



Darwin Initiative: Final Report

Darwin Project Information

Project reference	23-016
Project title	Yerba mate – a market-driven model for conserving Paraguay’s Atlantic Forest
Host country(ies)	Paraguay
Lead organisation	BirdLife International
Partner institution(s)	Guyra Paraguay , Company Guayaki SRP, Municipality of Alto Vera and the State Government of Itapúa, Universidad Nacional de Asunción
Darwin grant value	£ 309,244
Start/end dates of project	1 st April 2016 – 31 st March 2019
Project leader’s name	Dr Nonie Coulthard
Project website/blog/Twitter	http://www.birdlife.org/americas/partners/paraguay-guyra ; https://twitter.com/guyraparaguay https://twitter.com/BirdLife_News
Report author(s) and date	Evelyn Britz/ Nonie Coulthard/ Ana Inigo

1. Project Rationale

The aim of the project was to provide a pathway to poverty reduction for indigenous (IP) and local farming communities and a sustainable land use model for effective conservation of Paraguayan Atlantic Forest (AF), a global biodiversity hotspot. The San Rafael ‘Reserve for National Park’¹ is the largest (72,849 ha) and most important remnant of the Atlantic Forest in Paraguay; home to 400 bird species (12 globally threatened), endemic deer, Jaguar and Brazilian Tapir.

Indigenous Mby’a Guaraní (600 people) live in the forest in the San Rafael Reserve (their ancestral territory), and are dependent on the forest for products, and cultural and ecosystem services. Two previously transient IP communities (Arroyo Moroti and Arroyo Claro, 240 people) settled in 1995, with legal tenure of c. 1,200 ha. In addition, several communities of settled farmers (*campesinos*), c.3,000 people, live (legalized) in the Reserve’s buffer zone.

Both indigenous and *campesino* communities live in extreme poverty, lacking basic services such as health, education, and sanitation, and also the technical skills and capacity to access markets and trade goods. They instead rely on subsistence and small-scale cash-crop² agriculture which is inadequate for basic needs and leads to food insecurity and child malnutrition. As a result, *campesino* communities encroach on the Reserve; land clearing for agriculture in the buffer zone exacerbates the threat of forest fires and both indigenous and *campesino* communities may be driven to illegal activities (timber cutting for charcoal, marijuana cultivation). This problem is mirrored in a further c. 80,000ha of unprotected AF in Paraguay³, and there is a need for demonstrable solutions and policy to provide livelihoods for forest-dwelling IPs and *campesinos*, alongside forest conservation and monitoring.

