffee are improved and diversified, including wildlife friendly certification.

The marketing strategy is carried out through Origen, the company whose partners are producers, managed by second generation young producers, with the advice of WCS. The strategy is based on generating information for the urban market, emphasizing the sustainability of production systems, organic certification, the conservation of biodiversity, the effort and work of indigenous and rural producers to maintain these systems and offer a quality product. That is, tell the story behind each of the products. Printed and audiovisual material was developed and published on the website of Origen (www.origentienda.com) and the Facebook and Instagram platforms, carrying out campaigns on key dates such as Christmas, Mother's Day or Friendship Day. Through the website, the portfolio of clients abroad and other parts of Bolivia has been diversified. The cocoa beans are marketed with Solor SRL for the production of its 70% bar. In the presentation of the bar it presents photographs and origin of the cocoa. With the Master Blends company, cocoa is used to make liqueurs with Amazonian products. Cocoa has also been traded with artisan production companies such as Ruah. Additionally, the grain has been exported to the Celler can Roca restaurant in Spain. A part of the production (500 kg of grain) is transformed by Origen into 100% chocolate bars, 70% cocoa bars, solid chocolates and bonbons that are sold through the store or campaigns on digital platforms.

Exports are made through Origen both green gold coffee, dry cocoa beans and products with added value. Coffee customers are specialty coffee roasters such as Café Nomad in Spain, and Café Kreyol in the United States. 100% cocoa bars were also exported to Denmark to Stephan Gamillsheg ([Annex 16. Commercial Export Invoices](#)). The national clients for products with added value (roasted coffee, chocolate bars and 70% bars) are restaurants such as Gustu, Hierro Brothers, Pigalle, Public Property, Café Bunna, among others. Direct consumers of finished products such as coffee and chocolate have increased with the opening of the store in a commercial district of the southern zone in La Paz, which allows customers to experience and participate in the process of roasting coffee and making chocolates. Organic and Bird Friendly certification are also used in the marketing strategy. In order to export coffee with organic certification, Origen has been certified since 2020 and will be certified in 2021 as a processor and marketer with the Bird Friendly seal. Completing the certification cycle in coffee production,

processing and marketing with 38 certified organic producers and 13 certified as Bird Friendly until 2020.

The roasted coffee bags bear the Organic and Bird Friendly brand. For roasted coffee, there is also the Café Eco de las Aves brand, which offers blends from producers and a limited series of specialty or Premium coffees from producers with the highest score in cupping. In addition to Eco de las Aves, there are the brands of Wild for Chocolate, Shan for the sale of oils and soaps produced by the women of Pilon Lajas, and of incense from the Lecos Apolo indigenous land. A brand is currently being developed for the roasted coffee from the Apolo producers. The Eco de las Aves brand, chosen by APCERL producers, highlights the variety of birds that exist in the area.

The fulfilment of the indicators of this result is presented below:

Indicator 4.1 By end of Year 2, 20 producers are trained on requirements of bird friendly certification and monitoring bird diversity (Baseline = such training is not currently held).

In order to be eligible for organic or Bird Friendly certification, producers must meet certain requirements that are verified every year; 100% of the producers are internally controlled and certification folders are filled out ([Annex 17. Producer certification folder](#)).

During the first year of the project, a workshop was held with the participation of 25 APCERL producers. The topics addressed were the importance of biodiversity, bird monitoring and market opportunities with Bird Friendly certification. Subsequently, field technician Javier Condori has been training producers during monthly field visits in bird watching, use of binoculars and bird registration. There is a database with 241 bird records of which 128 species have photographic records. The photos were shared on social networks Facebook and Instagram of APCERL and Origen. The photos have been included in a field book ([Annex 6](#) and [annex 7](#)).

Indicator 4.2 *By end of Year 2, 8 APCERL producers receive barista training to enable them to present their bird friendly coffee in local and international fairs (Baseline = no such training is currently held).*

Coffee producers have been supportive of the participation of their young sons and daughters in roasting, cupping, and barista training. 3 young women have been trained in Colombia by an instructor accredited by SCA ([Annex 18. SCA course certificates](#)). These young women are now in charge of managing the coffee laboratory, quality control of the samples and the roasting process, and the elaboration of coffee and chocolate beverages. Two of them participate as official tasters in the Bolivian Presidential Coffee Competition, tasting coffee samples from all over Bolivia. One of them won second place in the national competition for the preparation of coffee with the Aeropress method. They attend events at local and national fairs and taste the coffee with the buyers' tasters and are in constant training in and out of the laboratory. Coffee prices are differentiated by producer and quality of the beans, and the coffee that was valued the highest in coffee tasting in 2019, Benito Huallpa, has been sold at USD [REDACTED] per kg, while the other blends were sold at USD [REDACTED] per kg. ([Annex 19. Origen and products photograph record](#)).

In cocoa, 1 indigenous man has been trained in the handling of cocoa for the production of chocolates. In 2019, a "Bean to Bar" course was held with two Ecuadorian specialists, which was attended by 2 indigenous women and 2 technicians of the Chocolecos. ([Annex 20 Photograph training rerecord bean to bar workshop](#)) This course was replicated in two workshops with the attendance of 41 people. A total of 8 producers (5 women and 3 men) have been trained in barismo, tasting and elaboration of fine chocolates during the project. The training has been replicated to 41 chocolate producers.

Indicator 4.3 By the end of Year 2 a communication campaign targeting urban dwellers as responsible consumers is developed and conducted in La Paz and El Alto (Baseline = no such similar campaign has been conducted in support of indigenous communities engaging in sustainable agroforestry and biodiversity protection).

The materials and communication strategy developed in the project were described at the beginning of this point (output 4). The communication campaign developed 4 short videos to tell

the story behind the products. A book of photographs of the birds of Teoponte's coffee plantations and posts and campaigns through Facebook and Instagram platforms.

In November 2020, we received the visit of Nio Tatewaki from Coffee Break magazine of the All Japan Coffee Association, to do a report on sustainable coffee in Bolivia. The report will be published in the 101st edition of the magazine in August 2021.

Indicator 4.4 *By end of Year 2, at least one new commercial alliance for coffee and at least one new commercial alliance for cacao increases prices for their products by 10% in comparison to average market prices that year (Baseline to be established in 2019 from commodity markets).*

Market and communication strategies should be reflected in a greater number of clients, better prices and consequently higher income for producers with the sale of grain or finished product through Origen. We conducted commercialization tests with national and international private companies, successfully selling the first 2.8 tons of dry parchment coffee from APICOA to Kreyol Coffee, with a good price of USD [REDACTED] per kg and a gross profit of USD [REDACTED] in 2019.

For the 2020 harvest, 6.6 tons of Apolo coffee have been exported to the same client at a price of USD [REDACTED] per kilo of coffee and 11.55 tons of APCERL certified coffee at a price of [REDACTED] per kilo of green gold coffee. This export has generated revenues of USD [REDACTED]. The average price in the coffee market in 2019 was USD [REDACTED]/kilo of green coffee and is considered the baseline for this indicator. Export coffee has been traded at an average of USD [REDACTED]/kg. If we consider the average price of coffee traded in domestic and export markets (USD [REDACTED]/kg of green coffee), by the end of the project there is an increase of 29% over the baseline.

In the case of cocoa, according to the ICCO (International Cocoa Organization) in 2019 cocoa had an average price per ton of dry beans of USD [REDACTED] (2.15/kg). The average selling price of cocoa beans in the domestic market was Bs. 35/ kg ([REDACTED] USD/kg) of dry beans. Prices on the local market are very high due to the demand for cocoa by national chocolatiers and the organoleptic quality of the native cocoa bean compared to the hybrid. (See [Annex 10](#))

3.2 Outcome

Outcome Sustainable cacao and shade coffee production by indigenous communities in Bolivia result in increased protection of collective lands, strengthened livelihoods, reduced forest loss and increased avian biodiversity in agroforestry areas.

We made important progress in providing assistance and training, as well as evaluating the applicability of the tools, protocols, and the use of the Android app to report encroachments over 636,466 hectares of indigenous lands (Tacana and Lecos Apolo TCOs). We also identified vulnerable areas in the three indigenous territories, which serve as the geographic reference for monitoring illegal activities and establishing control points in accordance with each community's Life Plans (Lecos Apolo, Tacana and Pilon Lajas). Additionally, coordination with indigenous grassroots organizations and protected area directors from Madidi and Pilon Lajas, has helped evaluate the application process. As part of the support provided by WCS through additional funds from the CEPF program and the Moore Foundation, the CRTM indigenous organization was able to update their Life Plan for the Pilon Lajas indigenous territory and have also identified the areas of the territory under highest risk of encroachments and illegal activities, adding another 400,000 hectares for a total of 1,036,466 hectares.

The project supported five productive cocoa associations; three indigenous cacao associations, Chocolecos and APCA O Mapiri, both managing native cocoa under agroforestry systems, and the producer families of Carmen del Emero (APROCACE), representing a total of 97 producers from 17 communities. The last two cocoa harvests in 2020 and 2021 were affected by the pandemic that restricted mobilization to all cocoa growing communities, so yield data could not be fully collected. However, available data from the monitored plots indicate that the yield achieved in the last year of the project was 252 kg/ha. The final increase over the baseline was 140% (180 kg/ha). Cocoa Yield has been improving as a result of the application of good management techniques at the different production stages, and as a result of the application of pre-harvest and post-harvest processes (0.3 outcome indicator). Average annual household income from cacao production at the end of the project, reached USD 311/ year, which represents an increase of 186% over the baseline (USD [REDACTED] (0.4 Outcome indicator).

