

Darwin Initiative Main Annual Report

To be completed with reference to the “Project Reporting Information Note”:

(<https://www.darwininitiative.org.uk/resources-for-projects/information-notes-learning-notes-briefing-papers-and-reviews/>).

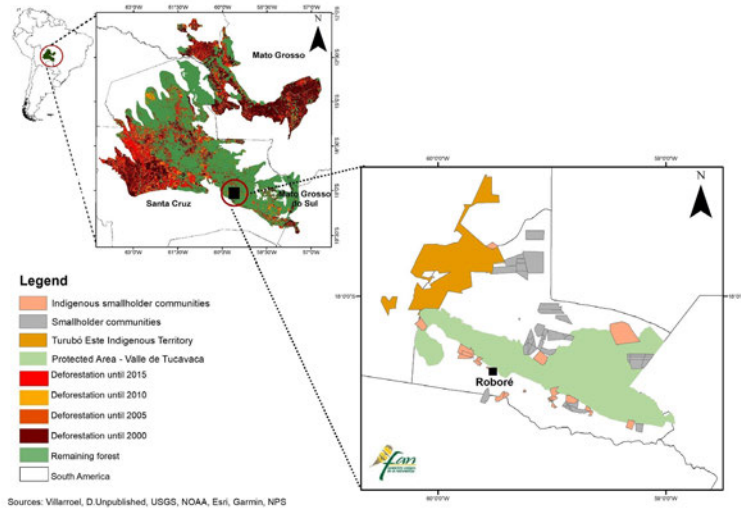
It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2022

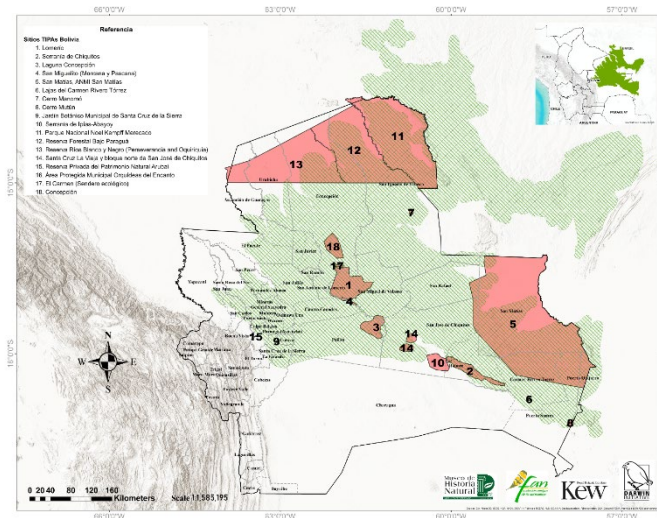
Darwin Initiative Project Information

Project reference	Main project 26-024
Project title	<i>Improving indigenous Bolivian Chiquitano people’s livelihoods through sustainable forest management</i>
Country/ies	Bolivia and Brazil
Lead partner	Royal Botanic Gardens, Kew, United Kingdom RBGKew
Project partner(s)	NGO Fundación Amigos de la Naturaleza, Santa Cruz, Bolivia FAN Museo de Historia Natural Noel Kempff Mercado, Universidad Autónoma, Gabriel Rene Moreno, Santa Cruz, Bolivia MHNNKM Facultad de Ciencias Agrícolas, Universidad Autónoma, Gabriel Rene Moreno, Santa Cruz, Bolivia UAGRM PlantLife international, Salisbury, United Kingdom PlantLife
Darwin grant value	Awarded £320.201 Total project value after latest accepted change request January 2022 = £449,479
Start/end dates of project	July 2nd 2019 – 30th September 2022 = 39 months
Reporting period (e.g. April 2021 – March 2022) and number (e.g. Annual Report 1, 2, 3)	April 2021 – March 2022, Annual Report 3
Project Leader name	Dr. Bente B. Klitgård
Project website/blog/social media	Facebook: @MuseoNKM, @FANBolivia Twitter: @KewAmericas, @KewScience. @FANBolivia Annex 4.3.4cii Project dissemination and promotion
Report author(s) and date	Bente Klitgård, Ruth Delgado, Maira Martinez, Daniel Villaroel, Marisol Toledo

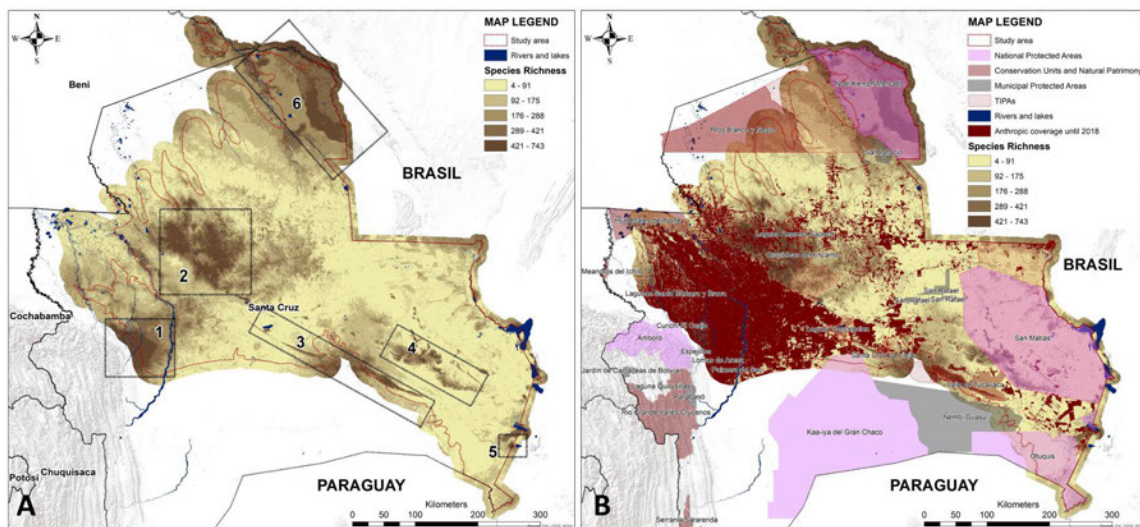
1. Project summary



Map 1. Project location. Map to the left shows position in Bolivia and extent of the Chiquitano ecoregion. Map to the right shows the locations of the indigenous smallholder communities engaged in the project.



Map 2. The network of 18 important Plant Areas sites (IPAs) documented and assessed for conservation prioritisation in the Chiquitano Ecoregion.



Map 3A shows the six centres of useful plants identified in Activity 3.4b, and map 3B these six centres with the IPA network, national parks and protect areas overlaid.

The globally unique Bolivian Chiquitano ecoregion is under increasing pressure from expanding soybean agriculture, cattle ranching, logging, and subsistence farming. We will enable the government of Santa Cruz Darwin Initiative Annual Report Template 2022

(an autonomous Bolivian department) to implement an effective conservation strategy by: 1) providing diversification options for livelihoods in sustainable forest management, 2) engaging key stakeholders (indigenous forest communities, soybean farmers, and cattle rangers), 3) building capacity for assessing IUCN extinct risk, and 4) implementing Tropical Important Plant Area (IPA) criteria in Chiquitano forest conservation.

The project is addressing increasing annual net loss of the globally unique Chiquitano dry forest ecoregion, representing the world's largest expanse of intact tropical dry forest, home to 3,500 plant species, of which 200 are endemic. Furthermore, it provides ecosystem services and livelihoods for the rural population and is highly vulnerable to extreme abiotic events, including droughts and large fast-spreading fires, both exacerbated by climate change, unsustainable management practices and deforestation. These problems were identified in Bolivia's 2025 Patriotic Agenda and its National Biodiversity Strategy, "La ley de la Madre Tierra".

In the decade 2004-2014, the Bolivian economy grew at an average annual rate of 4.7%, with the extreme poverty rate in the urban indigenous population falling from 37% to 14%, while 52% of the rural indigenous population still suffers extreme poverty. Amongst those are the 145,000 Chiquitano people, a Bolivian lowland ethnic group, whose livelihoods depend on logging and subsistence farming. In 2021, the economy rebounded strongly from the COVID19 pandemic, expanding at the fastest pace since the height of the commodities boom in 2013. Agriculture contributes 17% of Bolivia's GDP.

Concurrent with economic growth, Bolivian annual net loss of forest rose from 200mill. ha to 346mill. ha between 2015-2019, with 75% affecting the eastern lowlands, mainly the Chiquitano dry forest ecoregion, which suffered a 24% net loss to-date (<https://fb.watch/cGqQYg6ym7/>). Bolivian national policy, increased international market demand for soybeans and non-sustainable agricultural models are the main drivers of the forest loss, pushing indigenous subsistence farmers off their land and increasing risk of worker exploitation. Soybean alone represents Bolivia's third-biggest source of foreign export, the government planned to boost the area land-cultivation from 2.7mill. ha in 2014 to 4.5mill. ha by 2020.

The project aims to mitigate the threats to the ecoregion and its indigenous people through sustainable practices to reduce net forest loss from agriculture through:

- 1) addressing poverty in Chiquitano indigenous communities,
- 2) engaging soybean farmers and cattle farmers,
- 3) building capacity in applying practical, scientifically rigorous IUCN species conservation assessment and IPA-tools to identify site-based conservation priorities, and
- 4) equipping decision makers with these tools.