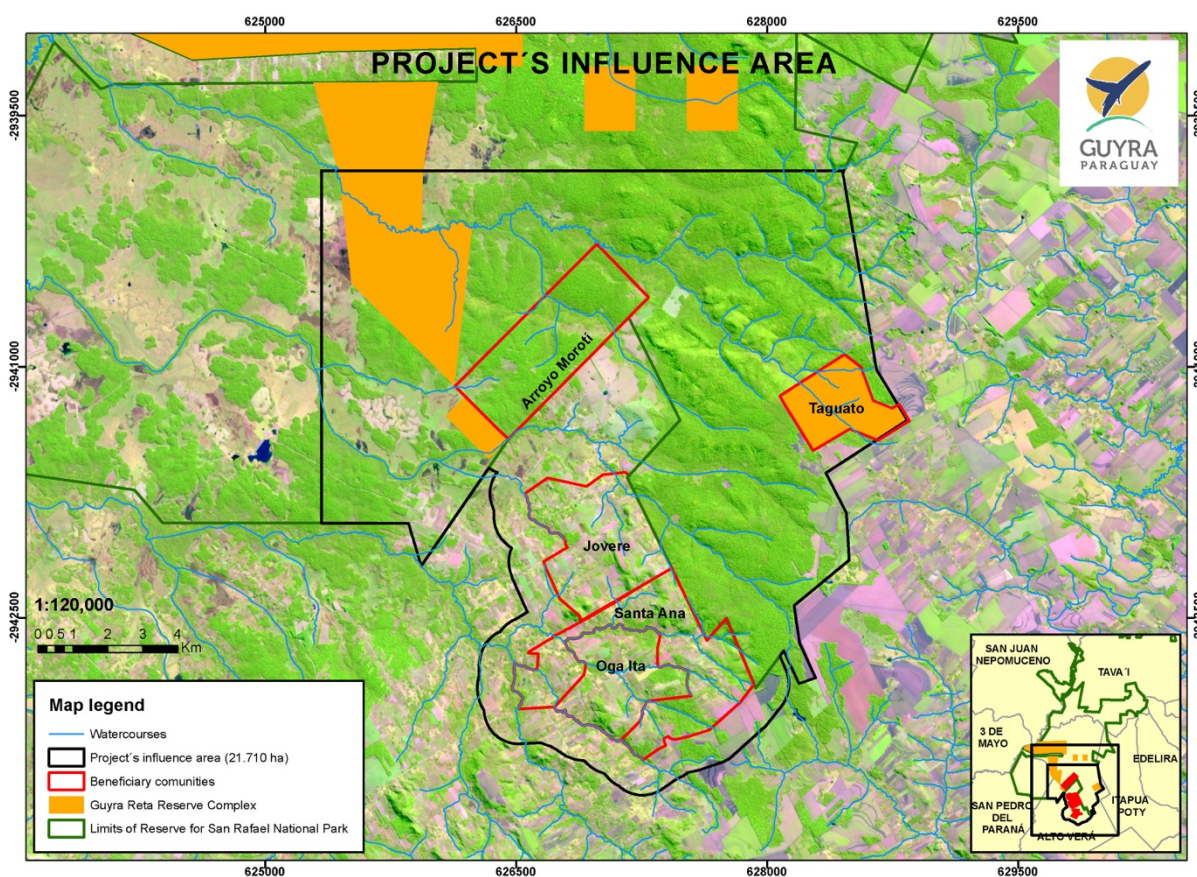
¹ The San Rafael area has been declared as an area “reserved to become a national park” but is not formally gazetted

² Mainly corn (maize) and sesame

³ Data from the Paraguayan Indigenous Institute <http://www.indi.gov.py/> (Instituto Paraguayo del Indígena – INDI)

Guyra Paraguay (BirdLife Partner) identified this challenge and possible solutions during more than 15 years working with communities and government departments in San Rafael. The project addressed some of these problems and demonstrated solutions and an effective model of linked livelihoods improvement and biodiversity conservation with one Mby'a Guaraní community (Arroyo Moroti) and the *campesino* communities of Oga Itá, Santa Ana and Joveré in the buffer zone (see Map 1).

The leaves of native yerba mate (*Ilex paraguariensis*) have been harvested traditionally in South America for centuries, to make “mate” (tea). Predominantly grown with full sun exposure, it can be shade-grown under native trees, adding value to standing forest and supporting biodiversity, including globally threatened species⁴. The higher prices paid for organic, shade-grown yerba mate (compared with “conventional” non-shade production) compensate for slightly lower yields (and longer time to first harvest) and increased labour. The project helped build capacity of the communities to develop the cultivation, production and marketing of organic, shade-grown yerba mate, promoting local economic development; reducing pressure for forest clearance; maintaining forest and biodiversity in the Reserve; and increasing native tree cover and enhancing habitats for biodiversity in the buffer zone.



Map 1. Beneficiary communities and their location in the Darwin project area at San Rafael (indigenous Mby'a Guaraní in the San Rafael Reserve for National Park at Arroyo Moroti; 'campesino' farmer communities at Oga Itá, Santa Ana and Joveré in the Reserve buffer zone). (Taguato is an area also owned 'in condominium' and jointly managed by indigenous Mby'a Guaraní with national NGO Guyra Paraguay but not part of the Darwin project).