Unfortunately, APROCACE producers in Carmen del Emero are still suffering the effects of heavy flooding in 2014, impacting cacao stands and their natural pollinators. However, we have continued to support the producer families in their efforts to monitor these stands to evaluate appropriate interventions when conditions improve. The floods' impact has resulted in broader changes in the course of the Beni river, which have clearly damaged and even caused partial disappearance of some cacao groves that had been previously identified in the management plan of 2013. Monitoring results from 2019 show an important loss in the area covered by the wild stands (reduction of 19.8 %) with respect to the baseline, with some stands losing 75% of their extension ([Annex 21: Field report visit to wild cacao stands June 2018](#)).

On the other hand, the two partner coffee associations, APCERL from the municipality of Teoponte, and APICOA, from the Lecos Apolo Indigenous Territory participated through their 84 coffee producers (67 men and 16 women), 47 from APCERL in Teoponte (40 men and 7 women), and 35 from APICOA in Apolo (26 men and 9 women). In 2020, the last coffee harvest of the project, the average yield was of 552 kg/ha, surpassing the baseline numbers of 211 kg/ha by 2.6 times (0.3 outcome indicator). At the end of the project the household income average was USD [REDACTED] (98% of baseline income: USD [REDACTED]/family). However, this is a result of the averages including APICOA and Apolo. If we separate the averages of the baseline and exit evaluations the 2018 baseline for APCERL is USD [REDACTED] per producer; and the 2020 exit evaluation for the 43 producers was USD [REDACTED] or a 192% increase. In the case of the Apolo producers in 2019 they generated USD [REDACTED] per producer, and by 2020, they generated USD [REDACTED] per producer ([Annex 22. Coffee harvest volumes and sales](#)).

We conducted commercialization tests with national and international private companies, successfully selling for the second consecutive year (2019 2.8 tons of dry parchment coffee from APICOA and APCERL coffee to Kreyol Coffee, with a price of USD [REDACTED] per kg and a gross profit of USD [REDACTED] in 2019). For the 2020 harvest the same client purchased 6.6 tons of coffee at a price of USD [REDACTED]/kg and 11.55 tons of certified coffee at a price of [REDACTED]/kg of green coffee beans for a value of USD [REDACTED] ([See Annex 16](#)).

At the end of the project coffee producers received technical assistance from the project; these consisted of 67 men and 17 women; 47 producers from APCERL in Teoponte and 37 from APICOA in Apolo, representing 13 total communities. In 2018, we reported an average coffee harvest yield of 575 kg/ ha, surpassing baseline numbers by 2.7 times and representing a 10% increase from the previous year. In the last harvest of coffee, the average yield was **552Kg/ha**.

The total number of indigenous producers working as partners or beneficiaries in the project was 181, slightly down due to reduced participation from cacao producers from Carmen del Emero, who have been affected by flooding; and in the case of APCA O Mapiri, who have been affected by gold mining. In Y3, the total number of indigenous producers included 102 T'simane Mosekene beneficiaries from Pilon Lajas, both jatata family producers whose women also participate in the aromatic oil and soaps initiative, increasing the total number of beneficiaries to 271. By Year 4, 4 families joined the Chocolecos association, reaching a total of **283 families**.

To date, 13 producers (12 men and one woman) have been certified as bird friendly for the next three years (2017-2019) and seven more are ready for certification. Due to the pandemic, this will be carried out in 2021. To evaluate the project's impact on biodiversity conservation we developed a standard protocol and producer capacities to monitor bird diversity in their own plots, using a baseline of 162 species. To date, the number of bird species has increased to 241 because of the structural complexity of the more mature plots and greater landscape connectivity. We compared the diversity in the complex agroforestry plots with that of the monoculture plots and found a difference in species diversity 241 vs. 67 species. In 2018, we collaborated with a graduate student from the Technological University of Dresden, Germany, who analysed ecosystem services within three types of coffee plots in Teoponte, monoculture simple coffee plots, complex agroforestry systems, and bird-friendly certified plots grown under forest canopy. He documented the relationship between increased bird diversity and lower coffee pest incidence, as well as the important role of the different coffee plantation systems for maintenance of water sources ([Annex23. Summary of study results by Carlos Landivar](#)).

The project's producers, partners, and beneficiaries continue to receive national and international recognition for the quality of their products (coffee and cacao). In 2017, the Chocolecos received

an award in Paris (France) at the International Cocoa Award competition for being among the 18 best cacaos in the world, and in February 2019, the Chocolecos competed in the Bolivian version of the [Salon del Chocolate 2019](#) (under the leadership of Bolivia's Ministry of Foreign Affairs in Bolivia, Ministry of Rural Development and Land, and the Bolivian Coordination Committee of Cacao (COPRACAO), on which WCS is a member. Renowned Ecuadorian chocolatier Jaime Freire ([Papá Cacao](#)) was part of a first-class jury to evaluate the different Bolivian cacaos competing.

Monitoring of assumptions

The *assumptions* originally described for the project were monitored throughout implementation.

Outcome level assumptions:

Assumption 1: Institutional stability in the producer organizations and indigenous territorial organizations.

During the implementation of the project, the indigenous and productive organizations have remained stable, although there have been scheduled leadership renewal. The participation of the organizations has been active, despite the pandemic and the political crisis in the last quarter of 2019.

Assumption 2: Extreme flooding does not occur in more than 1 year.

The 2014 flooding in northern La Paz has continued to impact the wild cacao groves of Carmen del Emero (Tacana I Indigenous Territory). Although during monitoring in Year 2, the wild cacao stands were about to start recovering their productivity, the new monitoring in Y3 shows a reduction in total area under management plan to 19.8% of the total, and most of the adult individuals have not produced fruits this year. Nevertheless, the number of saplings around the mother plants are encouraging regarding the optimal reposition of the cacao population ([Annex 21. Monitoring Report](#)).

Output level assumptions:

Assumption 1: The producer organizations and indigenous organizations are not affected by social conflicts related to increased pressure from extractive and infrastructure projects.

The pressure from large infrastructure projects as well as economically important extractive activities such as mining, illegal timber logging, and wildlife trafficking have not resulted in internal social conflicts. However, gold mining in the Mapiro and Teoponte region has resulted in a reduction in the number of producers interested in cacao production due to the high prices of gold. A strong base of producers has still been maintained, despite lower participation rates.

3.4 Impact: achievement of positive impact on biodiversity and poverty alleviation

The project has achieved significant positive outcomes for biodiversity, by improving management over 1,036,466 hectares under indigenous control. Additionally, by promoting sustainable production systems that allow the conservation of the habitat of 241 bird species (10% of the birds registered in the country) in the coffee plantations of Teoponte. This is supported by the Bird friendly seal and an organized database of records. Finally, the project promotes, informs and inspires the urban population on the importance of conservation of biodiversity, the sustainable production of coffee and cocoa and their participation and contribution as consumers of these products.

Assistance and training provided to producers is increasing the yields of coffee and cacao production, which translates into economic benefits. The improvement in production and prices of cacao and coffee, had a direct impact in poverty alleviation over 181 families and 724 people. Annual income per household at the end of the project is USD [REDACTED] from coffee production and USD [REDACTED] from cacao production (ref a 3.2 Outcome). Finally, supporting, control and vigilance of three indigenous lands supports the livelihoods and cultural survival of 6.932 people (ref 3.2 Outcome).

4 Contribution to Darwin Initiative Programme Objectives

4.1 Contribution to Global Goals for Sustainable Development (SDGs)

The project's activities were aimed at contributing to the following Global Goals for Sustainable Development:

Goal 1 (No poverty: End poverty in all its forms everywhere) by increasing vulnerable indigenous communities' control over their territories and natural resources and developing their resilience to climate-related extreme events and other economic, social, and environmental impacts and disasters through territorial management and sustainable livelihoods. **Income increased for 181 indigenous producers. 6,932 indigenous people have improved control over their collective ancestral lands (Tacana and Lecos Apolo and T'simane Mosekene peoples).**

Goal 12 (Responsible production and consumption: Ensure sustainable consumption and production patterns) by supporting the sustainable management of natural resources. **580.8 hectares are under agroforestry management.**

Goal 15 (Life on land: Sustainably manage forests, halt and reverse land degradation, halt biodiversity loss) by promoting the implementation of sustainable forest management and agroforestry as alternatives for gold mining and short-term aggressive extractive activities such as timber extraction, or intense commercial agricultures. **1,036,406 hectares are under improved indigenous control. Bird species diversity reported in the organic bird-friendly certified coffee plots is higher compared to baseline bird species reported in simple monoculture coffee plots (241 vs 67).**

4.2 Project support to the Conventions or Treaties (e.g. CBD, Nagoya Protocol, ITPGRFA, CITES, Ramsar, CMS, UNFCCC)

The project was designed to support the objectives of the Convention on Biological Diversity (CBD) and Aichi Strategic Goals by reducing the direct pressures on biodiversity and promoting sustainable use, as well as enhancing benefit sharing and capacity building of indigenous organizations. These actions address Strategic Goal B by reducing the direct pressures on forests, promoting the sustainable use of native forest groves, and supporting forest restoration through agroforestry. They also contribute to Strategic Goal E by respecting and supporting the customary use of indigenous lands by the T'simane Mosekene, Tacana and Lecos indigenous communities, since all activities are conducted in agreement with the local stakeholders as direct beneficiaries as well as part of the activities prioritized in their Territorial Life Plans. The project has also contributed to the reduction of green-house emissions through both reduction of forest loss and absorption of CO₂ by increasing areas under agroforestry production. ([Annex 25. CO2 Report](#))

The forest types managed and conserved inside the intervention area of the project all foster highly diverse sets of flora and fauna. Through sustainable management, we are guaranteeing their long-term conservation. The mid elevation mountain forests of the eastern slopes of the Andes, where the mountain shade coffee is grown by our partners from APCERL in the municipality of Teoponte, are part of the Andean hotspots and also identified as an Important Bird and Biodiversity Area (IBA) by Birdlife International, including 14 Andean endemics such as the Yungas Manakin (*Chiroxiphia boliviana*), Yungas Antwren (*Myrmotherula grisea*) and Yungas Tyrannulet (*Phyllomyias weedeni*). They are also home to a diverse community of other birds and mammals, including toucans, hummingbirds, woodpeckers, turkeys, parrots, owls, tanagers, squirrels, monkeys, coatis, tapirs, deer and more (See [APCERL's Facebook](#) for pictures and videos).