2. Project stakeholders/ partners

During the year 3 of the project, collaboration has been improved with key stakeholders such as indigenous organisations (Central Turubó and CICHAR), municipal governments (San Jose de Chiquitos and Roboré), and subnational government (Santa Cruz). Meetings were held with these stakeholders to report on project progress and validate products such as the value chain strategy. In addition to these, new key actors have been identified with whom to join forces: the ITERS technology institute and the civil society organisation CEPAC. All of the above-mentioned actors show commitment and are interested in an active role in forest conservation and the improvement of the livelihoods of indigenous communities (Evidence, Annex 4: 2.4 and section 11).

In previous years, coordination was limited by COVID19 and forest fire emergencies, political problems and elections of new authorities (see section 13). Unfortunately, the relationship with the Activa company, which was very positive in the first year, ceased because the company closed early 2021 due to the economic crisis caused by the COVID19 pandemic. Since then, we have been looking for a company with a similar profile with which a partnership could be established. Among the possible companies is Indelcusi.

Although contact is maintained with the company Barucas - Bolivia, this relationship has not deepened as its focus is the export of almonds with little added value. The value chain strategy, developed during the project, indicates that it is better to sell locally than to export. In this way, more value can be added to the product and a greater proportion of the profits stay in the community. Barucas only exports, so other allies such as Ecomanos and Saberes Ancestrales have been sought.

The project leader and the main partners, FAN and MHNNKM, have been involved in planning, monitoring and evaluation, and decision making throughout the project. A high degree of complementarity between the project partners was recognised at the inception. In three years, the project has proven that this degree of complementarity is bearing fruit for project communication, management, monitoring and ultimately delivery.

A strength of the partnership is that clear communication channels were established between the partners from the outset of project development. The roles of each of the main partners were clearly defined. One person was designated by each organisation to coordinate the implementation of project activities. Through these people, regular bi-weekly project monitoring and update meetings are held. We also hold quarterly whole team update and planning meetings. Over the two-year COVID19 pandemic, we have taken advantage Microsoft Teams, Microsoft Sharepoint and WhatsApp for meetings, and for sharing information and documents.

The RBGKew project leader was able to spend the month of March 2022 working with the teams in Bolivia, which was immensely useful after two years of virtual project activities and management.

The Darwin project budget allowed us to contract a consultant from MHNNKM for a period of two months in each of years 1, 2, and 3 in connection with field work and the logistics before and after expeditions. However, in the meantime awards from William Cadbury Trust and the Ingram Trust has allowed us to contract a Bolivian biologist, Lic.Biol. Maira Martinez Ugarteche, onto to the project full-time from February 2020 to September 2022 to deliver the MHNNKM's commitments under Outputs 3 and 4. Having a full-time person responsible for project activities based at the MHNNKM has also improved communication with that partner.

These strengths, of clear communication and well-defined roles, have facilitated moving forward with the project goals despite the environmental, political, and COVID19 issues of years 1 through 3. (Evidence, sections 3.4 and 13 for details).

3. Project progress

3.1 Progress in carrying out project Activities

Activity 1.3. Acquisition and installation of fruit processing equipment. Activity completed. Equipment for processing chiquitana almond and pesoé seed was manufactured. The design of the equipment considers local infrastructure and service conditions and allows for a good quality product (activity 1.7). The equipment was delivered to the communities at the beginning of the harvesting season in July 2021. The communities have provided both the environments in which to install the equipment and the wooden handles and supports as an in-kind contribution. The equipment purchased is being used in the good practice trainings (activity 1.4 and 1.5) (Evidence, Annex 4: 1.3.a).

Activity 1.4. Training in sustainable forest management and good NTFP harvesting practices. Training on sustainable forest management and good practices in the collection of chiquitana almonds, pesoé seed and copaibo oil was carried out using the equipment acquired (activity 1.3). 163 people (45% women) participated in the six communities of the project. (Evidence, Annex 4.1.3.b and **note *** at the end of the section).

Activity 1.5. Training in good NTFP processing practices. Training in good processing practices for chiquitana almond, pesoé and copaibo undertaken using the equipment acquired in activity 1.3. Participated 84 people (58% women) in four communities of the project (Evidence, Annex 4.1.4.a and **note *** at the end of the section).

Activity 1.6. Monitoring and technical assistance in good NTFP harvesting and processing practices. Technical assistance was provided to four project communities on the collection and processing of chiquitana almonds, pesoé seed and copaibo oil during the harvest and post-harvest period. This helped to put into practice what was learned during the trainings (Activity 1.4 and 1.5) and helped to resolve doubts about the implementation of the processes and address situations not covered during the training (Evidence, Annex 4.1.4.b and **note *** at the end of the section).

Activity 1.7. Production and dissemination of 2 Best Practice Manuals in the harvesting and processing of 2 NTFP species. Activity completed for year 3. The presentation of the text and graphics of the three manuals (one more than the target) was improved to facilitate comprehension and make the material more attractive. The three manuals on best collection and processing practices for three species: chiquitana almond, copaibo and pesoé were printed in Q4 of Y2. Distribution will be completed in Q1 of year 3 1/2. In the meantime, the approved technical version of the manuals has been used in activities 1.4 and 1.5 (Evidence, Annex 4: 1.5).

Activity 2.2a. Facilitate the organisation and legal constitution of harvesters in a community forest enterprise. Activity completed. Training in producer organisation has been provided to six communities that have the potential to commercially harvest non-timber forest products (as identified in Activity 1.2 and 2.2b). They have been supported to formally organise themselves, and four community forest enterprises are now officially functioning, one per community, with a total of 55 active members. Each community forest enterprise has by-laws and an operating structure reviewed and approved by the assembly of members. Their meetings and main agreements are recorded in minute books (Evidence, Annex 4: 2.2a).

Activity 2.2b. Specialist consultants to elaborate a market survey and a bio-business plan for the forest enterprise. Activity completed. Four bio-business plans have been elaborated for each of the community forest enterprises in a participatory manner. The final documents have been reviewed and approved by the assembly of members and implementation has started (Evidence, Annex 4: 2.2b).

Activity 2.2c. Technical assistance in business management (associativity, accounting, negotiation, sales, and marketing) by FAN. Activity completed for year 3. Technical assistance in business management (organisation of a community enterprise, accounting, negotiation, sales and marketing) continues to be provided to four community forestry enterprises. The technical assistance is based on the implementation of the documents elaborated with the active participation of the communities. Thus, regulations and structure (activity 2.2a) as well as market studies and bio-business plans (activity 2.2b) are being used (Evidence, Annex 4: 2.2c).

Activity 2.3. Exchanges of experience with transboundary communities in Brazil on NTFP harvesting and fair and equitable benefit sharing, facilitated by ECOA. Due to the severity of the COVID19 pandemic in Brazil, this activity could not be carried in year 3. Considering that the trend of the pandemic in Brazil has not changed, and that communities would benefit from face-to-face events, visits to Bolivian communities in nearby municipalities that have more than 5 years' experience in commercial NTFP harvesting are planned for Q1 and Q2 of year 3 ½. (Note * at the end of the section).

Activity 2.4. Development of value chain strategy and fair and equitable benefit sharing with stakeholders. Activity completed. Value chain strategy and benefit sharing assessment developed for the three priority species of the project: chiquitana almond, copaibo and pesoé. This has been validated with key value chain actors: leaders of community forestry enterprises, leaders of indigenous organisations, companies and local government representatives (Evidence, Annex 4.2.4).

Activity 2.5. Facilitate alliances between the community forest enterprise and companies based on fair and equitable benefit sharing. Activity completed for year 3. Based on these guidelines of the value chain strategy (activity 2.4), progress is being made in alliances between communities and value chain actors. Contact has been maintained with three companies interested in establishing alliances with community forest enterprises: Ecomanos, Indelcusi and Saberes Ancestrales. Commercial agreements were signed with Saberes Ancestrales for the 2021 harvest. It is expected to renew this agreement, and sign agreements with the other two companies, for the 2022 harvest during Q1 and Q2 of year 3 ½ (Evidence, Annex 4: 2.5).

Activity 2.6. Summarise the experience and lessons learnt by the 5 indigenous communities and the community forest enterprise in sustainable forest management and produce (short video) to promote uptake in more communities. Activity completed for year 3. The summary of lessons learned has been developed for year 3 of the project (Evidence provided in Section 8).

Activity 3.3. Document, map, and identify 15-20 Important Plant Areas (IPAs) in the Chiquitano dry forest ecoregion. The data from the Chiquitano IPA network was shared with the GADSC administration by year 2; and we followed up with the new administration and share the data again in year 3 (Evidence, Annex 4.4a.). On the portal developed and hosted by RBGKew, each of the 18 IPA site documentations is scientific paper with a DOI. We uploaded the site documentation including maps to the relatively new and untested RBGKew portal, in year 2 (Evidence, Annex 4.3.3). In the process we have run into several obstacles – partly due to the novelty of the portal and partly due to the English/Spanish language barrier. This has led to a decision to translate and publish the network in Spanish on the portal. In addition, we decided to publish the network of 18 sites in hardcopy and in Spanish rather than English to ensure that the data are available where most needed. See activity 3.4ci for more information.

Activity 3.4b. Centres of high floristic diversity of useful plant species identified, and these incorporated into already identified IPA sites. We completed this activity in year 2. However, given high level of interest amongst project stakeholders, we also undertook a study – modelling the distribution patterns and assessed the threats to the useful plants of the Chiquitano ecoregion. This was possible thanks to the skills of project staff Daniel Villarroel, GBIF (Global Biodiversity Information Facility) and a database of +2,000 useful plants of the ecoregion hosted by FAN. A manuscript titled “Centros de riqueza de plantas útiles y sus patrones de distribución en la región de la Chiquitania (Santa Cruz, Bolivia)” is currently under review in the journal *Biología Neotropical*. (Evidence, Annex 4.3.4b). The results of this study have already gained a high level of interest amongst project stakeholders, including GADSC and indigenous communities, who value their useful plants higher than the presence of rare and endemic plants, something we in hindsight might have predicted and given higher priority in the project design. However, this is the first IPA project in Latin America which includes the diversity of useful plants; and it will serve as a model for future IPA projects in tropical countries.