⁴ Kristina L. Cockle, Marty L. Leonard and A. Alejandro Bodrati (2005) Presence and abundance of birds in an Atlantic forest reserve and adjacent plantation of shade-grown yerba mate, in Paraguay. *Biodiversity and Conservation* 14: 3265–3288

2. Project Partnerships

BirdLife International was the lead project partner, with staff of both the Global (Cambridge) and Americas Regional Secretariat (Quito), providing overall project coordination, technical assistance/ capacity building and support to progress reviews and M+E; reporting to Darwin and dissemination/ promotion of results; help to identify and secure matched funding and funding for follow-on initiatives to ensure sustainability of project impacts. This support is continuing under BirdLife International's Trillion Trees initiative and other wider Atlantic Forest collaboration on conservation work in the region (Paraguay, Brazil and Argentina) supported through BirdLife Secretariat and various donors.

Guyra Paraguay (national BirdLife Partner) was responsible for project implementation and relationships with all other project partners locally and nationally in Paraguay. The project was originally designed and developed with stakeholders and based on over 20 years of Guyra Paraguay work with communities at San Rafael. Partnerships at local level are very effective with enthusiastic engagement from communities and project-employed technicians from within communities supporting and training producers and their families. Beneficiaries have very high confidence in the project and Guyra Paraguay's ongoing support. Additional communities continue to ask to participate in the shade-grown yerba mate planting and associated initiatives both during and post-project. The Municipality of Alto Vera and State Government of Itapúa have been engaged and committed during the whole project. They have shown interest and support through letters of support for the project, and support to the activities in the municipality, such as workshops and strategic meetings, providing facilities and disseminating projects activities and results. They have participated in training meetings and forums, including "Yerba Mate Forum in Native Forest" in Itapúa, helping to expand the initiative among other small producers.

Although formal support from INFONA (Instituto Forestal Nacional) was weak (due to national level political instability and weak capacity), other support exceeded original commitments, with donations of over 2,000 native tree seedlings for shade planting and forest habitat improvement in yerba mate parcels. Guyra Paraguay continues to lobby INFONA and expects to sign a Cooperation Agreement to continue enhancement of forest conservation activities at San Rafael and achieve approval of the initiative as an INFONA 'project of interest' in 2019. In addition, Guyra Paraguay signed an agreement with the Ministry of the Environment (MADES) in April 2019 to strengthen cooperation on joint activities related to the environment and sustainable development and improving life conditions of different sectors of the population. This will facilitate greater impact and dissemination of the forest conservation actions and results at San Rafael.

The private sector company Guayaki SRP (<http://guayaki.com/>) has been consistently supportive throughout the project, providing advice and training on shade-grown, organic yerba mate for all the beneficiaries. Regional manager Nelson Guaray (consultant to the project in Year 1) regularly monitored the planted plots and helped build capacity through technical assistance, training, and advice on production, sales, and marketing under a cooperation agreement between Guyra Paraguay and Guayaki. For 2019, Guayaki signed an agreement to buy the first shade-grown production from San Rafael, ensuring that project beneficiaries achieve enhanced income (an important goal and component of the business model). This relationship is continuing (post Darwin project), both for training and with Guayaki as the principal buyer and export enterprise for the shade-grown yerba mate production at San Rafael. In the project proposal, other private sector supporters were proposed (Lauro Raatz S.A.) but they were not able to provide relevant support. Another company Yerba Mate Pajarito, provided technical assistance to Guyra and the project, to develop and promote organic and shade-grown yerba mate production and advice on certification. Guyra Paraguay will continue to support communities to implement the San Rafael business plan (prepared as a Darwin project output), to achieve a fully certified community business - and in ongoing negotiations with external private sector buyers and exporters.

All biodiversity monitoring was carried out in collaboration with the University of Asunción, with students guided by Dra. Lourdes González collaborating with the Guyra science team on field data collection and analyses. Results have been very interesting and in addition to project monitoring reports and publications, two students have completed their thesis for a Forest Engineer degree. Updated information for the San Rafael IBA will be incorporated into BirdLife

IBA/ KBA databases⁵, and any species status updates submitted to the Red List. The project team from Guyra Paraguay supported and monitored the work on the yerba mate plantations and associated forest conservation and restoration very closely. The presence of the Guyra technical team in the area is constant and will continue through ongoing initiatives and work with communities at San Rafael with BirdLife International and various donor support.