The project contributes to the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) by promoting and supporting the efforts of indigenous and local communities for *in situ* conservation of wild cacao relatives located inside their indigenous lands and in nearby protected areas, for food production.

4.3 Project support to poverty alleviation

The direct beneficiaries of the activities in the project are the communities and producers of the T'simane Mosekene, Tacana, and Lecos indigenous territories as well as Quechua and Aymara coffee producers of APCERL, from 7 communities in the municipality of Teoponte.

The project made important progress in providing ways to report on illegal activities in the indigenous territories, which will result in improving indigenous control over the Tacana and Lecos Apolo and T'simane indigenous lands, benefiting the collective rights of 6,932 indigenous people. Important results have been achieved regarding the income of 181 cacao and coffee producers (See section 3.3),

We have increased and diversified our support to the indigenous communities in the area, and have supported specific projects for T'simane Mosekene women, having increased the collective annual income of 33 families to USD [REDACTED] in the second year, almost three times from USD [REDACTED] the year before; and the collective income of 102 producers of T'simane Mosekene managers of jatata palm leaves, leading to a total annual income of USD [REDACTED] from a similar baseline the year before of USD [REDACTED] despite the impacts on the pandemic impacting their primary market linked to tourism infrastructure.

4.4 Gender equality

The project addresses gender equality by of empowering women economically, improving their capacities for the production and elaboration of value-added products and visualizing their contribution along the production chain. These actions are promoted through a communication strategy in social networks. The project encouraged the participation of women in all training and coaching processes. Women's participation in the pre-harvest field schools was 32%, while in the post-harvest training events it was 41.54%. The overall average participation of women was 35% (Outcome Indicator 2.3 and 3.2).

Our impact on promoting women's participation is evident through the support provided to the three female coffee baristas of APCERL, who represent a new generation of coffee producers, have shown great potential, and have stood out during different training events and coffee cupping tournaments. They have continued their training and shown their leadership by leading coffee processing and roasting in the laboratory in La Paz and continue their participation in coffee and cacao tastings, fairs, and other marketing events. Another important impact is the work led by indigenous women in the production of chocolate bars for sale in local markets and participation in fairs and official events. Additionally, through the work with the T'simane Mosekene women's initiative of aromatic oil extraction and artisanal productions of soaps, we have provided assistance to 33 women from six indigenous communities.

4.5 Programme indicators

Provide comments under each bullet:

- Did the project lead to greater representation of local poor people in management structures of biodiversity?

Strengthening the human resources of grassroots organizations allows for greater and more effective representation in biodiversity management and coordination with local authorities, such as directors and park rangers of protected areas. Most importantly the encroachment risk plans informed the development of the management plan of the Pilon Lajas indigenous land and protected area ([See reports in Annex 4](#))

- Were any management plans for biodiversity developed and were these formally accepted?

No.

- **Were they participatory in nature or were they 'top-down'? How well represented are the local poor including women, in any proposed management structures?**

The experience of working with producers as a result of a long and sustained presence of WCS in the region, allow us to have participatory processes not only with the leadership, but with members of productive organizations. The local technical support and the permanent presence

of the technicians in the work areas facilitate the participation of the local population in identifying local needs and promoting the empowerment of women and youth.

- **How did the project positively influence household (HH) income and how many HHs saw an increase?**

The project has improved the income of 283 HH by accessing niche markets, 84 HH of coffee producers, 97 HH of cacao producers and, 102 T'simane Masetene. Although, in the case of the latter income was not increased losses to loss of markets during the pandemic were mitigated.

- **How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?**

Average annual household income from cacao production at the end of the project, reached USD [REDACTED] year, which represents an increase of [REDACTED] over the baseline (USD [REDACTED] (0.4 Outcome indicator). In the case of APCERL their income increased from a 2018 baseline of USD [REDACTED] per producer; to USD [REDACTED] or a [REDACTED] increase. In the case of the Apolo producers in 2019 they generated USD [REDACTED] per producer, and by 2020, they generated USD [REDACTED] or a [REDACTED] increase.

- **Transfer of knowledge**

WCS is part of the Bolivian Cocoa Technical Committee. This is a space for discussion among organizations that work with cocoa to share experience and technical discussions regarding cocoa. On two consecutive occasions, we have collaborated with the National Cocoa Program, establishing protocols for the organoleptic evaluation of cocoa samples participating in the Salon du Chocolat competition in Paris. We have also participated in webinars with other guests and virtual meetings with groups of young people interested in the subject and women entrepreneurs.

A Bolivian male master's student from the Technische Universität Dresden, Germany, did his thesis on the Teoponte coffee plots.

In 2019, 3 young women participated in an event accredited by the SCA (Specialty Coffee Association) for their training as baristas, cuppers and coffee roasters in Bogota, Colombia.

4.6 Capacity building

The young women trained in Colombia as baristas have been invited and are part of the panel of national judges for the Presidents Coffee prize (Café Presidencial). They have also been invited to participate in the barista contest, one of them obtaining the second place among 34 participants. Additionally, together with the cocoa technician, they were invited as judges to evaluate the cocoa samples in the Bolivia 2021 Chocolate Salon competition.

5 Sustainability and Legacy

We will have built sustainability of our actions by:

- 1) Control and vigilance has been strengthened by engaging with the integral monitoring programs of the indigenous territorial organizations and by establishing alliances with overlapping protected areas. As long as productive organizations are strengthened, producers can contribute to the control and surveillance of the territories, since they have a permanent presence in the territory and can coordinate with the grassroots organizations as well as with the protected areas.
- 2) Developing capacities in established organizations and institutions that functioned before the project and will continue to function at the end of the project, but with strengthened capacities and with developed technical instruments.
- 3) The productive organizations have developed pre- and post-harvest capacities that have allowed them to enter markets with better prices and it is in their interest to remain in these markets because it translates into better income and quality of life.
- 4) Coffee and cocoa producers have taken ownership of the sustainability of production under agroforestry systems, the use of native species and the importance of biodiversity conservation.

- 5) The coffee growers' organizations are also involved in the National Coffee Program and the cocoa producers are involved in the National Cocoa Program.
- 6) Young women trained in cupping are recognized by national government organizations and participate in national competitions directed and organized by the Ministry of Rural Development and Land and the Bolivian Ministry of Foreign Affairs.
- 7) Support for sustainable coffee and cocoa production continues with CSR (Corporate Social Responsibility) funds from FIE Bank and ASATA.
- 8) The strengthening of Origen-Chomateo SRL is a strategy to reach external and local niche markets, but also to improve the link with consumers and promote sustainable consumption.

6 Lessons learned

Indigenous peoples face increasingly complex challenges that threaten the conservation of their territories and access to their livelihoods. The use of adjusted and accessible tools to facilitate the protection of their territories is a mechanism that must be strengthened through continuous training of users and permanent improvement of the tools. The development of protection systems with technological support through the development of applications has had difficulties related to the lack of connectivity in the indigenous territories, which has limited their functioning. However, the change to simpler applications that do not depend closely on this connectivity has improved their application. Another challenge is that communal authorities change annually, which also implies a demand for permanent training in the use of technological alternatives so that they can have continuity in their application.

The socioeconomic impacts arising from gold mining in the Mapiri and Teoponte region continue to be an obstacle for promoting sustainable agroforestry. However, a core group has continued supporting the production of high-quality cacao and coffee. Recognition of this quality value by achieving better prices and recognitions by international experts and events is an opportunity to continue to gradually increase the number of producers.

Climate is always a challenge for all farmers, especially smaller-scale ones, since production is limited and consequences of a bad year can have serious impacts on their narrow economies. Nevertheless, producers are adapting to changes in climate by diversifying their crops and varieties to plant; for instance, coffee producers are renewing and establishing plots with coffee varieties resistant to pests, soil conditions, and dramatic changes in weather conditions, such as extreme rain and drought. However, in the case of the natural cacao stands in the Tacana Indigenous Territory, the natural dynamics of the river and extreme changing seasons represent a greater challenge. Regular monitoring of the cacao plants both in agroforestry systems and wild stands will enable us to predict productivity, while also taking actions and transplant wild cacao relatives to agroforestry plots in order to increase genetic variability and produce improved varieties of fruits with better qualities for the market. One strategy to reduce climate-related risks would be the installation of climate indicator monitoring modules. Linking an application to a smartphone could contribute significantly in strengthening resilience to climate change, monitoring and management of rust, application of bio-inputs, among others. One aspect that needs to be strengthened is the development of conservation systems for wild and native varieties of cocoa because they represent a gene pool that could contribute to the improvement of cocoa production in Bolivia.

Linking producers with buyers/consumers has been key to achieving the results, because producers have access to information on where their product is consumed, why it is chosen among others and how it contributes to sustainability. On the other hand, buyers/consumers are interested in knowing how the product is produced and the traceability of the product throughout the production chain. This contributes to establishing reliable and long-term relationships between producers and buyers/consumers.

A recommendation for future projects is to include carbon footprint reduction as an objective in the post-harvest and transformation processes, not only as a sustainability tool, but also as a market strategy.