*Activity 3.4ci. Manuscript of Chiquitano ecoregion priority habitat list and IPA sites submitted to peer-reviewed journal *Kempffiana*.* In workshops we have revised the classification of habitats connected with the Chiquitano area and identified the threats to these. Whilst working through the descriptions of IPAs sites, we kept building up the data set towards a manuscript on the Chiquitano ecoregion priority habitat list and IPA sites. As a milestone, we published a special issue of the journal *PATUJU* in November 2020. This issue serves as a) translation into Spanish of the IPAs methods and principles, b) teaching material for activity 3.5, and c) a steppingstone in developing the manuscript. We have submitted 18 manuscripts on the IPA sites for a special issue of the peer-reviewed journal *Kempffiana* dedicated to the results of this project. For this special issue, we have also completed the analyses in a study that maps, prioritises,

and IUCN redlists the threatened habitats of the Chiquitano ecoregion (Evidence, Annex 4.3.4ci). The manuscript is near completion. This activity has taken longer than expected partly because we decided that this study of habitats would follow strict IUCN guidelines, rather than basing it on mere estimates, and partly because other activities took priority – such as writing the manuscript on useful plants of the Chiquitania (see Activity 3.4b), and uploading the data on the 18 IPA sites to the TIPAs (Tropical Important Plant Areas) portal hosted by RBGKew (Evidence, Annex 4.3.4ci). The special issue will be published in time for the project closing workshop in September 2022.

Activity 3.4cii. Submit results to open-access scientific journals, on the website of FAN, MHNNKM, IUCN, PlantLife International, and Kew, and disseminate the information generated in the project on social media: booklets, manual, Facebook, Twitter, blog posts, radio, and video. We are taking every opportunity to disseminate the results of the project and promote IUCN and IPAs methods (Evidence, Annex: 3.4cii).

Activity 3.5. Module for undergraduate and graduate students at UAGRM in IPAs and IUCN methodology, including preparing course material in years 1, 2, and 3. All three courses were developed and taught in a timely manner. The first two-day course was hosted by the MHNNKM and held in-person in March 2020. Lectures and handout were developed jointly by Kew and Bolivian project staff, who taught IUCN species and habitat and IPAs assessment methods, for 20 undergraduate or graduate students - leaders in their fields. In March 2021, COVID19 restrictions forced us to move the 2nd course online. This meant much additional time spent adapting the course material to virtual lessons. Fifteen students completed the course, whilst five had to give up attending due to bad internet connection. In year 3, we decided to teach this as a theory- and field-based course. In March 2022, due to COVID19 measures we took only 10 students, however, for a week based in a community bordering two IPA sites. Whilst was logistically challenging, everybody enjoyed the mixed theory-field approach; and many of these students are now very enthusiastic and eager to volunteer for the project (Evidence, Annex 4.3.5).

Activity 3.6. Develop and supervise at six Lic.Biol. or MSc dissertation projects at UAGRM in IUCN extinct risk assessment and/or IPA methodology. Activity completed. Four dissertation projects were supervised. During year 3, the focus was on completing analyses and writing reports for their universities, defending their theses (all students defended their theses with flying colours), and writing manuscripts for submission to peer-reviewed journals (Evidence, Annex 4.3.6).

Activity 3.7. Compile, keep updated, and share project databases with partners and stakeholders. The datasets listed below are constantly being updated and shared between partners: Evidence, please see Annex 3, Standard Measures.

Activity 4.2. Provide information and recommendations for incorporating IPAs into territorial management instruments at the subnational and national levels. The revised GADSC's departmental plan for its protected areas, incorporates the results of our IPA site identification. In year 1 we shared our data and map layers with GADSC and impacted the revision of four major nature reserves in the department of Santa Cruz. This continued in year 2, when we shared the data and map layers of the 18 IPAs sites identified and documented with GADSC and FAN for a revised masterplan of protected areas in the department of Santa Cruz (Evidence, Annex 4.2). In year 3, we shared our results, data and map layers again with the new GADSC administration, which adopted IPAs sites alongside IBAs (Important Bird Areas) and RMSAR sites (globally threatened wetlands) in the prioritisation of protected areas in the Department of Santa Cruz – in a revised “Plan de Desarrollo Territorial Integral de Santa Cruz” (PTDI) (=Integral territorial development plan for Santa Cruz) for developed by the national subnational government of Santa Cruz (Evidence, Annex 4.4a).

Activity 4.3. Progress workshop with the newly elected GADSC government actors, including reiterate the IPAs identified in output 3. In year 3, project staff met with and presented our results again to the heads of three sections under GADSC's subnational Ministry for the Environment; and shared our data and map layers with each of these head of section (Evidence Annex, 4.4a).

Activity 4.4. Workshops with government actors and the productive and indigenous sectors to prioritise IPA sites, involving (stakeholders as per 4.1). Over year 3, 18 stakeholder workshops were held with indigenous, and subnational and regional government bodies. (Evidence, Annex 4.4a, 4.4b). More workshops, including with the productive sector planned to take place by year 3 ½.

Activity 4.6. Participation in national and international conferences (CBD, CITES, ...) to disseminate IPAs methodology / approach and promote their adoption. Due to COVID19 measures this activity has been slower than hoped for. To make up for cancelled conference opportunities, we produced a special issue of the journal PATUJU focused on IPAs in year 2. In year 3 we have taken every opportunity to attend virtual conferences, and fairs (Evidence, Annex 3, Annex 4.3.4cii), and to promote the project in social media post online. We also took the step to disseminate the results of our results on useful plants in a peer-reviewed journal paper, and similarly we decided to produce, not only one paper on threatened habitats, but an entire special issue results from Output 3 (Evidence, Annex 4.3.4ci, 4.3.4b).

Note: (*) These are the activities that have been most affected by the pandemic. Adjustments were made to their implementation according to the change request approved on 21.12.2020. They have had to organise more events with fewer people, and to implement a security protocol to avoid transmission. The progress made during year 3 and the additional 6 months of the project will allow the project goals to be achieved.

3.2 Progress towards project Outputs

Output 1. Five indigenous smallholder communities in the Chiquitano dry forest ecoregion apply best practices to build climate resilience and sustainable forest management. During year 3, good progress has been made in achieving Output 1. Although some delays are carried over due to the pandemic and fires in 2019, the change request approved on 21.12.2020 has mitigated most of the delays of Y1 and Y2. Therefore, all targets are expected to be achieved by the end of year 3 ½. For the current year, work continues with three NTFP species instead of two; work continues with six communities instead of five; and intermediate capacity building indicators have been exceeded. Working with more species and more communities has given enough flexibility to adapt to unforeseen events that have arisen so far. The higher number of people trained this year allows catching up, especially from year 1.

Indicator 1.3. 300 smallholders (40% women) trained in sustainable forest management and best harvesting practices of NTFP (50 in year 1 ¼, 75 in year 2, 125 in year 3, 50 in year 3 ½). 163 people were trained in sustainable forest management and good practices in the collection of chiquitana almonds, pesoé seed and copaibo oil (45% women) in the 6 communities of the project. The intermediate goal of 125 people, 40% women, was exceeded, which will allow overcoming the delays of Y1 and Y2. At the rate at which progress is being made, it is estimated that the final indicator can be reached in year 3 ½ (Evidence, Annex 4.1.3.b).

Indicator 1.4. 150 smallholders (60% women) trained in best processing practices of NTFP (50 in year 1, 25 in year 2, 50 in year 3, 25 in year 3 ½). 84 people (58% women) were trained in good practices for the processing of chiquitana almond, pesoé oil and copaibo oil in four communities of the project. The intermediate target of 50 people has been surpassed, and the target of 60% women is very close to being reached. This will make it possible to overcome the delays of year 1 and 2, so that the final indicator can be reached in year 3 ½ (Evidence, Annex 4.1.4.a).

Indicator 1.5. Two best practice Manuals on harvesting and processing of the two selected NTFP species developed and delivered to 300 smallholders - by year 3. Three manuals on good harvesting and processing practices for chiquitana almond, copaibo and pesoé were produced. This is an additional manual to the two planned manuals. The printed version is ready. The physical copies will be distributed, and a digital version will be uploaded on the web during Q1 of year 3 ½, which is before the next harvesting and processing season. The approved technical version of the manuals has already been in use in activities 1.4 and 1.5. (Evidence, Annex 4: 1.5).

Output 2. Indigenous smallholder communities of the Chiquitano dry forest ecoregion are organised in a community forest enterprise and sign mutually beneficial agreements with three companies and take measures to share benefits in a fair and equitable way to develop sustainable value chains based on biodiversity products. Good progress has been made on output 2 during year 3. Most of the delays caused by the 2019 pandemic and fires have been overcome. Communities have been organised into community forestry enterprises and have received training and have tools to conduct their business within the framework of fair and equitable benefit sharing and sustainable value chains (market survey, business plans, operating by-laws, value chain strategy). The additional six months, approved in the change request of 21.12.2020, will allow to continue trainings and technical assistance for an additional harvest cycle, and to underpin the progress made.