3. Project Achievements

3.1 Outputs

Achievements relevant to the whole project are reported here, with emphasis on Year 3. Evidence is provided in Annexes 5. (Publications) and 7. (Supplementary material). See Annex 2. (Summary report of progress) for specific documents and links for each Output and indicator.

Output 1. *Institutional frameworks (CBOs or other culturally appropriate social/ family groups) with the capacity (social and institutional capital) for cultivation, marketing and benefit-sharing of shade-grown yerba mate established through a participatory process among settled Mby'a Guaraní and campesino communities in San Rafael*

Output 1 was achieved successfully. Capacities of the CBOs (community-based organisations) have been strengthened through more than 10 group training workshops and more than 200 individual technical assistance visits. The technical assistance was provided by the partner Guayaki SRP and the project's field technicians. Most of the training workshops were carried out in the field. The results of all of these training workshops is reflected in the excellent condition of the yerba mate parcels. Of 46 farms that are being managed by beneficiaries of the project of the project, 43 have followed the organic parcel management practices. Improved capacities were evaluated under the socioeconomic monitoring of the project and the communities expressed that capacity strengthening has been one of the main benefits of the project.

Indicator 1.1: *By the end of year 1, communities have established organizations regarding yerba mate production, with culturally-appropriate and equitable representation from women and men*

Legal organizations regarding yerba mate productions were successfully established in Oga Itá and Joveré, however the Santa Ana legal organisation has not yet updated its legal recognition from the Municipality of Alto Vera. The CBOs are well organized, and the yerba mate activities are being carried out with support from the Peace Corps volunteers, which are an important force in the area. The Arroyo Moroti indigenous community is still using traditional, cultural forms of meeting and decision-making within family groups (not formal CBOs), however they are part of all of the meetings of the CBOs and their opinion is considered for all joint decision making.

Indicator 1.2: *By the end of year 1, capacity needs assessment of CBO members for shade-grown yerba mate cultivation, management and marketing completed*

Capacity and training needs assessments were carried out with all project communities in Year 1 and repeated in Year 3 to identify the main results of the project training workshops and other support to communities (see Indicator 2.7). Continuous support and liaison with producers by the project technicians and Guyra team allowed for training 'on the job' to be adapted to each producer and their farm and for additional training events to be run as requested by communities.

Indicator 1.3: *By the end of year 2, CBOs have developed plan(s) for production and marketing of shade yerba mate being grown by communities in San Rafael.*

The Business Plan was completed (for the whole San Rafael shade-grown yerba mate enterprise – all Mby'a Guaraní indigenous producers inside the Reserve and 'campesino' farmers outside), with both Spanish and English versions of the document produced (Annex 7.5). A Guaraní version was not completed due to the need of using terms regarding business that do not exist in this language. The 'best' scenario in the Plan involves sales to the private sector company Guayaki (market leader in export sales to the United States – where premium prices can be obtained for organic and shade-grown product for use in energy and sports drinks). The projected

⁵ <http://datazone.birdlife.org/home>

internal rate of return (IRT) is 55.9% for product sold to Guayaki or other private sector company for export, (compared with selling the same product into conventional markets in Paraguay which provides an IRT of 37.8%). However, investments are required in order to achieve exports and premium prices – including construction (or access to) an industrial drying plant ('secadero') which can produce yerba mate dried without exposure to smoke and also significant costs of organic and Fair-Trade certification. An alliance with a company was suggested to help finance these requirements. It is estimated that developing product for export will take two years from the first shade-grown, organic harvests (in 2019) and that an export business will provide return on investment and go into profit from the third year of sale (prices of 2.5 USD/kg for 'pure-leaf' product). If the San Rafael product is sold only into conventional markets ('worst case'), the business would be viable only from the fifth year of sale onwards (and lower profits). Although this 'worst-case' is also viable, the conclusion is that best value for communities will be achieved through investment in production and quality of a shade-grown, certified organic product sold at premium prices into export markets. Commitments from companies are still being negotiated to achieve the best outcome for San Rafael communities (for example ensuring that no one company demands exclusive buying rights in return for investments in production or certification). It is also important to highlight that a letter of commitment for the purchase of 16,000 kg of organic, certified product from the first project-supported harvests in July 2019 was signed by the Guayaki SRP Company in March 2019 (see Indicator 1.5 and Annex 7.10 'carto compromiso').