6.1 Monitoring and evaluation

No changes in the monitoring and evaluation plan were required. The monitoring and evaluation plan has been supervised by the project lead, and the WCS Bolivia country direction with support from the technical team. The monitoring and evaluation of the Outcomes and Outputs indicators was relevant to detect problems on time and discuss solution alternatives with the team. The main indicators used to evaluate progress towards achieving the Outputs and main project Outcome are:

1. Qualitative changes in capacity for reporting and responding to illegal encroachments over 1 million hectares of indigenous land.
2. Number of cacao and coffee producers with improved productivity/hectare.
3. Increase in household income
4. Number of new certified producers
5. Bird biodiversity
6. Forest loss and avoided carbon emissions

We also evaluated the ecosystem functions of coffee agroforestry plots of APCERL in 2018. This research provided evidence on the importance of coffee production across a matrix of management systems on the provisioning of environmental services in the region, such as forests for water quality and soil maintenance and bird diversity for control of coffee diseases ([Refer to Annex 23. Summary of study results by Carlos Landivar](#)).

6.2 Actions taken in response to annual report reviews- N/A

7 Darwin identity

The Darwin logo has been included in all documents resulting from workshops and relevant technical documents produced as part of the project activities ([Annex 27. Technical manuals](#)). The Darwin Initiative was also recognized as one of the main donors of the project in Origen's webpage (<https://origentienda.com/>) and included in the promotional videos produced on Orygen Store and all the products offered under its umbrella. The logo of Darwin is also included in the book "Aves de Teoponte" (see [Annex 7](#)).

Whenever the project has been presented to the national and subnational authorities, as well as project stakeholders, the contribution of the UK government as a funder is mentioned. WCS has more than 15 years of active presence in the region and has established a sustained relationship with indigenous organizations and the Madidi, Apolobamba and Pilon Lajas National Parks. The project submitted to Darwin was designed with the partners to contribute to the objectives of strengthening indigenous organizations in the management of their territories. The project adds, contributes and synergizes with other funds to achieve this objective. The Darwin Initiative Funding is presented as a distinct project within the reporting of WCS to the national authorities. The annual report that WCS submits to the national authorities reports on the development of the projects and the origin of the funds, including the Darwin projects ([Annex 24. Annual WCS report 2019](#)). This report is distributed to all partners involved in all projects implemented annually by WCS.

<https://bolivia.wcs.org/en-us/Informative-resources/News-room/articleType/ArticleView/articleId/14177/WCS-collaborates-in-the-registry-of-the-birds-of-the-Teoponte-coffee-plantations.aspx>

<https://bolivia.wcs.org/en-us/Informative-resources/News-room/articleType/ArticleView/articleId/15855/18-tons-of-coffee-produced-under-agroforestry-systems-exported-with-WCS-support.aspx>

<https://bolivia.wcs.org/en-us/Informative-resources/News-room/articleType/ArticleView/articleId/16102/Award-to-the-cocoa-produced-by-the-Chocolecos-Association-that-will-represent-Bolivia-at-the-International-Cocoa-Awards-2021-tournament.aspx>

Similarly, Orygen has recognized Darwin support in its Facebook page.

<https://www.facebook.com/OrigenBO/photos/a.1089396501263738/1357257084477677/>

https://www.facebook.com/plugins/post.php?href=https%3A%2F%2Fwww.facebook.com%2FOrigenBO%2Fposts%2F1479545112248873&show_text=true&width=500

8 Impact of COVID-19 on project delivery

The impact of the COVID-19 pandemic has been mostly related to travel restrictions between March and October 2020 and between January and March 2021. This made holding training workshops, coordination meetings and other face-to-face events impossible. The total closure of access to the communities was the most important local preventive measure to avoid contagion in indigenous and producer communities. During this critical period, project activities focused on the collection and processing of cocoa and coffee, for which the local technicians living in the beneficiary communities played a very important role in ensuring that the coffee and cacao harvests yielded good results. All activities that involved gathering people together, such as field schools, were suspended, but the local technicians visited the farmers' plots to follow up. Biosecurity supplies were distributed for the use of field technicians and beneficiaries at the entrance to the communities, mainly face masks and alcohol gel. WCS developed a biosafety protocol for field trips and activities with the project beneficiaries. Meetings and encounters were conducted through video calls using Zoom, Meets and other platforms, when internet signal was available.

9 Finance and administration

9.1 Project expenditure

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL				

Staff employed (Name and position)	Cost (£)
Oscar Loayza - Project leader	
Ximena Sandy - Cacao and marketing specialist	
Jorge Rojas - Coffee Specialist	
Klivia Mancilla - Administrative Assistant	
Carlos Fajardo - Financial oversight	
TOTAL	

Capital items – description	Capital items – cost (£)
TOTAL	

Other items – description	Other items – cost (£)
Partner- Tekokavi	
TOTAL	

9.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
ASATA	
BANCO FIE	
NORDECO /TEKOKAVI	
TOTAL	

Source of funding for additional work after project lifetime	Total (£)
BANCO FIE	
Moore Foundation- LLF	
TOTAL	

Value for Money

With an investment of under £ [REDACTED] WCS has achieved significant outcomes for biodiversity (as measured by hectares under improved indigenous control and increased avian biodiversity in agroforestry plots), reduced carbon emissions, poverty alleviation (as measured by number of cacao and coffee producers with improved income) and the establishment of an urban constituency in support of conservation. We have also taken several measures to maximize

economy and efficiency of the Darwin Initiative's funds, in particular building local capacity and partnerships for long term sustainability of investments. In addition, leveraging £ [REDACTED] matching funds.

10 OPTIONAL: Outstanding achievements of your project during the (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

WCS collaborates in the registry of birds in the Teoponte coffee plantations

An observation, with photographic evidence, of the Alachua (*Phibalura boliviana*) in the coffee plantations of Teoponte is an important finding in the distribution of the species. The **palkachupa** is classified as endangered and is endemic to the gallery forests, natural pampas and humid montane forests around Apolo, in northern La Paz. This new record supports the idea that the species makes seasonal movements towards the humid montane forests of the region. Ornithologists proposed this hypothesis as the species is periodically more difficult to observe near Apolo.

The Regional Association of Organic Coffee Producers of Larecaja (APCERL), with support from WCS, is dedicated to the production of shade-grown coffee in agroforestry systems, and in 2013 received the 'Bird Friendly' certification awarded by the 'Smithsonian Bird Migration Center' for contributions to the conservation of wildlife habitat. The coffee plantations are located within an Important Biodiversity and Bird Area: IBA Bella Vista BO047, in the south of Madidi National Park, the protected area considered the greatest diversity of birds in the world (10%).

Javier Condori Cruz is the son of one of the coffee producers, and is now an APCERL coffee technician and bird photographer. For the last six years Javier has monitored bird species in the shade grown coffee plots, registering 241 species, belonging to 47 families and 177 genera, representing 16% of the bird species of Bolivia. The majority (93%) are characteristic of humid montane forests, 2% are boreal and 5% are austral migratory birds. Some species are threatened or critically endangered, such as the palkachupa.

These humid montane forests are home to tanagers, woodpeckers, toucans, parrots, hawks, macaws, owls, guans, colourful and noisy orioles and trogons, and more than ten species of hummingbirds. The white-throated toucan (*Ramphastos tucanus*), the chestnut-eared aracari (*Pteroglossus castanotis*) and the woodpecker (*Dryocopus lineatus*) stand out as the most representative species.

The production of 'Eco de las Aves' coffee supports efforts to conserve forests and wildlife diversity, while contributing to the economy of 44 coffee families in seven Teoponte communities. These activities are carried out within the project "Wildlife-friendly agroforestry and sustainable forest management in Bolivian indigenous territories", funded by the UK Government through the "Darwin Initiative".

How lovely to be able to contribute to the conservation of our heritage by drinking good coffee produced by Bolivian communities committed to the environment and biodiversity!

Photo description: Palkachupa in Teoponte

Project reference: 24/011

Location: Teoponte, La Paz, Bolivia

[PHOTO LINK](#)