Indicator 2.2. A community forest enterprise established with at least 50 members - by year 2 1/2. During the training on producer organisation, it was identified with the project beneficiaries that it would be possible to organise one community forest enterprise per community. This would facilitate the operation of each enterprise, as all the members of each community enterprise would be living in the same community. In the alternative scenario, if there were only one community enterprise, the members would live in communities separated by considerable distance, where public transport is infrequent and not regular. During the first half of Y2, four of the communities decided to form and maintain four active community forest enterprises, with a total of 55 members. Thus, this indicator has not only been achieved but also surpassed. (Evidence, Annex 4: 2.2.a, 2.2.b and 2.2.c).

Indicator 2.4. A value chain strategy and benefit-sharing assessment developed and validated - by year 3. Indicator achieved. A value chain strategy and benefit sharing assessment developed for the three priority species of the project: chiquitana almond, copaibo and pesoé. This has been validated with key value chain actors: leaders of community forestry enterprises, leaders of indigenous organisations, companies and local government representatives (Evidence, Annex 4.2.4).

Indicator 2.5. A community forest enterprise signed up to mutually beneficial agreements with three companies regarding ethical sourcing - by year 3 ¼. Community forestry enterprises have signed commercial agreements with one company and are in discussions with two additional companies. These negotiations are expected to lead to mutually beneficial agreements with three companies on ethical sourcing before the next harvesting season (late Q1 early Q2 year 3 ½) (Evidence, Annex 4.2.5).

Output 3. Priority species, habitats, and sites for plant conservation in the Chiquitano dry forest ecoregion identified, documented and published; plant dataset shared with Bolivian partners and biodiversity centres; and national capacity to assess plant conservation priorities built through training of scientists and pre- and post-graduate students. For this output progress is being made. Most activities are being delivered in a timely manner and some Indicators exceeded, and others were revised. Indicators 3.1 and 3.2 were completed by year 1.

Indicator 3.3. An estimated 15-20 Important Plant Areas (IPAs) of the Chiquitano ecoregion identified, documented and mapped - by 2 year. We have completed this indicator, having identified, mapped, and documented a network of 18 IPAs sites in the Chiquitano ecoregion. These are the first IPAs sites ever documented in Latin America. The data and

maps were uploaded to a dedicated global IPAs portal hosted by RBGKew <https://www.kew.org/read-and-watch/tropical-important-plant-areas-explorer-launch> (Evidence, Annex 4.4.2, Activity 3.3).

Indicator 3.4. The estimated 1000 useful plant species native to the Chiquitano dry forest ecoregion identified and prioritised – by year 2. This indicator is completed as per activities A.3.4a and A.3.4b. Please see above for reporting on A.3.4.ci and A3.4cii.

Indicator 3.5. Six lectures and handouts on IUCN species conservation assessments and IPA identification tools and application developed for UAGRMs Lic.Biol., Lic.Forestry, and MSc. in Natural Resource Management and Environment - by ¾ year; training 20 students (50% women) per years 1,2,3. Our project is the first ever to build research capacity in IUCN and IPAs methodology in Bolivia. The indicator was completed on time for years 1,2,3, training a total of 45 students, which is slightly less than the 60 predicted. However, see justification in reporting on activity 3.5.

Indicator 3.6. Six Lic. Biol., Lic. Forestry, and MSc. student research projects (50% women) at AGRM University completed on IUCN extinct risk assessment and IPA identification (2 in each of years 1,2, and 3), focussing on socio-economically valuable species. During year 3, the remaining four students (100% female) managed to complete their research projects and submit manuscripts for publication. In addition, two of the students were able to hold results presentation events in the indigenous communities where they conducted fieldwork. Thus, as in previous years 2 students already completed their projects, the indicator of six students' projects was achieved (Evidence, Annex 4.3.6).

Indicator 3.7. All scientific datasets, including national IPA database and priority species specimen database, shared with all partners, updated each year of project, in line with Nagoya protocol. The databases listed in A.3.7 are either developed jointly or have been shared appropriately with the partners and stakeholders. See Activity 3.7 for further information (Evidence, Annex 3).

Output 4. IPAs of Chiquitano dry forest Ecoregion incorporated into subnational action plans on conservation and sustainable development. Local authorities, officials and rangers equipped with strategic knowledge, tools and capabilities for the effective management IPAs and protected areas. At output level, indicator 4.1, 4.3 were exceeded, indicator 4.5 was impacted by the COVID19 pandemic, and for indicator 4.2 there are workshops pending with the agricultural sector.

Indicator 4.1. Kew, MHNNKM, and FAN to work with the key stake holders: GADSC, SERAP, DGBAPAP (national government); representatives for the Chiquitano indigenous people; soya bean farmers; cattle rangers; conservation NGOs (FCBC, Natura, WWF); the universities UAGRAM, UPSA, NUR; representative of key industries and productive sectors, throughout the project to highlight the contribution of IPAs to national and subnational CBD targets – years, 1,2,3. In years 1 and 2, we have worked with the sitting GADSC and key stakeholders; and we have met with stakeholder in as far as COVID19 measures have allowed it. In year 3 we managed to meet with, present to and had approval from the new GADSC that this practice will continue (Evidence, Annex 4.4a).

Indicator 4.2. IPA sites are prioritised and designated using best practice with input from all stakeholders including the soya farmers and cattle rangers and Chiquitano indigenous smallholders. – by year 2. Caused by COVID19 measure in 2020 and 2021, we put the activities for this indicator on hold until these measures were loosened at the beginning of 2022, when we held stakeholder workshops specifically with indigenous communities, and larger regional workshops. To these we invited broadly from most key stakeholder sectors - government, agriculture, cattle rangers, national parks, and indigenous peoples' organisations. Whilst the workshops were well-received and useful, we will make special efforts to engage the productive sector in year 4. See also, reporting for Activities 4.2, 4.3, 4.4. (Evidence, Annex 4.4b).

Indicator 4.3 Management recommendations provided to departmental and local government for all 15-20 designated IPA sites for future formal protection – by year 3. In year 2, our maps and data were shared with GADSC and FAN and informing the revision of four protected areas in Santa Cruz. In addition, we have shared our data and maps for all 18 IPAs sites with GADSC, who approved to apply IPAs data in line with IBAs and RAMSAR site data for in the prioritisation of protected areas in the department of Santa Cruz in the revised masterplan for protected areas. In year 3 we reenforced this relationship and the usefulness of the IPA tools through in-person meetings with GADSC and sharing our data and map layers with the individual heads of sections in the Ministry for the Environment (Evidence, Annex 4.4a and 4.4.b)

Indicator 4.5 Results disseminated, and IPA tools promoted via international conferences (CBD and CITES, ...) in years 1, 2, 3. In year 2 and 3, COVID19 measures meant that several conferences national and international were cancelled; and we have thus presented the project less than we had initially planned. This was considered in our change request submitted in December 2020. Despite this we have taken every opportunity to present our results – (Evidence, Annex 3, Annex 4.3.4cii).

3.3 Progress towards the project Outcome

Progress has been made towards achieving the Outcome and it is likely that it will be achieved by the end of the project. The first actions have been taken to improve the livelihoods of the Chiquitano indigenous communities. The indicators are adequate to measure Outcome. Because of events taking place outside our control: forest fires and political unrest in 2019 and 2020, and Covid19 measures in 2020 and 2021, we foresaw that an additional six months would be needed to achieve the Outcome. Therefore, we submitted a financial change request in December 2020, which was approved in March 2021. And we fundraised successfully to part-cover Bolivian project salaries for the additional six months.

Indicator 0.1 Sustainable forest management of natural resources developed and practiced in five pilot communities in Bolivian Chiquitano dry forests. Collection and trade in forest products increased for 2 plant species, and household income derived from sustainable forest products increased by 10% – by year 3 ½. Work has continued with six pilot communities of the project, which are trained and motivated for sustainable forest management on their communal lands, and the application of good practices for the collection and processing of three plant species (chiquitana almond, copaibo and pesoé) instead of two. Four community forestry enterprises have been formed and are being trained in producer organisation, business management and marketing of the three prioritised plant species. Pilot sales have already taken place during Q2 and Q3 of year 3. The 6-month extension of the project, approved in the change request of 21/12/2020, will allow for an additional sales cycle, and will enable the achievement of the targets set (Evidence, Annex 4: 1.3.b, 1.4.a, 1.5, 2.2a, 2.2b, 2.2c, 2.4 and 2.5).

Indicator 0.2 Understanding of forest ecosystem services values and engagement in activities leading to economic benefits from sustainable forest management opportunities. Both will be increased at community and local decision-making levels – by year 3 ½. During year 3, leaders of indigenous organisations and local decision-makers (Autonomous Municipal Government of San Jose de Chiquitos, Autonomous Municipal Government of Roboré and Autonomous Departmental Government of Santa Cruz de la Sierra) were more involved. They participated in trainings on sustainable forest management and the economic benefits that sustainable NTFP harvesting activities can produce. They have been kept up to date on progress with communities and community forestry enterprises (Evidence, Annex 4: 2.4, 11.1 and section 11).

Indicator 0.3. IPAs approach combined with IUCN Red Data book of endemic, rare, threatened, and useful plant species are recommended as a tool in best-practice area-selection for intensive soya bean agriculture, cattle farming, and forest logging – by year 2. In year 1 we facilitated and funded the publication of the Redlist book for threatened plant species of the Lowland Bolivia. In year 2 we published a guide to IPAs assessment in Spanish. At the outset of the project the target communities of this indicator were already seen as the most difficult to engage, and COVID19 did unfortunately halted work these communities for two years. They were invited to the workshops that we managed to host in-person at the end of year 3 with a wider group of key stakeholders (see also reporting for Output indicator 4.2, Activity 4.4.); and we aim to focus our workshop activity on this group in the last six project months.