Indicator 1.4: *By the end of year 3, community/CBO representatives (women and men) have received training in numeracy, literacy and basic accounting, to support fair and effective engagement in markets*

More than 10 group training workshops were carried out under the project, covering topics including organic and fair-trade standards, solid residues management, formation pruning and harvesting, and financial planning. In addition, participation by project beneficiaries in 3 regional and national events provided learning and training opportunities: the South American Yerba Mate Congress; the Forum of Yerba Mate related to Native Forest; and the National Yerba Mate Congress. Over 200 technical visits were carried out by project technicians and advisers, providing the producers with continual, personalized training and capacity strengthening and key information for parcel management according to the situation on every project farm. (See Table 1. below and Annex 7.13 and 7.14 for details and evidence: training attendance records etc.).

Table 1. *Topics, dates and details of participants from beneficiary communities in all project training workshops and participation of project producers in national and regional forums*

No.	Topic	Participants	Date
1	Certification process The requirements that must be fulfilled in order to obtain a certification that will enable to add value to shade-grown yerba mate were discussed during this training workshop	16	28/09/16
2	South American Yerba Mate Congress	4	16-18/05/17
3	Solid residues management This workshop was related to the certification workshop considering that one of the requirements are maintaining the yerba mate parcels clean, besides improving the quality of life of the beneficiary communities.	Not recorded	10/04/17
4	Soil management with green manures This training allowed the producers to increase the productivity of the parcels with the implementation of green manures that protect the soils, avoiding erosion and increasing fertility.	12 men; 3 women	25/09/17
5	Formation pruning workshop	27 men; 1 woman	26/04/18

	This workshop was carried out on the field, showing the producers the best practices for formation pruning. This is a crucial workshop in order to secure the productivity of the plants in the long term.		
7	<p>Shade-grown Yerba Mate Forum</p> <p>2-day event, included discussion of following topics:</p> <ul style="list-style-type: none"> • Experiences of the Sustainable Rural Development Programme (PRODERS) with yerba mate • Yerba Mate Production at the <i>Tekoha Guasu</i>, San Rafael • Experiences in the recovery of agroforest systems with yerba mate in Paraguay • Good practices related to yerba mate • Organic yerba mate production • Experiences of the Project Reactivation of the Yerba Mate Production in the North of the Country, an alternative for the retirement for farmers • International certification types for yerba mate • Production of Yerba Mate seedlings in tree nurseries • Implantation of a yerba mate crop with an agroforestry management • Amphibians and reptiles in the yerba mate plantations of the Reserve for San Rafael National Park • Birds in the shade-grown yerba mate parcels • Visit to Guyra Paraguay's shade-grown yerba mate parcel at the Taguató Conservation Unit <p>Topics were presented by researchers and yerba mate producers from different institutions in Paraguay and Argentina.</p>	About 20 beneficiaries	06 and 07/09/17
8	<p>I National Yerba Mate Congress</p> <p>This event was organized by the Centro Yerbatero Paraguayo, several topics of relevance for the yerba guild were discussed and the producers were able to exchange ideas and experiences with several of the presenters, among them an indigenous community who are also working with shade grown yerba mate and commercialising their production at the national level.</p>	4	10-11/10/18
9	<p>Financial education: financial goals</p> <p>This training workshop following the <i>Más Vale Saber!</i> Programme⁶</p>	23 men and 2 women	16/06/18
10	<p>Financial education: budget</p> <p>This training workshop was also done following the <i>Más Vale Saber</i> Programme.</p>	26 men and 2 women	01/09/18
11	<p>Financial education: saving</p> <p>This training workshop following the <i>Más Vale Saber</i> Programme and was related to the financial goals workshop (<i>request by communities for additional training</i>).</p>	16 men	09/03/19