Annex 1 Project's original (or most recently approved) logframe, including indicators, means of verification and assumptions.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact:</p> <p>Improved territorial control and monitoring of indigenous lands coupled with sustainable agroforestry leads to biodiversity protection, strengthened livelihoods and climate resilience in an approach that can be replicated across Bolivia.</p>			
<p>Outcome:</p> <p>Sustainable cacao and shade coffee production by indigenous communities in Bolivia result in increased protection of collective lands, strengthened livelihoods, reduced forest loss and increased avian biodiversity in agroforestry areas.</p>	<p>0.1 By the end of Year 4, within the 1M ha of indigenous lands, a well-established participatory system for documenting and reporting illegal encroachments into areas managed by producer organizations is in place (Baseline = no such system currently exists).</p> <p>0.2 By the end of Year 4, illegal encroachments within the 1M ha of indigenous lands are reported and responded to in joint actions by the indigenous territorial organizations and producer organizations (Baseline = no joint actions).</p> <p>0.3 By the end of Year 4, 280 indigenous Tacana, Lecos and T'simane Mosekene producers (60 women) have increased productivity by 20% (Baseline = 180 kg/ha cacao and 211 kg/ha coffee).</p> <p>0.4 By the end of Year 4, 280 indigenous Tacana, Lecos and T'simane Mosekene producers (60 women) have increased household income from agroforestry by 20% (Baseline = average annual household income from agroforestry is █████ USD for cacao and █████ USD for coffee).</p>	<p>0.1 Digital maps and infraction reports by producer organizations of the Tacana, Lecos and T'simane Mosekene indigenous lands.</p> <p>0.2 Number of joint actions between producer organizations and their territorial organizations as documented in technical reports.</p> <p>0.3 Benefit distribution report of producer organizations and technical monitoring reports.</p> <p>0.4 Benefit distribution report of producer organizations and technical monitoring reports.</p>	<p>Institutional stability in the producer organizations and indigenous territorial organizations.</p> <p>Extreme flooding does not occur in more than 1 year.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>0.5 By the end of Year 4, 15 coffee producers (8 new, of which 5 women, and 7 recertified) are certified under the Smithsonian standards as “bird friendly” for their contribution to conservation of 162 bird species, including 14 Andean endemics, such as (<i>Simoxenops striatus</i>), (<i>Myrmotherula grisea</i>), (<i>Phyllomyias weedeni</i>) (Baseline = 7 producers are currently certified, but will need recertification).</p> <p>0.6 By the end of Year 4, project-supported agroforestry plots show a 15% increase in avian diversity, compared to baseline (to be established in Year 1) and a 30% increase in avian diversity compared to areas following traditional single crop agriculture (Baseline to be established in year 1).</p> <p>0.7 By the end of Year 4, an estimated 152,672 tCO₂e is absorbed in new agroforestry plots (Baseline = 0).</p> <p>0.8 By the end of Year 4, 80 hectares of avoided forest loss and the associated 46,374 tCO₂e equivalent avoided emissions (Baseline = 0.3% annual forest loss in the region).</p>	<p>0.5 Certification documents.</p> <p>0.6 Bird diversity monitoring results as documented in technical reports.</p> <p>0.7 Technical monitoring reports developed by project staff.</p> <p>0.8 Landsat satellite imagery analysis and field verification.</p>	
<p>Output 1: Producer organizations and their representative territorial organizations have developed and implemented systems for control and vigilance of their territorial lands.</p>	<p>1.1 By the end of Year 1, areas vulnerable to illegal encroachment in three indigenous territories are identified and mapped in a participatory process (Baseline = no such participatory mapping has yet been done in these areas).</p> <p>1.2 By the end of Year 1, three training workshops are held between producer organizations and their territorial organizations on formal documentation of infractions, with 45 participants</p>	<p>1.1 Maps identifying vulnerable perimeters and areas under control by producer organizations.</p> <p>1.2 Training materials and participant lists.</p>	<p>The producer organizations and indigenous organizations are not affected by social conflicts related to increased pressure from extractive and infrastructure projects.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>overall. (Baseline: no such trainings are currently held with these groups)</p> <p>1.3 By the end of Year 2, a digital platform (eg. SMART) and clear protocols for coordination of actions against encroachments in three indigenous lands are under implementation (Baseline = such a platform and protocols do not currently exist).</p>	<p>1.3 Signed agreements between producer organizations and indigenous territorial organizations approving territorial control plans.</p>	
<p>Output 2: Pre-harvest management of agroforestry plots and native cacao forest groves is improved and local capacity built for sustainable agroforestry that is wildlife friendly.</p>	<p>2.1 By the end of Year 2, 283 hectares of existing agroforestry plots and native groves are restored via the implementation of agroforestry systems (pruning, soil management, diversifying canopy shade trees) (Baseline = no restoration work has been done so far).</p> <p>2.2 By end of Year 3, 200 new hectares of agroforestry systems are established (100 by Year 2) (Baseline = 0).</p> <p>2.3 By end of Year 4, 12 training workshops are implemented (2 in Year 1, 4 in Year 2, 4 in year 3, and 2 in Year 4) and 280 indigenous producers (including 60 women) are trained in seedling nursery management, shade trees and canopy for bird diversity, soil fertility, pruning, and implementation of the management plan for wild cacao groves (Baseline = 0).</p>	<p>2.1 Technical and monitoring reports, maps of interventions.</p> <p>2.2 Technical and monitoring reports, maps of interventions.</p> <p>2.3 Training materials, participant lists, course evaluations.</p>	
<p>Output 3: Post-harvest management of cacao and coffee is improved, and local capacity built for diversification of products.</p>	<p>3.1 5 community processing infrastructure “modules” for cacao fermentation and drying and 5 community processing infrastructure “modules” for coffee fruit pulping and fermentation are in place (3 by Year 2, and 2 in Year 3), training 280 producers (Baseline = 0).</p> <p>3.2 12 training workshops are implemented for 280 indigenous</p>	<p>3.1 Technical monitoring reports, photographs of infrastructure.</p> <p>3.2 Training materials, participant lists, course evaluations.</p>	

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>producers (including 60 women) in quality control protocols for post-harvest processing (2 workshops in Year 1, 4 workshops in Year 2, 4 workshops in Year 3, 2 workshops in Year 4) (Baseline = 0).</p> <p>3.3 By end of Year 2, women producers develop an artisanal chocolate bar that allows access to local markets fetching prices of 14USD/Kg. (Baseline = 5 USD/Kg for raw cacao).</p>	<p>3.3 Benefit distribution report and project technical reports.</p>	
<p>Output 4: Marketing strategies for cacao and coffee are improved and diversified, including wildlife friendly certification.</p>	<p>4.1 By end of Year 2, 20 producers are trained on requirements of bird friendly certification and monitoring bird diversity (Baseline = such training is not currently held).</p> <p>4.2 By end of Year 2, 8 APCERL producers receive barista training to enable them to present their bird friendly coffee in local and international fairs (Baseline = no such training is currently held).</p> <p>4.3 By the end of Year 2 a communication campaign targeting urban dwellers as responsible consumers is developed and conducted in La Paz and El Alto (Baseline = no such similar campaign has been conducted in support of indigenous communities engaging in sustainable agroforestry and biodiversity protection)</p> <p>4.4 By end of Year 2, at least one new commercial alliance for coffee and at least one new commercial alliance for cacao increases prices for their products by 10% in comparison to average market prices that year (Baseline to be established in 2019 from commodity markets).</p>	<p>4.1 Certifications, bird diversity monitoring reports.</p> <p>4.2 Training evaluation reports, participant lists.</p> <p>4.3 Audiovisual materials.</p> <p>4.4 Commercial contracts.</p>	

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Activities per Output			
Output 1. Producer organizations and their representative territorial organizations have developed and implemented systems for control and vigilance of their territorial lands.			
<p>1.1 Facilitate participatory mapping of areas under management by producer organizations vulnerable to illegal encroachment. WCS staff will facilitate participatory mapping with producer organizations using supporting satellite imagery. Producers will first map the circuits and areas under their use for both their commercial (cacao and coffee) production and their subsistence (fishing and hunting) activities. Producers will then map existing threats from encroachment and also future threats from planned roads in the region. Overlaying both threats and areas under potential control by different producer organizations and communities will permit an initial distribution of protection responsibilities according to location.</p> <p>1.2 Hold a training workshop with each of the producer organizations on legal requirements for processing illegal incursions into their management areas. WCS staff will coordinate with protected areas and indigenous territorial organizations to hold training workshops on the legal framework and processes for processing illegal incursions into natural resource management areas within indigenous lands.</p> <p>1.3 Test digital platforms and develop protocols for producer organizations and their territorial organizations to take coordinated actions against encroachments. We will work with producer organizations and their territorial organizations exploring the use of SMART and other digital platforms to allow for immediate visualization of incursions and consolidation of reports from different producers. We will also facilitate meetings to develop the necessary protocols for communication, registration of illegal events, and collective response against illegal encroachments.</p>			
Output 2: Pre-harvest management of agroforestry plots and native cacao forest groves is improved, and local capacity built for sustainable agroforestry that is wildlife friendly.			
<p>2.1 Provide technical assistance for producers to restore their agroforestry plots through soil management, pruning and diversification of shade trees. Based on an initial diagnostic of the individual coffee and cacao producer agroforestry plots we will establish the needs for restoration or renewal, as well as the shade and soil fertility conditions. With this information, we will develop an annual action plan for each producer. The technical assistance will be provided through field schools and demonstration plots. This process will be implemented and monitored by field technicians.</p> <p>2.2 Develop a training curriculum and associated training materials for pre-harvest management of agroforestry plots and native cacao forest groves. The technical team will leverage their extensive experience to develop a specific training curriculum for cacao and another for coffee agroforestry management. Supporting training materials will also be developed and will include soil management, seedling production, pruning and shade management.</p> <p>2.3 Implement field schools. The training materials produced under activity 2.2 will be used to implement field schools that will enable peer-to-peer discussion to identify common production problems and alternative solutions. Field schools will be implemented at least once a month according to priorities identified by the producers and organized by geographic location and level of expertise to have a mix of expert producers and new producers.</p> <p>2.4 Install communal seedling nurseries. As a first step, a diagnostic will be carried out to establish the requirement of seedlings and in the field schools of activity 2.3 we will provide guidance on the use of local materials for the seedling nursery and responsibilities for looking after the seedlings. An important step will be finding certified coffee seeds from Central America or Colombia, since locally available seeds are produced from a very limited genetic stock. Cacao seeds will be obtained by taking advantage of the local genetic diversity and we will establish clonal gardens to source the seeds as well as vegetative materials for grafts.</p>			
Output 3: Post-harvest management of cacao and coffee is improved, and local capacity built for diversification of products.			
<p>3.1 Develop a training curriculum and associated training materials for post-harvest processing of cacao and coffee. In the same manner, as for the pre-harvest phase the technical team will leverage their extensive experience to develop a training curriculum for coffee and cacao post-harvest processing focusing on quality control as required for the target niche markets.</p> <p>3.2 Implement field schools. Using the above training materials, we will implement field schools focusing on post-harvest processing of cacao and coffee. Field schools will be implemented at least once a month according to priorities identified by the producers and organized by geographic location and level of expertise to have a mix of expert producers and new producers.</p>			