Indicator 0.4 IPAs integrated into policy and action plans on biodiversity conservation and sustainable development in the autonomous department of Santa Cruz, in line with GSPC and Aichi Biodiversity targets by the end of the project – by year 3 ½. We are proud that in year 2 the regional government GADSC has adopted IPAs criteria alongside IBAs (Important Bird areas) and RAMSAR site criteria in the prioritisation of protected areas; and we are confident that that the newly appointed GADSC will continue this practice (see also Output indicators 4.1, 4.3).

3.4 Monitoring of assumptions

Outcome assumptions

Assumption 0.1: Pilot communities remain committed to sustainable forest management. Risk minimised by focus on short-term delivery of benefits within a long-term strategy supporting regional coordination and cooperation, and multi-stakeholder engagement throughout the project life cycle. This assumption remains valid. Communities remain committed to sustainable forest management. This is demonstrated by a good level of participation of communities in the activities organised in year 3 of the project (Evidence, Annex 4.1.3.b, 4.1.4.a, 4.1.4.b, 4.2.2.a)

Assumption 0.2. Options and market demand remain in place for available forest products; resources available in commercially viable quantities for sustainable management; products meet standards for local/-international markets. Risk will be minimised through diversification of NTFP options. This assumption remains valid. Products produced by Community forestry enterprises, chiquitana almond and copaibo, have been successfully marketed during year 3 and there are already discussions for the sale of what is produced in the next harvesting and processing season. Pesoe is a lesser-known product on the market, but the first sales have already happened. It is believed that with greater dissemination of the properties, companies that buy copaibo, which has some similar characteristics and uses, may be interested. The community enterprises have applied good harvesting and processing practices that are valued by the local market (Evidence, Annex 4.1.4.b and 4.2.5).

Assumption 0.3. Autonomous government of Santa Cruz will incorporate IPAs within their conservation / resource management strategies as an integral element of their obligations under the CBD. This assumption remains valid. By the end of year 2, we had convinced the sitting regional GADSC to adopt IPAs criteria in departmental conservation prioritisation. However, a new regional government took office in 2021. In year 3, we kept influencing the new government to keep applying IPAs criteria in future conservation prioritisation (Evidence, Annex 4.4a)

Assumption 0.4. Publicity of the successful application of the IPA approach in the Chiquitano dry forest ecoregion of Santa Cruz department will promote uptake and use as a means of effective conservation prioritisation in other regions of Bolivia and other Latin American countries. This assumption still holds true. Through our three IPAs and IUCN courses, and workshops, and conferences presentations, we have generated interest at grass root level in applying IPAs and IUCN criteria in conservation prioritisation. We already have expressions of interest from the national Bolivian Ministry for the Environment and Water that they would like our project model to be adopted throughout Bolivia. In parallel, we receive expressions of interest for IPAs and IUCN assessment courses and projects, for example from Colombia, Ecuador, and Chile. From April 2022, we have received funding from the Peoples' Postcode Lottery, initially for a year of pump priming to scale up the model we developed in the Chiquitano ecoregion to national level.

Output assumptions

Assumption 1.1. Smallholders from indigenous communities are engaged in sustainable forest management. The assumption remains valid. Communities remain committed to sustainable forest management. This is demonstrated by a good level of participation of the communities in the activities organised in year 3 of the project (Evidence, Annex 4: 1.3.b, 1.4.a, 1.4.b, 2.2.a).

Assumption 1.2. The population dynamics of the species under management is not affected by fires or extreme climatic events such as drought or El Niño. The assumption remains valid. As part of the monitoring of good harvesting practices, the areas with the highest abundance of the three species prioritised in the project have been monitored. As expected, the 2021 fire season was less severe than 2019, and no extreme weather events have been recorded. Thus, the population dynamics of the plant species selected by the project have been largely unaffected (Evidence, Annex 4.1.4.b).

Assumption 2.1. The population dynamics of the species under management is not affected by forest fires or extreme climatic events. See comments on Assumption 1.2.

Assumption 2.2. Market conditions remain favourable for forest products prioritised in the project. This assumption remains valid. Although enterprises have been identified in the sector that have had to close down due to the economic crisis caused by the pandemic (e.g. Au Naturel), new enterprises have also been identified (e.g. Saberes ancestrales). In addition, contact has been maintained with companies prioritised in the market study (e.g. Ecomanos and Indelcusi) that are still interested in acquiring the forest products supported by the project (Evidence, Annex 4.2.5)

Assumption 3.1. Sufficient data on socio-economically valuable plant species can be amassed to accurately assess their extinction risk and to identify centres of high floristic diversity of socio-economically valuable plant species. This assumption is still valid. (Evidence, Annex 4.3.4b).

Assumption 3.2. UAGRM incorporate teaching on IPAs and IUCN species conservation assessments into Lic.Biol., Lic. Forestry and MSc teaching modules. This assumption may hold true. For the moment, the project staff and one UAGRM lecturer are teaching the course on IPAs and IUCN tools. We are working towards it that the course will be considered valuable and sustained by the university once the project ends in September 2022. Currently, one permanent UAGRM lecturer, Dr Marisol Toledo, is qualified to teach the course; and it could be restructured as a module running over a semester. We are in discussions with Dr Toledo about this option.

Assumption 3.3. Sufficient students select thesis projects on IUCN extinction risk assessment and IPA identification, and they are skilled to conduct quality field research following training. This assumption stands, as per Activity 3.6 (Evidence, Annex 4.3.6).

Assumption 4.1. GADSC, SERAP, DGBAPAP will incorporate IPAs within their conservation / resource management strategies as an integral element of their obligations under the CBD and promote uptake and its use as a means of effective conservation prioritisation in other regions of Bolivia. This remains a valid assumption. In year 2, we convinced GADSC to adopt IPAs within their conservation / resource management strategies. In year 1, we also convinced the sitting national Minister of the environment of the usefulness of implementing IPAs criteria in. However, the Bolivian national government changed in November 2020, and the regional in 2021. In year 3 we have thus continued to promote IPAs to the new regional government through lobbying and by inviting government representatives to stakeholder events. In year by year 3 ½ we will have done the same at national level facilitated by the British Embassy in La Paz (Evidence, Annex 4.4a).

Assumption 4.2. The political will of subnational and national authorities is maintained to promote biodiversity conservation actions in the public agendas, during the pre and post electoral process. The assumption is still valid. However, combined with lobbying activities and stakeholder workshops we will monitor to what extent this assumption will stay valid.

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

Project Impact statement: Protection, sustainable use and management of globally unique ecosystems in Latin America are promoted through wide adoption of Important Plant Area (IPA) tools.

The project is establishing clear connections between the conservation of natural forests and the generation of economic income for vulnerable indigenous families. As a result, the project communities have identified plant species that are abundant on their community-owned land and have good potential for commercial harvesting. This is something they were previously unaware of and has pleasantly surprised them. Also, these communities are positive towards learning to harvest forest products sustainably, organising themselves in cooperatives to market their product under beneficial conditions (Evidence, Annex 4.1.3a, 4.1.3b, 4.2.2b, 4.2.2c)

On the other hand, the difficult economic and logistic scenario caused by the COVID19 pandemic has further reduced the work and income possibilities of these rural populations. Due to restrictions to avoid infection by the virus, the possibilities to work temporarily in nearby larger towns have been reduced. Thus, opportunities to generate cash income through activities without leaving their communities are highly valued. The project's contributions to the development of livelihoods based on forest products have therefore become even more relevant. However, during the COVID19 pandemic, the project extension worker has similarly been prevented from visiting the communities as often as he wished, and it was planned from the outset. The result being that the communities need additional training in organisation, selling and marketing tools and strategies, before they can run their businesses independently.

The project has contributed to building Bolivian capacity for biodiversity conservation through 1) training 15 Bolivian professional botanists/conservationists and leaders in the field, in IUCN species conservation assessment methods accepted worldwide as the gold standard plant conservation; 2) training 45 Bolivian BSc and MSc students in IUCN and IPAs conservation assessment methods; 3) providing six BSc thesis project opportunities in plant conservation and natural resource management; and 4) enforcing this training for MHNK project staff in on the job learning, while contributing to writing the 250 IUCN species conservation assessments and the 18 IPAs site assessments for the Chiquitania IPA network (Evidence, Annex 3, Annex 4.3.5, 4.3.6).

The project is also contributing through: 1) specialist workshops to document and evaluate the existing habitat classification of the Chiquitania resulting in authoritative standards needed for effective conservation prioritisation – and a review paper to be published on this topic; 2) evaluating the IUCN conservation status of the species endemic to the Chiquitania, 3) researching the centres for diversity of useful plants of the Chiquitania, and disseminating the results in scientific papers, sharing all project data with the local, regional and national governments for their use, giving them additional value arguments for plant conservation (Evidence, Annex 4.3.4cii). Also, we facilitated and funded the publication, dissemination, and distribution of the Redlist book for 285 threatened species with the support of the Bolivian Ministry for the Environment and Water and the British Ambassador in Bolivia, gave a real boost to plant conservation and increased the awareness of Bolivian plant biodiversity among Bolivian decision makers and press. The book was accepted as the national authority on threatened plants of lowland Bolivia.