⁶ <https://masvalesaber.com/>; <https://www.masvalesaber.edu.py/>

Indicator 1.5: *By middle of year 3, the CBOs are in direct discussion with private sector buyers concerning their shade yerba mate*

In March 2019, a purchase deal was closed with the Guayaki SRP Company. This was the result of more than 15 negotiation meetings with potential buyers (Yerba Mate Pajarito, Yerba Mate Montana, LUSH-Brasil and Guayaki SRP) under the project (see Annex 7.9). The company Guayaki have committed to buying 16,000 kg of certified organic shade-grown yerba mate from 16 producers in the project (Oga Itá, Joveré and Arroyo Moroti communities) from their first harvests in June 2019 (Annex 7.10). The harvest plans will be completed through the engagement and support of other private sector companies. Most producers who will harvest in 2019 had planted yerba mate before the beginning of the project and have been supported under the project to change to manage all of their yerba mate crops organically and under shade. (See maps in Annex 7.11). Guyra Paraguay is organizing the certification process with communities under both fair-trade and organic standards with the companies Ecocert (fair-trade standards) and Imocert (organic standards). The product export is being planned and will be carried out with the Jerovia Orgánico Company. Support from the Eco Sauer Group, who own the biggest drying kiln in the project's influence area, was obtained to carry out the product processing. Guayaki will purchase the first product despite the fact that the Eco Sauer Group works with a conventional drying kiln (where the product is in contact with smoke) as only small quantities are involved. The support of the Eco Sauer Group was achieved by the Guyra team through meetings and lobbying. The owner has shown great interest to support the harvest and product processing in order to motivate the project beneficiaries. The first harvest will be completed only with support of these companies since it will not be profitable for the Guayaki Company or the Eco Sauer Group; however, this will be crucial so that the producers can see the economic benefits of their efforts and gain from the advantages of producing organic, shade-grown yerba mate that conserves the Atlantic Forest. The price of the product is still under negotiation with the Guayaki Company and will be calculated based on the costs of the activities, so that even though some costs of first certification were funded under the project, the producers can have a real sense of the incomes that they will obtain by selling the product under future, established conditions. This will be a motivation so that they continue working with this system even after the end of project funding.

Output 2. *Shade-grown yerba mate is being grown in 50ha of indigenous peoples' and campesino forested lands increasing incomes and restoring/maintaining habitat suitable for threatened Atlantic forest endemics*

Output 2 was successfully achieved, although first actual increases in incomes from shade yerba mate were realized just after project end (June 2019 harvests – see (revised) Indicator 2.6 below).

Indicator 2.2: *By mid-point of Year 3, 50ha of shade-grown yerba mate have been established (10ha at indigenous community of Arroyo Moroti; 40ha at campesino communities).*

A total of 48 hectares of shade-grown yerba mate were planted with support from the project by 45 producers in the Oga Itá, Joveré and Santa Ana farmer (*campesino*) communities and the Mby'a Guaraní indigenous community at Arroyo Moroti (see Table 2 and Annex 7.11 Darwin producers' information and maps (2019)).

Table 2: *Shade yerba mate (ha) planted with project support by project year and by beneficiary community*

Community	Number of hectares planted in Year 1	Number of hectares planted in Year 2	Number of hectares planted in Year 3	Total (Ha)
Oga Itá	8.27	6.7	-	14.97
Arroyo Moroti	5.56	3	-	8.56
Jovere	-	-	23	23
Santa Ana	-	2.3	-	2.3
Total				48.83

Indicator 2.3: *From middle of year 2 to end year 3, yerba mate farmers from San Rafael make 2 visits: one to the Ache of Kue Tuvy and one to an Mby'a Guarani community in Brazil, for peer-to-peer learning*

One exchange visit to the Aché of Kue Tuvy Community was carried out successfully under the project. However, the proposed second visit to an indigenous community working with shade-grown yerba mate in Brazil was deemed to be too expensive despite support from the Guayaki SRP partner. The team decided to invest the remaining funds on parcel maintenance and on-site training. Other peer-to-peer learning and exchanges were facilitated by the project through producers' attendance at yerba mate conferences/ forums (see Indicator 1.4 and Table 1. above).