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>3.3 Install community processing infrastructure for cacao fermentation and drying. We will support producers to establish the necessary infrastructure for post-harvest processing of both coffee and cacao. Each community processing module will include fermentation boxes, drying tables, as well quality control equipment such as balances, thermometers and hygrometers. The construction and installation of the fermentation and drying modules will be established with the participation of the producers and also using the field schools to discuss their design.</p> <p>3.4 Provide technical assistance to women producers to produce an artisanal chocolate bar. We will purchase basic cacao grain roasting, peeling and grinding equipment in order to allow women members of the cacao producing organizations to produce high quality cacao paste. We will also bring specialists to train these producers in the production of granola, chocolate bars and chocolate nibs for the local market.</p> <p>3.5 Install community processing infrastructure for coffee pulping and fermentation. We will provide technical guidance and materials to the coffee producers to establish communal post harvesting processing modules for coffee, consisting of fermentation pits, washing channels and drying tables. We will work closely with the producers to design the modules taking into account the best distribution depending on distance to the different production plots, distance to de-pulping machines and volume produced.</p> <p>Output 4: Marketing strategies for cacao and coffee are improved and diversified, including wildlife-friendly certification.</p> <p>4.1 Identify coffee producers managing agroforestry plots closest to the required standard for bird-friendly certification and develop a work plan to support them through the certification process. We will identify new coffee producers with a potential for bird-friendly certification and provide them with technical assistance throughout the certification process and compliance during the implementation phase. Bird-friendly certification is carried out every two years and will require organic certification that is renewed annually. An internal control system will be developed in order to fulfil requirements of both certifications.</p> <p>4.2 Carry out a training program on bird diversity monitoring with these producers. We will work with newly certified bird-friendly producers and previously certified producers on the use of a bird monitoring protocol based on indicator species of good quality montane forests of the Central Andes and that are mostly recognizable by their distinctive calls. This monitoring is based on a simple monitoring form and is carried out with minimum additional effort in the agroforestry plots. Indicator species include 14 Andean endemics, such as <i>Simoxenops striatus</i>, <i>Myrmotherula grisea</i>, and <i>Phyllomyias weedeni</i>.</p> <p>4.3 Implement a marketing strategy for roasted coffee and processed chocolate for the local market. We will implement a marketing strategy for roasted coffee and processed chocolate for the local market that will involve developing the capacity of producer organizations to manage production flows, have solid administrative capacity and form market linkages for product distribution and sale.</p> <p>4.4 Train between 5 and 10 coffee producers in roasting and as baristas to assist with marketing in local and national fairs. This activity is part of the marketing strategy for roasted coffee and will allow product placement in local fairs, enabling the producers to promote the quality and the story behind the bird-friendly coffee with urban Bolivian consumers.</p> <p>4.5 Develop and broadcast audiovisual materials to develop an urban constituency supporting cacao and coffee produced by indigenous groups. The audiovisual materials will tell the story behind sustainable coffee and cacao to support the marketing strategy. High quality visual materials will be used to develop short spots to be transmitted through television and digital platforms, such as Facebook and YouTube. Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p>			

Annex 2 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements
<p>Impact:</p> <p>Improved territorial control and monitoring of indigenous lands coupled with sustainable agroforestry leads to biodiversity protection, strengthened livelihoods and climate resilience in an approach that can be replicated across Bolivia.</p>		<p>The project has contributed to the generation of capacities for the control and monitoring of more than one million hectares of the territory of the indigenous peoples involved.</p> <p>It has also helped generate sustainable agroforestry production models in the coffee and cacao chains, which contribute to improving the income of producers.</p> <p>At the same time, the productive organizations have strengthened strategies for the protection of their territories.</p>
<p>Outcome</p> <p>Sustainable cacao and shade coffee production by indigenous communities in Bolivia result in increased protection of collective lands, strengthened livelihoods, reduced forest loss and increased avian biodiversity in agroforestry areas.</p>	<p>0.1 By the end of Year 4, within the 1M ha of indigenous lands, a well-established participatory system for documenting and reporting illegal encroachments into areas managed by producer organizations is in place (Baseline = no such system currently exists).</p> <p>0.2 By the end of Year 4, illegal encroachments within the 1M ha of indigenous lands are reported and responded to in joint actions by the indigenous territorial organizations and producer organizations (Baseline = no joint actions).</p> <p>0.3 By the end of Year 4, 280 indigenous Tacana, Lecos and T'simane Mosekene producers (60 women) have increased productivity by 20% (Baseline = 180 kg/ha cacao and 211 kg/ha coffee).</p> <p>0.4 By the end of Year 4, 280 indigenous Tacana, Lecos and T'simane Mosekene</p>	<p>0.1 We developed tools and protocols to report encroachments over 1,036,406 ha of indigenous lands, in the Tacana, T'simane Mosekene and Lecos Apolo Territory.</p> <p>0.2 Illegal encroachments are reported over 1,036,406 ha of indigenous lands.</p> <p>0.3 Cacao producer organizations: Chocolecos (27 women and 23 men), APCA0-Mapiri (5 men and 2 women) and APROCACE (18 women and 22 men). Total cacao: 97 producers (47 women and 50 men). Average production per hectare of cocoa was 252 kg/ha. The final increase over the baseline was 140% (180 kg/ha).</p> <p>Coffee producer organizations: APCERL and APICOA (Apolo), 84 (67 men and 17 women). Yields improved and reached an average of 552 kg of dry coffee/ha. This represents 261% of the project goal (211 kg/ha). Total coffee and cacao producers: 182 (64 women and 67 men). Additionally, 102 producers (45 women and 57 men) jatata cloth producers in Pilon Lajas, included 33 women of essential oils production.</p> <p>Total, 283 beneficiaries</p> <p>0.4 The increase in cocoa revenues at the end of the project was affected by the COVID-19 pandemic, as the quarantine coincided with the harvests in 2020 and 2021. The average income</p>

Project summary	Measurable Indicators	Progress and Achievements
<p>Output 1. Producer organizations and their representative territorial organizations have developed and implemented systems for control and vigilance of their territorial lands.</p>	<p>1.1 By the end of Year 1, areas vulnerable to illegal encroachment in three indigenous territories are identified and mapped in a participatory process (Baseline = no such participatory mapping has yet been done in these areas).</p> <p>1.2 By the end of Year 1, three training workshops are held between producer organizations and their territorial organizations on formal documentation of infractions, with 45 participants overall. (Baseline: no such trainings are currently held with these groups)</p> <p>1.3 By the end of Year 2, a digital platform (eg. SMART) and clear protocols for coordination of actions against encroachments in three indigenous lands are under implementation (Baseline = such a platform and protocols do not currently exist).</p>	<p>1.1 Based on the information generated in Year 1 on areas vulnerable to illegal encroachment within the three indigenous territories, Tacana, Lecos Apolo and T'simane Mosekene, we produced vulnerability maps for each indigenous land (Annex 1)</p> <p>1.2 Additional training and assistance in using an Android app first and other technical instruments (like KoBo Colect) for reporting illegal activities in their territories was conducted with the directorates of CIPLA, CRTM, and CIPTA); and with 6 Tacana communities with a total of 120 participants (Annex 2)</p> <p>1.3. During Year 2 of the project, a server has been established for receiving the reports from illegal activities in the Tacana I and Lecos Apolo territories (Annex 3 and annex 4)</p>
<p>Activity 1.1 Facilitate participatory mapping of areas under management by producer organizations vulnerable to illegal encroachment.</p>		<p>With the participation of WCS's indigenous local partners (CIPTA, CIPLA and CRTM), we produced vulnerability maps during the first year of the project, identifying the most vulnerable areas within each indigenous territory.</p>
<p>Activity 1.2. Hold a training workshop with each of the producer organizations on legal requirements for processing illegal incursions into their management areas.</p>		<p>The training workshops with indigenous representative organizations of the local leader organizations have taken place as part of regular coordination meetings held in their headquarters and they have had to be repeated in each renewal of the community directories. Training materials and legal information are made available as "Supporting documentation" in the app.</p>
<p>Activity 1.3: Test digital platforms and develop protocols for producer organizations and their territorial organizations to take coordinated actions against encroachments.</p>		<p>Currently, CIPTA and CIPLA have threat monitoring systems in their territories that are linked to the monitoring programs of both organizations and these systems have technological resources through the use of specific applications that automate processes and centralize reports in a central server that can be accessed by the parent organizations. In addition, in the case of overlapping areas between indigenous territories and protected areas (Pilon Lajas and Madidi) concurrent actions have been established to protect the territories from common threats.</p>

Project summary	Measurable Indicators	Progress and Achievements
<p>Output 2. Pre-harvest management of agroforestry plots and native cacao forest groves is improved, and local capacity built for sustainable agroforestry that is wildlife friendly</p>	<p>2.1 By the end of Year 2, 283 hectares of existing agroforestry plots and native groves are restored via the implementation of agroforestry systems (pruning, soil management, diversifying canopy shade trees) (Baseline = no restoration work has been done so far).</p> <p>2.2 By end of Year 3, 200 new hectares of agroforestry systems are established (100 by Year 2) (Baseline = 0).</p> <p>2.3 By end of Year 4, 12 training workshops are implemented (2 in Year 1, 4 in Year 2, 4 in Year 3, and 2 in Year 4) and 280 indigenous producers (including 60 women) are trained in seedling nursery management, shade trees and canopy for bird diversity, soil fertility, pruning, and implementation of the management plan for wild cacao groves (Baseline = 0).</p>	<p>2.1 By the end of the project there is a total of 404 hectares under management; of which 378 hectares are coffee in the production areas and includes an adjusted forest area of 177 hectares. The remaining 26 hectares are established cocoa plots (Annex 8).</p> <p>2.2 At the end of the project, 176.8 hectares of agroforestry systems have been established, 123 in coffee and 53.7 in cocoa. (88.5% of the goal) (Annex 8).</p> <p>2.3 In year 2, 8 field schools were held for coffee and cocoa producers. In year 3, 9 field schools were held with coffee and cocoa producers. In year 4, 2 field schools were carried</p> <p>The accumulative number of trained producers were: 528 (158 women and 370 men, ratio 1:2,34) in 19 field schools (Annex 9).</p>
<p>Activity 2.1. Provide technical assistance for producers to restore their agroforestry plots through soil management, pruning and diversification of shade trees.</p>		<p>Coffee and cocoa producers received regular technical assistance during year 1 and 2 of the project through regular field schools. However, during the last year of the project, Covid-19 restrictions prevented field schools from being held, but local technicians were responsible for technical assistance with field visits. In December 2020, an exchange of experiences with the coffee producers of Coroico took place.</p>
<p>Activity 2.2: Develop a training curriculum and associated training materials for pre-harvest management of agroforestry plots and native cacao forest groves</p>		<p>In the native cocoa production chain under agroforestry systems we distribute and implement manuals: 1. Quality control, 2. Good management practices of native cocoa, and 3. Post-harvest in native cocoa.</p> <p>Five manuals have been developed for coffee:</p> <p>1. Soil management, 2. Establishment of coffee nurseries, 3. Preparation and use of bioinputs, 4. Coffee harvesting and 5. Post-harvest process.</p> <p>In the last year of the project we developed 2 manuals for the quality control of roasted coffee: 1. Basic guide for cupping and 2. Good handling practices for roasted coffee (Annex 27)</p>
<p>Activity 2.3: Implement field schools.</p>		<p>Until the third year of the project, pre-harvest field schools were developed continuously with coffee and cocoa producers. Eight in the second year for coffee and 9 in Y3. In Year 4, due to</p>