In project years 2 and 3, we have achieved the adoption of IPAs criteria in regional conservation planning and natural resource management. Recognising our achievements, we have been awarded grants from the Ingram Trust, the William Cadbury Trust, and the People's Postcode Lottery. These will allow us scale up the scope of an extended project national level in Bolivia, providing science-based recommendations on Important Plant Areas and Centres of diversity for useful plants for protecting biodiversity, including crop wild relatives, whilst encouraging sustainable forest management.

4. Project support to the Conventions, Treaties or Agreements

The project proposed to support the Convention on Biological Diversity (CBD) and the Nagoya Protocol on Access and Benefit Sharing (ABS). In addition, we are contributing to: the Ramsar Convention on Wetlands, (see below for evidence).

Bolivia will be supported to achieve its CBD targets through the Global Strategy for Plant Conservation (GSPC), particularly GSPC Targets:

2: An assessment of the conservation status of all known plant species to guide conservation action. The project has contributed 200 global IUCN extinction risk assessments of plant species endemic to the Chiquitano ecoregion and 50 of the topmost used plant species in the region. In the Chiquitano ecoregion we have identified 18 sites of global importance for plant conservation and centres of diversity for useful plants. Whilst the 18 Important Plant Area (IPA) sites to some degree overlap and reinforce the RAMSAR and IBA sites, they also highlight sites not previously identified as priorities for biodiversity conservation. (Indicators 3.1, 3.2, 3.3, 3.4, 3.7, 4.1, 4.2, 4.3. Evidence, Maps 2, 3b).

4: At least 15% of each ecological region or vegetation type secured through effective management and/or restoration. Eighteen globally Important Plant Area (IPA) sites and six centres of useful plants were documented in the Bolivian Chiquitano ecoregion; and threatened habitats were identified and mapped, and IUCN conservation assessments were undertaken of these. Through FAN's consultancy with GADSC, the project recommendations were taken onboard in the revised master plan for protected areas in the department of Santa Cruz and similarly in a "Territorial Plan for Integrated Development" (PTDI, for the acronym in Spanish), currently being developed (Indicators as above. Evidence, Maps 2, 3a, 3b).

5: At least 75% of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity. The 18 IPA sites and associated map layers have been shared with GADSC, local governments and indigenous communities for consideration for formal protection. (Indicators and evidence as above).

12: All wild harvested plant-based products sourced sustainably. Best practice manuals were developed and published for the collection of the three prioritised NTFP species, and training is being carried out for the communities to apply these recommendations (Indicators 1.1-1.5, Evidence 1.5).

13: Indigenous and local knowledge innovations and practices associated with plant resources maintained or increased to support customary use, sustainable livelihoods, local food security and health care. The best practice manuals consider local knowledge of the NTFP species prioritised by the project. They also include the type of organisation of indigenous communities in the formation of groups for harvesting and commercialisation of plant resources (Indicators and evidence as above).

15: *The number of trained people working with appropriate facilities sufficient according to national needs, to achieve the targets of this Strategy.* The project has to-date built capacity at national and regional levels training 15 Bolivian academics, six BSc university dissertation projects, 45 Bolivian BSc students, plus conservation NGOs, and policy makers in IPA and IUCN assessment methods. Using the train-the-trainers approach their knowledge will be transmitted to their institutions and regions of origin (Indicators 3.1, 3.5, 3.6. Evidence, Annex 4.3.5, 4.3.6).

In April of 2020 the UKs Ambassador to Bolivia, His Excellency Jeff Glekin, met with the Bolivian Minister for the Environment and Water, when they discussed the current Darwin projects in Bolivia, including this one. The main project partner FAN negotiated with the Bolivian Minister for the Environment and Water that the book on threaten plants of lowland Bolivia became the official Redlist book, endorsed by the Minister, who also gave the opening address at the book launch (Indicator 3.2.).

In project year 2, Bolivia had both national and regional elections, which meant that the national ministers changed in November 2020. The regional authorities were changing in autumn of 2021, so we prepared renewed lobbying campaign with the new governments and presented to the regional government in March 2022., We are planning to meet with the national government by end of September 2022, facilitated by the British Embassy in La Paz, which is being very helpful. We also had a project update meeting with the British Embassy in March 2022 (Indicators 3.1, 3.2, 3.3. 3.4, 3.7, 4.1, 4.2, 4.3. Evidence, Maps 2, 3a, 3b).

5. Project support to poverty reduction

The expected beneficiaries of the project are 300 households (+1,000 people, at least 40% are women) belonging to five indigenous communities in the Chiquitano dry forest ecoregion. The project is helping these communities to recognise opportunities for new income, by better understanding their potential for harvesting selected NTFP plant species, through resource surveys and market research. Also, the project is helping to build capacity in the communities through training in good harvesting practices and business management; and the project is providing equipment to the communities so that they can take advantage of these new income opportunities (Evidence, Annex 4: 1.3.b, 1.4.a, 1.5, 2.2a, 2.2b, 2.2c, 2.4 and 2.5).

Our project is expected to have a direct impact on poverty. This is reflected in Outcome indicator 0.1: Sustainable forest management of natural resources developed and practiced in five pilot communities in Bolivian Chiquitano dry forests. Collection and trade in forest products increased for two plant species, and household income derived from sustainable forest products increased by 10% – by year 3.

In addition to increasing household income, our project is also contributing to poverty reduction in other ways. The communities we work with have limited access to education, as they have little free time and limited resources for vocational training. In addition, there are no options for technical training in their community. To attend technical training, they therefore need to migrate and leave their extended family with whom they have a mutually supportive relationship. This is truer for women, especially those with young children.

The project gives them the opportunity to acquire skills for a trade (NTFP collection and processing), and to start a business enterprise based on sustainable forest harvesting. This plays to the tradition and culture, as indigenous people tend to face problems and opportunities together as a community rather than individually.

In addition, sustainable forest use protects the forest from productive activities that could degrade or transform it into mechanised agriculture. This is very important for indigenous communities, as they depend on the forest for ecosystem services such as food, regulation of the local climate, dealing with high temperatures during the summer (the communities have a noticeably lower wind chill than nearby intermediate cities) and above all sufficient water provision for human consumption and subsistence crops.

In this way, the fact that the communities can carry out an economic activity based on care of the forest, and that the activity allows them to earn a cash income, reduces the pressure to transform the forest at the cost of having to forego key ecosystem services for them.

This past year, six project communities were trained and motivated to apply sustainable forest management on their communal lands, and to develop good practices for the harvesting and processing of three plant species (chiquitana almond, copaibo and pesoé). Four community forestry enterprises have been formed and are receiving training in producer organisation, business management and marketing of the three plant species mentioned. The community enterprises have already carried out pilot sales, and are preparing for a next cycle of harvesting, processing, and sales.

6. Consideration of gender equality issues

The project works to address gender inequality. It seeks to empower women through more sustainable livelihoods. It is promoting a socially inclusive and gender-sensitive model for the community forest enterprise and a value chain strategy of fair and equitable distribution of benefits. Several actions have been taken to achieve this:

- During year 3, in business management trainings and then during the formation of Community forestry enterprises and the design of their by-laws, good governance systems have been advocated to provide opportunities for women to take leadership roles and for their rights to be respected.
- In the election of boards of directors of community forestry enterprises, the partners proposed that both men and women should be included. They also expressed the importance of giving responsibility to young people so that they can be trained and learn to value the wisdom of older people. Boards have between 5 and 4 members. Three of the community enterprises have between 1 and 3 women and one of the enterprises is made up only of women. Generally, speaking, in the four community enterprises we see that most of the elected chairpersons are men. In the treasury and secretariat portfolios more women were elected.
- Gender-disaggregated data is also being collected to monitor gender roles in the NTFP sector. Gender has been included in harvesting and processing capacity building activities.

Additionally, the project team is investing time in strengthening their knowledge on gender and integrating it into their areas of work. In the case of FAN, an Institutional Gender Policy is being developed, which shows the commitment to deepen efforts on this issue.

In year 3, like in year 1 and 2 most of the students (7 female and 3 male), who completed the IUCN and TIPAs course, were female. And, all four dissertation students completing their dissertation projects in year 3 are female.

This is reflected in the progress of the indicators aggregated by gender, mainly achieved through Indicators 1.3, 1.4, 2.2, 3.1, 3.5, and 3.6 (Evidence, Annex 4: 1.3b, 1.4a, 2.2a, 2.2b, 2.2c, and 3.6).

It is also worth emphasising that the project PI and co-PIs are all women, as are most of the project staff.

7. Monitoring and evaluation

At the start of the project, an M&E plan was developed for the project – particularly considering Gender and the poor and/or vulnerable.

The M&E plan established participatory mechanisms to support M&E with inputs from partners and key stakeholders, aimed to facilitate learning and adaptive management of the project.

FAN have been implemented a M&E System that includes a cloud-based platform for information management (INFOFAN), linked to the logical framework and project annual operating plans. In this platform, the progress of the project is continuously reported, and all documentation, data, photos, and relevant information generated and related to the project that contributes to knowledge management are stored.

There has only been change to the M&E plan, from the change request submitted in December 2020 and approved in March 2021.

The project partners share the M&E tasks according to the Outputs and activities under their responsibility. Quarterly reports are shared to identify project progress and delays.

The M&E processes have worked well and have allowed for adaptive project management, even though COVID19 measures in Bolivia has made this year particularly challenging. The M&E plan, the regular team meetings and the quarterly reports between partners have allowed to process the information and record the progress, as well as to identify in time the opportunities to mitigate the delays. Monitoring, and being flexible about changing direction and speed is being helped our solid and dynamic M&E plan informed and developed by FAN's vast experience with socio-economic development projects.