Project summary	Measurable Indicators	Progress and Achievements
		<p>meeting restrictions and the difficulty of access to the plots, 2 field schools were held for coffee and 1 for cocoa (Annex 9).</p> <p>There was also an exchange of knowledge between the coffee producers of Teoponte (APCERL) and the producers of Coroico.</p>
<p>Activity 2.4: Install communal seedling nurseries.</p>		<p>The production of coffee and cocoa seedlings is carried out permanently in communal nurseries, such as the one in the community of San Jose de Pelera, as well as in family nurseries for coffee production.</p> <p>During the project a total of 154,500 coffee seedlings and 22,000 cocoa seedlings have been produced</p>
<p>Output 3. Post-harvest management of cacao and coffee is improved, and local capacity built for diversification of products.</p>	<p>3.1 5 community processing infrastructure “modules” for cacao fermentation and drying and 5 community processing infrastructure “modules” for coffee fruit pulping and fermentation are in place (3 by Year 2, and 2 in Year 3), training 280 producers (Baseline = 0).</p> <p>3.2 12 training workshops are implemented for 280 indigenous producers (including 60 women) in quality control protocols for post-harvest processing (2 workshops in Year 1, 4 workshops in Year 2, 4 workshops in Year 3, 2 workshops in Year 4) (Baseline = 0).</p> <p>3.3 By end of Year 2, women producers develop an artisanal chocolate bar that allows access to local markets fetching prices of 90Bs/Kg. (Baseline = 35 Bs/Kg for raw cacao).</p>	<p>3.1 Two post-harvest modules were built for cocoa producers. One for the Chocolecos Association and one for the Mapiro Association. These two modules directly benefit 57 producers (50 Chocolecos Association and 7 Cacao Mapiro Association.)</p> <p>For coffee producers, a total of 16 modules were built (4 in Y1 1 and 12 in Y2). These post-harvest modules benefit a total of 32 coffee-growing families from Apolo.</p> <p>Total modules built: 2 community cocoa modules and 16 family coffee modules.</p> <p>Direct beneficiary 90 producers</p> <p>316 producers have been trained in the post-harvest process of coffee and cocoa. (indicator 3.2 Annex 15)</p> <p>3.2 Post-harvest workshops and field schools were conducted continuously until the third year of the project. Four post-harvest workshops, for cocoa and cacao in 2018. Four in 2020 and three in 2021. (Annex 15)</p> <p>A total of 12 training events were held for a total of 316 coffee and cocoa producers (115 women and 201 men).(Annex 15)</p> <p>3.3 The production of chocolate pastes is an ancestral activity in the indigenous cocoa-producing communities. Through Origen they have diversified the forms and products based on chocolate. Improving the formulation and presentation of the products has allowed them to improve the price to the consumer in local markets.</p> <p>The project's baseline is Bs. [REDACTED] of dry cocoa beans. One kg of cocoa can be used to produce 6 pastes weighing 110 grams of 100% cocoa. These pastes are sold in the local market at Bs. [REDACTED] (USD [REDACTED]). The sale of 6 pastes allows them to earn Bs. [REDACTED].</p>

Project summary	Measurable Indicators	Progress and Achievements
<p>Activity 3.1 Develop training curriculum and associated training materials for post-harvest processing of cacao and coffee.</p>		<p>The coffee and cocoa protocols have been adjusted during the execution of the project. For coffee, emphasis has been placed on the fermentation process by controlling the optimum pH for the end of fermentation.</p> <p>For cocoa, there is an established protocol that includes a control of fermentation days (4 days) by controlling the temperature of the fermented cocoa. Drying begins with pre-drying (1-2 days) and then drying until the beans reach 9% humidity.</p> <p>These protocols have allowed to improve the quality of the coffee beans, reaching cup scores of 8.6, positioning it as a specialty coffee. (Annex 13)</p> <p>The quality control in cocoa places it as a first class, fine aroma coffee (Annex 12)</p>
<p>Activity 3.2 Implement field schools.</p>		<p>The post-harvest field schools focused on quality control of the fermentation, drying and storage processes. (Annex15)</p> <p>During the third and fourth years, pH control was included in the coffee fermentation process.</p> <p>The harvested coffee and cocoa beans are subjected to quality controls in order to be able to make the offer to buyers.</p>
<p>Activity 3.3 Install community processing infrastructure for cacao fermentation and drying.</p>		<p>During the first year, a post-harvest module was constructed for the Chocolecos Association in the community of San Jose de Pelera. The module consisted of : A fermentation area with wooden crates and a drying area with 3 pre-drying tables and 6 drying tables for cocoa. These facilities were expanded with contributions from an FAO project.</p> <p>During the first year, with counterpart funds, a fermentation module and two drying sheds were built for the Mapiri cocoa producers.</p>
<p>Activity 3.4 Provide technical assistance to women producers to produce an artisanal chocolate bar.</p>		<p>In the first year, the responsible of the chocolate factory (Juan Carlos Espinoza) was trained by Jose Carbo (Spanish chocolatier), two indigenous women and a field technician were trained by experts from Ecuador (Jaime Freyre and Paulina Pino) in a course called "Bean to Bar". During the year 2 Juan Carlos Espinoza replicated the course in the community of San Jose de Pelera with 18 participants, of which 12 were women and 6 men. In the last year of the project, a second bonbon making course was held with 23 participants, 16 women and 7 men. (Annex 19)</p> <p>In total, 30 women have been trained in the production of chocolate products.</p>
<p>Activity 3.5 Install community processing infrastructure for coffee pulping and fermentation.</p>		<p>During project implementation, a total of 16 post-harvest coffee processing infrastructures were constructed with the coffee producers of Apolo. These modules consisted of two fermentations and washing pits, a belt channel and a coffee cherry pulping machine.</p> <p>During the first year, with counterpart funds, 4 modules were built and during year 2, 16 were completed. (Annex 11)</p>

Project summary	Measurable Indicators	Progress and Achievements
<p>Output 4: Marketing strategies for cacao and coffee are improved and diversified, including wildlife friendly certification.</p>	<p>4.1 By end of Year 2, 20 producers are trained on requirements of bird friendly certification and monitoring bird diversity (Baseline = such training is not currently held).</p> <p>4.2 By end of Year 2, 8 APCERL producers receive barista training to enable them to present their bird friendly coffee in local and international fairs (Baseline = no such training is currently held).</p>	<p>4.1 In the first year, a workshop was held with the participation of 25 APCERL producers. The topics addressed were the importance of biodiversity, bird monitoring and market opportunities with bird friendly certification.</p> <p>Since the second year, field technician Javier Condori has been training producers during monthly field visits in bird watching, use of binoculars and bird registration. The bird identification based on the Bolivian Bird Guide and the collaboration of some bird specialists from Armonia and other organizations.</p> <p>We have a database with 241 recorded species of which 128 species have photographic records. The photos were shared on social networks Facebook and Instagram of APCERL, Origen and Javier Condori. (Annex 7)</p> <p>For the second year of the project, 13 producers were certified Bird Friendly. By the end of the project, there are 20 producers to be certified "Bird Friendly". (Annex 17)</p> <p>4.2 In the first year, 3 young women (Dayana Kea, Sandra Alcon and Anita Condori), daughters of coffee producers, attended a roasting, barista and cupping course with accredited trainers from SCA (Speciality Coffee Association) in the city of Bogota, Colombia. (Annex 18)</p> <p>They participated in international and national barista events and were qualified to be judges in the Presidential Coffee Competition in Bolivia in 2019 and 2021</p> <p>They also participated in a national competition on coffee elaboration with the "Aeropress" method to represent Bolivia in the international tournament in England. One of the young women (Dayana Kea) won second place among 36 baristas from all over Bolivia. (Annex 19)</p> <p>The young women also tasted with buyers from Spain (Nomad Coffee, Yasser Rios) and the United States (Krayol Coffee, Joseph Stazzone), receiving feedback to improve their cupping skills.</p> <p>In the second year of the project, a chocolatier from Barcelona (Joan Carbó) arrived for training in chocolate making with the head chocolatier (Juan Carlos Espinoza), and a young man from the San Jose de Pelera community, son of a cocoa producer (Aldahair Luque).</p> <p>In 2019, a "Bean to Bar" course was held with two Ecuadorian specialists (Jaime Freyre and Paulina Pino), which was attended by two indigenous women (Dimelsa Apuri and Sofia Vasquez) , one technician of the Chocolecos Association (Rene Marquez) and the chocolates responsible (Juan Carlos Espinoza) (Annex 20).</p>