8. Lessons learnt

What worked well was that the communities had access to training and technical assistance in good harvesting and business management practices before receiving the processing equipment. In this way, communities were already organised into community forest enterprises with clear rules and structure and had the skills to collect enough forest products to process with the donated equipment.

Another aspect that worked well was that the communities were asked to collect a certain amount of produce before handing over the processing equipment (e.g. 300 kg of pesoe seed in the Ipias community). It was explained that they could process a large quantity with the equipment; and they thus had to demonstrate that they could collect enough seeds to put the equipment to good use. The business enterprises were positively challenged and collected a quantity that far exceeded the target (e.g. 500 kg of pesoe seed in the Ipias community).

This resulted in the equipment being delivered at the appropriate time to the communities, which gave a good basis to move forward with the trainings on good processing practices. The communities had enough forest products to process, and the enterprise was prepared to face the next activities derived from processing: marketing and distribution of profits from sales.

Thus, as a lesson learned, it was better to carry out preparatory work with the communities before handing over the equipment. In this way, the equipment was more valued when it was received, and can be used without generating social tensions in the community, as there is a previous work to generate capacities, organise the work and the expectations of the participants.

This work logic is being translated into an intervention model for FAN to support other communities in the sustainable use of NTFPs in future projects.

In year 2, we held a virtual all-project event in June 2020 to celebrate achievements in year 1. This worked well for the Spanish-speaking side of the project. However, several UK stakeholders did not participate because of the language-barrier and the inexperience at that point of providing simultaneous translation virtually. In year 3, we were planning to hold an in-person event in RBGKew to launch the “Plantas Amenazadas” book and the 18 TIPAs sites in the UK. However, COVID19 measures in the UK halted this event, which is postponed until August/September 2022. And, we plan to host a similar event in Bolivia in September 2022.

Despite, holding all-project planning workshops in year 2, there was a wish for all project staff to meet more regularly – to plan, undertaken M&E, and exchange progress and results in the different project components. In year 3, we were therefore having quarterly all-project workshops to accommodate this wish.

Due to the high demand by professionals to participate in the courses that the project offers, we are, given time and funding, considering similar courses geared towards professionals and/or graduate students in the scaled up national level project.

The Darwin Initiative Twitter account is linked, when posting project related posts on @KewAmericas and @KewScience. However, this did not happen consistently across social media accounts. To remedy this, we distributed a list of accounts to tag and some suggested hashtags to include for each post, and it has worked better in year 3.

Covid19 measures affected when and how training and field meetings with communities could be conducted. All in-person group activities had to be suspended during the early months of the pandemic when a rigid quarantine was in place in Bolivia. When the stricter measures were lifted, small group meetings could be held outdoors, following protocols to avoid transmission. This has increased the number of meetings and reduced the number of participants at a time, making training more laborious. It helped to maintain regular phone and WhatsApp calls with the communities. However, it should be noted that these were only an effective means of communication because there was a previous relationship of trust with the technicians thanks to the activities of year 1 and 2 of the project. Provided that in the short term the restrictions due to the pandemic will be maintained, it has been thought to complement the training approach with the train the trainer technique. In such a way that there is at least one person per community with greater knowledge who can follow up on what is taught in the trainings and technical assistance.

At the beginning of the project period, the contract of the only permanent botany staff at the MHNNKM was not renewed. This has left the botany department and herbarium without a head, future direction, and continuity. For that reason, the Museum's director, botanist, and co-PI, Dr Marisol Toledo, was both administratively and technically involved in the project. The Museum changed directors again in year 3. Whilst the new Director, MSc Luzmila Arroyo, is supporting the project objectives, she does not have the time, project history, nor training needed to take over the technical role played by the outgoing Director. Whilst the Darwin-funded project provides funding for short consultancies each year, we secured additional funding to employ a Bolivian project staff for 80% FTE until end of project. This has helped immensely. We also keep pressuring the MHNNKM to secure long-term funding for at least one permanent botanist post to ensure continuity, future capacity building, and skills retention. Additionally, throughout year 2-3, the Museum has been undergoing an administrative transition installing a new accounting system (SIGEP), which means that

fund transfers and payments are very delayed entering and leaving the Museum's accounting system. In the future we may ask partnering institutions to provide guarantees signed by the institutional senior management that the institution has a finance system in place to receive and manage their project budget allocation and associated activities in a timely fashion.

9. Actions taken in response to previous reviews (if applicable)

Reviewer's comments on year 2 report, requiring response:

1. The reviewer notes the comment that although much of the forest remains, it is susceptible to further degradation due to the mosaic nature of the remnant patches. Is there a role for forest restoration - an opportunity in the Chiquitano area to plant trees, following the guidelines set out in the recently published RGBKew paper on '10 golden rules for forest restoration' – to create restored native forest to buffer and/or link fragments of native forest?

2. Are there any opportunities to create 'livelihood native forest', for example with species such as the 'rediscovered' Chiquitano almond?

We welcome questions 1 and 2, which are somewhat related. Yes, a next step from our project could very easily be a project proposal focussed on regenerating some of the lost forest cover considering the "10 golden rules for forest restoration"; and aiming at least in part to plant e.g. Chiquitano almonds for livelihoods. For this species germination and growth trials are already taking place in a controlled environment funded by the German Technical Cooperation (GTZ), and spontaneously in some of the communities where harvesting is taking place. As a result of this project, we will be submitting a proposal to the Darwin Initiative in the next round, exactly aimed at building capacity and capability in restoration techniques in the Chiquitano ecoregion.

3. More information could be included on the methods being used to increase female participation in meetings and training.

To increase women's participation in project activities, we have identified that empowering women is crucial. Several actions have been taken to achieve this: 1) In business management trainings and then during the formation of Community forestry enterprises and the design of their by-laws, good governance systems have been advocated to provide opportunities for women to take leadership roles and for their rights to be respected; 2) gender-disaggregated data is also being collected to monitor gender roles in the NTFP sector; 3) Gender has been included in harvesting and processing capacity building activities.

10. Other comments on progress not covered elsewhere

A significant unexpected difficulty was encountered during year 3, when the national government promised the construction of "social housing". The national government provides building materials to the communities, who have a deadline to complete the work. As there is no timetable for delivery of materials, and there have already been delays because of this, communities spend most of their time on construction when the materials finally reach their community. This has interfered with people's participation in the trainings, particularly the young men, who participate in the construction. Among the main measures taken to overcome this difficulty is the rescheduling and repetition of training and technical assistance events.

11. Sustainability and legacy

As a result of the project there is greater interest and capacity in sustainable forest management and harvesting of non-timber forest products. In Q3 and Q4 of year 3 an alliance has been organised with CEPAC (civil society organisation) and the Technological Institute ITERS (ITERS) to carry out actions for the conservation and sustainable management of Chiquitano forest products and improvement of the livelihoods of communities in the Municipality of San José de Chiquitos (one of the municipalities where this project carries out actions).

Based on the progress of our project, CEPAC has secured PPD-UNDP grant funds to strengthen one of the community forestry enterprises, San Ceferino, which we helped to organise. This will enable the community enterprise to build part of the facility designed in the business plan developed by our project. A municipal government regulation will be negotiated to protect the Chiquitano almond harvesting area, which was identified and monitored during the project's training and technical assistance on good harvesting practices. Alliances with the gastronomic sector in the main cities of the country (Santa Cruz and La Paz) will be developed so that the community enterprise can provide high quality chiquitana almonds at a better price. Also, its role in the conservation of the forest and the improvement of the livelihoods of the indigenous communities will be promoted to the final consumer.

The ITERS is interested in including in its curriculum the contents developed by our project on good practices in the harvesting and processing of chiquitana almond, pesoé and copaibo, as well as training and strengthening of community forestry enterprises. ITERS considers it critical to work with local and not only introduced species. Thus, discussions are underway for ITERS to have access to the material and participate in our project trainings, as a first step towards a partnership to improve local technical capacities.

Together with CEPAC, ITERS and the community forestry enterprise San Ceferino, we have met with the Autonomous Municipal Government of San José de Chiquitos to validate the value chain strategy developed by our project. As a result of this meeting, an inter-institutional cooperation agreement for the conservation and sustainable management of Chiquitano forest products and the improvement of the livelihoods of communities in the municipality of San Jose de Chiquitos has been developed. The agreement is expected to be signed in May 2022 (Evidence, Annex 4: 11.1).

The exit strategy is still valid. Engaging stakeholder organisations and commercial companies with long-term interests in sustainable NTFP trade. With the value chain strategy as a guide, activities are being implemented to articulate the communities and their enterprises with producers with companies and distributors already established in the market. (Evidence, Annex 4: 2.5).

The project is fundraising to support up-scaling of NTFP business to 10 indigenous Chiquitano communities and is building partnerships to extend its activities beyond its initial three years. A concept note has been submitted to AECID for the period 2023-2024. As it has been approved, the full proposal is being prepared for submission in May 2022.

The secured adoption of IPA tools and 18 sites network, by GADSC and regional Santa Cruz governments, will leave a legacy, and are also seeing the fruits of designating IPAs sites for conservation as the inhabitants, indigenous organisations, and local governments in these sites are beginning to come forward asking for their IPA sites to be officially recognised for example via certification and/or formal protection. Similarly, have we secured part-funding from the Peoples' Postcode Lottery for a new project aimed at upscaling the IPA approach from Chiquitano region focus on Bolivia national level IPA documentation and assessments; and we keep being asked by Latin American countries (e.g. Ecuador, Chile, Colombia) for similar projects to start in their countries.