Project summary	Measurable Indicators	Progress and Achievements
	<p>4.3 By the end of Year 2 a communication campaign targeting urban dwellers as responsible consumers is developed and conducted in La Paz and El Alto (Baseline = no such similar campaign has been conducted in support of indigenous communities engaging in sustainable agroforestry and biodiversity protection).</p> <p>4.4 By end of Year 2, at least one new commercial alliance for coffee and at least one new commercial alliance for cacao increases prices for their products by 10% in comparison to average market prices that year (Baseline to be established in 2019 from commodity markets).</p>	<p>Juan Carlos Espinoza also conducted two field schools in the community of San Jose de Pelera. The first school was held during year 3 with the attendance of 18 producers (12 women and 6 men) and, in the last year of the project, a training for the elaboration of bonbons with 23 attendees: 16 women and 7 men.</p> <p>A total of 8 producers (5 women and 3 men) have been trained in barismo, tasting and elaboration of fine chocolates during the project. The training has been replicated to 41 chocolate producers.</p> <p>4.3 The communication campaign reaches the urban public in the cities of La Paz and El Alto through digital platforms: Website (www.orgentienda.com), Facebook campaigns (1800 followers) and Instagram (770 followers), @OrigenBo.</p> <p>Producers and baristas participated in different fairs in La Paz: "Eat out", "Ñam", "El chef eres tu". Salon de Chocolate Bolivia 2017 and 2021. During 2020, there were no fairs due to COVID-19.</p> <p>In the second year, the adequacy of a space for the sale of products and services was initiated. Due to the pandemic, the work was stopped for 3 months. The producers' company was registered in August 2018. In the second year of the project, organic certification and operating permits were obtained. By the end of 2020 all the permits for coffee and chocolate processing were obtained and, additionally the export permits. (Annex 26. Permits for Origen-Chomateo SRL)</p> <p>Audiovisual material is available: 4 short videos of the coffee, cocoa, soap and origin promotion ventures.</p> <p>This company allows a direct connection with consumers of products, but also with buyers of Bolivian coffee. We connected with coffee buyers Nomad Coffee, from Spain, Kreyol Coffee (USA) and "Muchas Manos" (England), with whom we closed coffee export contracts.</p> <p>In November 2020, we received the visit of Nio Tatewaki from Coffee Break magazine of the All Japan Coffee Association, to do a report on sustainable coffee in Bolivia. The report will be published in the 101st edition of the magazine in August 2021.</p> <p>4.4 At the end of the project we have a portfolio of national and international clients (Annex 10)</p> <p>Until the second year of the project a micro lot of native cocoa was sent to the restaurant Celler Can Roca in Girona, Spain. In the same year, a shipment was sent to NOMAD COFFEE in Barcelona, Spain.</p> <p>In the third year, agreements for the sale of roasted coffee and processed cocoa were made with restaurants and coffee shops such as: Gustu, Hierro Brothers, Bunna Coffee, Cafe Pigalle, among others.</p>

Project summary	Measurable Indicators	Progress and Achievements
		<p>We also exported coffee to Kreyol coffee and chocolate paste to Denmark.</p> <p>In the last year of the project, the agreement with Kreyol Coffee from USA and Muchas Manos Ltda. from England was consolidated and a new export of chocolate paste to Denmark was made.</p> <p>The baseline for the coffee price was taken from the average reported by ICO (International Coffee Organization) for the year 2019: █████ USD/kg of green coffee gold.</p> <p>In the 2019 harvest, the average selling price of coffee in the local and export coffee market was █████ USD/kg (25% more than the baseline). In the 2020 harvest the average price of coffee in the local and export market was █████ USD/pound. (29% more than the baseline).</p> <p>In case of cocoa, according to the ICCO (International Cocoa Organization) in 2019 cocoa had an average price per ton of dry beans of USD █████. The average selling price of cocoa beans in the domestic market was Bs █████ of dry beans. (Annex 10)</p>
<p>Activity 4.1 Identify coffee producers managing agroforestry plots closest to the required standard for bird-friendly certification and develop a work plan to support them through the certification process.</p>		<p>The "Bird Friendly" certification began in 2014 with 7 producers. The next certification period (2017) took place in the first year of the project and 13 producers were certified. In 2020, the Smithsonian Museum established that due to the COVID-19 pandemic, the 2017 certificate will have one more year of validity. In the last year of the project, 20 producers are eligible for bird friendly certification (July 2021). (Annex 5.)</p>
<p>Activity 4.2 Carry out a training program on bird diversity monitoring with these producers.</p>		<p>During the first year the farmers received information about bird diversity through a student (Carlos Landivar) who did his Master's thesis in the coffee plantations of Teoponte (Annex 23)</p> <p>The field technician, Javier Condori, who also carries out the bird registry, was responsible for training the farmers in bird watching, use of binoculars, and bird identification according to the Bolivian Bird Guide.</p> <p>Last year (2020-2021), with counterpart funds, the book "Aves de los cafetales de Teoponte" was printed and distributed among the farmers and as promotional material (Annex 7)</p>
<p>Activity 4.3 Implement a marketing strategy for roasted coffee and processed chocolate for the local market.</p>		<p>In 2019, producers and Origen participated in local fairs such as: "Eat Out", "You are the Chef", "Feria Nam Bolivia" and the "Salon of Chocolate Bolivia 2019" (sponsored by the Ministry of Foreign Affairs and the National Cocoa Program). In 2020, no fairs were held due to COVID -19 restrictions.</p> <p>In 2021, the Salon of Chocolate 2021.</p>
<p>Activity 4.4 Train between 5 and 10 coffee producers in roasting and as baristas to assist with marketing in local and national fairs.</p>		<p>During the first year of the project, 3 young women (producer's daughters) were trained in coffee roasting and barista training. With matching funds, they trained as roasters and baristas by experts in Colombia authorized by SCA (Special Coffee Association) (Annex 18).</p>

Project summary	Measurable Indicators	Progress and Achievements
		<p>Likewise, two indigenous women and chocolate technician Juan Carlos Espinoza were trained in chocolate making (bonbons) by a couple of experts from Ecuador (Jaime Freyre and Paulina Pino) (Annex.20).</p> <p>In addition, the technician Juan Carlos Espinoza gave two workshops to train 10 cocoa producers in the production of chocolate and bonbons.</p>
<p>Activity 4.5 Develop and broadcast audiovisual materials to develop an urban constituency supporting cacao and coffee produced by indigenous groups.</p>		<p>During the implementation of the project, the following audiovisual materials have been produced to support the link between producers and consumers in order to promote sustainable production and consumption systems.</p> <p>2 brochures on coffee and cocoa (2018) 1 video on coffee (2019) Link al video 1 video on cocoa (2019) 1 video about the Origen store (2020)</p> <p>On the other hand, campaigns and posts have been made on the origen Facebook page with 1800 followers and Instagram with 770 followers.</p>

Annex 3 Standard Measures

Code	Description	Total	Nationality	Gender	Title or Focus	Language	Comments
Training Measures							
1a	Number of people to submit PhD thesis						
1b	Number of PhD qualifications obtained						
2	Number of Masters qualifications obtained	1	Bolivian	male	Environmental services of the Teoponte coffee plots (APCERL)	English	
3	Number of other qualifications obtained						
4a	Number of undergraduate students receiving training						
4b	Number of training weeks provided to undergraduate students						
4c	Number of postgraduate students receiving training (not 1-3 above)						
4d	Number of training weeks for postgraduate students						
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification (e.g., not categories 1-4 above)						
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)						
6b	Number of training weeks not leading to formal qualification						
7	Number of types of training materials produced for use by host country(s) (describe training materials)						

Research Measures		Total	Nationality	Gender	Title	Language	Comments/ Weblink if available
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)						
10	Number of formal documents produced to assist work related to species identification, classification and recording.	1	Bolivia		Birds of the coffee plantation of Teoponte	Spanish	
11a	Number of papers published or accepted for publication in peer reviewed journals						
11b	Number of papers published or accepted for publication elsewhere						
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country						
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country						
13a	Number of species reference collections established and handed over to host country(s)						
13b	Number of species reference collections enhanced and handed over to host country(s)						

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work						
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.						

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)		
21	Number of permanent educational, training, research facilities or organisation established		
22	Number of permanent field plots established	12	8 coffee demonstrative plots and 4 for cacao

Financial Measures		Total	Nationality	Gender	Theme	Language	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work (please note that the figure provided here should align with financial information provided in section 9.2)	████████					Asata, Banco Fie and Nordeco

Annex 4 Aichi Targets

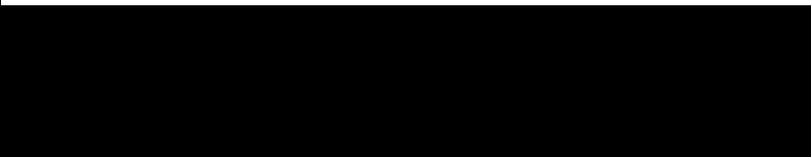
	Aichi Target	Tick if applicable to your project
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	✓
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	✓
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	✓
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	✓
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	
13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	✓

14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	✓
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	✓
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	✓
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	✓
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	✓
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

Annex 5 Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. web link, contact address etc)

Annex 6 Darwin Contacts

Ref No	24-11
Project Title	Wildlife-friendly agroforestry and sustainable forest management in Bolivian indigenous territories
Project Leader Details	
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Fax/Skype	
Email	
Partner 2 etc.	
Name	
Organisation	
Role within Darwin Project	
Address	
Fax/Skype	
Email	

Annex 7 Supplementary material (optional but encouraged as evidence of project achievement)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	√
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	√
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 10)?	√
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	√
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
Have you involved your partners in preparation of the report and named the main contributors	√
Have you completed the Project Expenditure table fully?	√
Do not include claim forms or other communications with this report.	