12. Darwin identity

Whenever an opportunity has arisen, the project has included the Darwin logo and promoted the mission of the Darwin Initiative in written and oral presentations (Evidence, Annex 4: 3.4cii).

The funding is a distinct project with a clear identify. However, we have raised additional funds to support some Output 3 activities, for which the Darwin funding was minimal; and some activities in Output 4 have been facilitated by the ECCOS project – an EU funded project with FAN as a key partner.

Before this project, there was awareness about the Darwin Initiative at NGO and decision maker level – regional Santa Cruz government, in addition to the Bolivian Ministry for the Environment and Water. Nevertheless, over the past three years, our direct project engagement with key stakeholders such as GADSC, and use of the Darwin logo on project banners, T-shirts, caps, leaflets, promotion materials, Powerpoints, etc. have strengthened the bond with and increased this awareness the Department of Santa Cruz. The Darwin Initiative is seen a positive institution and being supporting by the Darwin Initiative is seen as prestigious.

The Darwin Initiative Twitter account is tagged, when posting project posts on @KewAmericas, @KewScience, and the Facebook account is tagged when posting on @MuseoNKM, @fanbolivia and the personal Twitter and Facebook accounts of project staff (Evidence, Annex 4.3.4cii).

13. Impact of COVID-19 on project delivery

Several factors, including the COVID19 pandemic, led to us submitting a change request in December 2020, which was accepted in March 2021. Below we consider each factor in turn: **Chiquitano Ecoregion forest fires:** The communities and municipalities, which we are engaging, were in an emergency due to forest fires in the Chiquitania region during the period July - September 2019. The area burnt in the Department of Santa Cruz amounts to 3.9 million hectares and represents 73% of the total areas affected by fires nationwide (5.3 million ha). The municipalities where the project is engaging livelihoods significantly affected: San José de Chiquitos (265,943 ha) and Roboré (174,395 ha). With this emergency, some of the project activities were delayed. **Political unrest in Bolivia:** After the national election on October 20th 2019, Bolivia entered a situation of national unrest with strikes and roadblocks throughout the country, and clashes between groups

of demonstrators belonging to the two main political factions. While we hoped that a solution to the situation was found, and that the Darwin project staff could move freely and safely between the city of Santa Cruz and the indigenous pilot communities – ca. 250 km east of the city, we were not optimistic that this would happen soon; and with good reason as the roads between Santa Cruz and east to Roboré continued to be blocked by protesters until January 2020. Similar events happened, during the election campaign for regional elections held at the beginning of March 2021; and it continues to happen at sporadic intervals. **COVID19 pandemic:** In 2020 the COVID19 crisis put the project out of kilter again, which meant that additional changes were requested, as most activities on all outputs were halted or at best slowed down from March 2020 onwards. Given the seasonal nature of our project – relying on flowering and fruiting times and the absence of forest fires, in addition to dealing with COVID19 emergency measures and additional political unrest related to the presidential election in October 2020 and regional elections in February and March 2021, we predicted that the changed planning would spill into a fourth financial year 2022-23 (yr4) to ensure that we have two fruiting seasons to train the indigenous communities. Also, the MHNNKM is the base for the IPA project team. For two years the Museum was closed due to the pandemic, and it is only close opening up and getting functional again. This meant that some project activities, like plant identification have slowed down, as staff were unable to use the herbarium collection for identification purposes.

Virtual meetings: Being forced to think creatively, we began using Windows Team and Zoom for virtual meetings, and Whatsapp for quick messages and chats. Whilst this new way of working will never replace face-to-face interactions, it was successful for our annual whole team meeting in June 2020, and extremely successful for our bi-weekly catch ups with individual partners and quarterly whole team meetings. Also, in March 2021 the partners met virtually with GADSC, who at that time accepted the IPA methods and map layer in line with the methods for IBA and Ramsar site assessment for biodiversity conservation. Continuing to holding our regular update meetings online, will cut back on the Kew PI's visits to Bolivia. However, we would for future project like to balance that with Bolivian project staff to spending longer training opportunities at Kew.

In March 2021, we also adapted and taught the IUCN-IPAs methods course virtually. Whilst it allowed us to offer the course across Bolivia, we found it challenging teach this course virtually, because it is based much around group exercises with the teachers present. We also found that some of the students and teachers had trouble staying connected, because of slow internet connections in parts of Bolivia. In March 2022, we reverted to teaching the IUCN-IPA methods course in-person. We organised the course to be field-based – spending much time outdoors. We imported Lateral Flow Tests from the UK and everybody tested (20 people) prior to leaving the city and mid-week (to protect the indigenous community hosting us), and at the end of the week (to protect the students' families). Nevertheless, nobody tested positive throughout the week, which was a relief as no action was needed on COVID19 H&S measures agreed with the students prior to leaving the city. Similarly, when hosting or participating in training sessions/ meetings/ workshops project staff and participants wore face masks, used hand sanitizer, and applied social distancing measures (Evidence, Annex 4.3.5).

Our participation in national and international conferences to disseminate IPAs methodology / approach and promote their adoption were slower than hoped for. To make up for cancelled conference opportunities, we produced a special issue of the journal PATUJU focused on IPAs in year 2. In year 3 we have taken every opportunity to attend virtual symposia and conferences and to promote the project in social media post online (Evidence, Annex 3, Annex 4.3.4cii),

14. Safeguarding

Please tick this box if any safeguarding or human rights violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to ODA.safeguarding@defra.gov.uk as indicated in the T&Cs.

There are appropriate safeguarding policies in place for the project. They follow RBGKew's safeguarding policy; and in year 3 there were not safeguarding issues raised. The Spanish version of Kew's safeguarding policy has been shared with the partners (Evidence, Annex 4.14).

15. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2021 – 31 March 2022)
Reporting on rephased budget – as per approved change request submitted 20211222

Project spend (indicative) since last Annual Report	2021/22 Grant (£)	2021/22 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	██████	██████	99.2%	Draft
Consultancy costs	██████	██████	+0.2%	
Overhead Costs	██████	██████	98.6%	
Travel and subsistence	██████	██████	98.8%	Draft
Operating Costs	██████	██████	+12%	See note**
Capital items (see below)	██████	██████	82%	See note ***
Monitoring & Evaluation (M&E)	0	0	0	
Others (see below)	██████	██████	+7%	See note ****
TOTAL	84,830	84,829		

Note** More was spent on the Operating costs budget. Covid-related expenses are still high: Covid hospitalisation insurance, and periodic Covid testing of the community outreach worker, and sanitary equipment (e.g. masks, disinfectant, gloves) for the project team and community members who participated in project activities. More training and technical assistance events had to be conducted with fewer people to comply with pandemic security protocol. There were also additional expenses for rescheduling and repeating training and technical assistance events because they intersected with unexpected activities that required immediate attention from the community (see section 10)

Note *** Priority was given to the most important equipment to be purchased, so that the main equipment needs of the communities are taken care of. After addressing the issue of equipment, it is a priority for the project to carry out sufficient training and technical assistance activities in good processing practices so that the communities can get the most out of the equipment delivered. For this reason, it was evaluated that it was possible to reduce a little the percentage for the purchase of fruit processing equipment, and thus balance the additional expenses in the Operating costs and Others items.

Note**** Bank fees and exchange rate differences were higher than those estimated by the variable exchange rate.

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

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

Livelihoods

Working with six communities, we have seen how they differ in their approach to sustainable forest management. In this respect the Ipias community stands out. Prior to project start, they knew that Pesóé seeds could be used. However, only with the project did they learn to benefit from this on a large and commercial scale, and at community level. Supporting the community with training and equipment has motivated the inhabitants to form a forestry community company. Realising that they can use the equipment donated by the project for other products, they already have ideas to include NTFP products with commercial potential, such as the palm totai. They recognise that the equipment is valuable; and they feel proud that the project has invested in the community. It is the first time this has happened at such scale. The project activities have awakened the leadership of community's women as main partners in their community company to the point that Ipias has a female president of their company. We put this positive experience down largely to the regular support throughout the project. And inhabitants of Ipias told us: "there have been other projects wanting to support our community. However, these were short and isolated experiences, with very few practical training sessions, and we did not receive any equipment help us put the training into practice".

Forest conservation

One project indicator state that “by 2022, management recommendations should be provided to departmental and local governments for 15-20 designated Important Plant Area (IPA) sites in the Chiquitano ecoregion for future formal protection”. In Bolivia, the Chiquitano ecoregion is confined to the department of Santa Cruz, which covers 370,621 km² - an area 1.5 the size of the United Kingdom. In the project period we have designated a network of 18 IPA sites for conservation prioritisation. In 2021, we influenced the sitting departmental government by sharing map layers and data sets, and the government adopted IPA sites in line with IBAs and RAMSAR site data for in the prioritisation of protected areas. These data informed the revision of the Departmental Masterplan for protected areas. In the meantime, the regional elections resulted in a change of government administration. In 2022, we therefore strengthened the relationship with the newly inserted government and promoted the usefulness of IUCN and IPA tools through in-person meetings and sharing of map layers and data on 18 IPA sites, and six centres of diversity of useful plants. As a result, the map layers and data are also informing the development of an “Integral territorial development plan” (PTDI, Spanish acronym) for the department of Santa Cruz. We are seeing the fruits of designating IPAs sites for conservation as the inhabitants, indigenous organisations, and local governments in these sites are beginning to come forward asking for their IPA sites to be officially recognised for example via certification and/or formal protection. We are thus very hopeful and encouraged the project is helping to protect the Chiquitano ecoregion and its people, and to give plants a voice.

Please, see project summary pages 3-4 for maps, and Annex 4 for suitable images for both stories