Indicator 2.4: *By first/ second quarter of year 3, the importance of retaining Atlantic Forest habitat has been demonstrated through biodiversity surveys (in forest, forest-edge and on-farm plots and all seasons) and the presence of forest-dependent species; to feed into the guidelines (Output indicator 3.2) and to act as a baseline for long-term biodiversity and habitat monitoring in San Rafael*

The biodiversity monitoring and data analysis were carried out successfully, establishing a baseline to identify the contribution of shade-grown yerba mate parcels to the protection of Atlantic Forest habitat and associated biodiversity in the longer-term. A total of 112 bird species were recorded; among these 71 species recorded in forests with yerba mate, 53 in borders of forests with yerba mate and 55 species in open areas. Among the bird species recorded, 20 are endemic to the Atlantic Forest and 17 of these species were recorded in forests with yerba mate. The trophic guilds analysis indicated the presence of a larger number of insectivorous species in shade grown yerba mate parcels, compared with other areas. The diversity of birds with forest preference was higher in both forests and borders of forests with yerba mate (than in open areas). Regarding amphibians and reptiles, 10 species were recorded in total; four of these species recorded in forest, one species recorded in forest borders and five species recorded in open areas. Among the species recorded in forests, only one of them was exclusive to this type of habitat (*Physalaemus cuvieri*). It is anticipated that more species will be found with continuing survey work in the same sites. The study suggests that shade-grown yerba mate could be beneficial to maintaining species diversity in forest and shows the high conservation value even of small of Atlantic Forest fragments. (See Annex 7.4 Biodiversity Monitoring Report and Annex 7.15 Cabral et al, 2019 (*in prep*). *Draft MS. Shade yerba mate and Atlantic Forest Biodiversity*).

Indicator 2.6: *By the end of year 3, participating communities (over 1,000 people) are benefitting from increased community capacity, improved production and progress towards certification and sale of certified shade-grown yerba mate products. Direct project beneficiaries are 340 individuals (producers and their families - indigenous and campesino). Estimates of harvest and sale in year 3 (organic, conventional yerba mate from project producers in Oga Itá) are 20,600 kilos (at approx. 0.5 USD per kilo). The predicted future price of certified, shade-grown product is at least 2.5 USD per kilo – first harvests in 2020*

Communities state that one of the main benefits of the project has been capacity strengthening (see Annex 7.1 Socio-economic monitoring report). They were very enthusiastic because the project followed the commitments outlined at the start and provided three years of capacity strengthening not only regarding shade-grown yerba mate, but also soil conservation and other topics that have been of great utility to improve the yields of other crops as well. This has been achieved due to the great effort of Miguel Aquino, the field technician who has supported the communities, beyond the commitments established under the project. The direct project beneficiaries are 45 producers and their families in the 3 farmer (*campesino*) communities and one indigenous community of 129 members, who have greatly improved their yerba mate parcel management. At the end of the project, 43 of the 46 farms are fulfilling the conditions for certification under organic and fair-trade standards, which means they are able to sell their product at premium prices. 16,000 kg of premium, certified product will be harvested and sold at the end of project Year 3. Prices are still being negotiated with the Guayaki SRP Company. Benefits to the wider communities (over 1,000 people) impacted by the project were not measured but the socio-economic monitoring revealed great confidence among the communities themselves that their strengthened capacity and ongoing support from Guyra Paraguay and the private sector to development of the San Rafael yerba mate business will bring wider community

benefits including new incomes which will help to meet some basic needs (see 2.7 below). Four new producers in a fourth *campesino* community (Perlita) joined the project (with conversion of their farms to shade and organic production) in mid-2019 and others are keen to join.

Indicator 2.7: *By the end of the project, communities are reporting capacity and wellbeing benefits (increases in social and natural capitals and progress towards meeting identified basic necessities through yerba mate production, certification, sales and marketing). [Socio-economic consultation and examples seen elsewhere (peer to peer learning visits) suggest initial priorities will be for food, education, solar panels, health care and improved water supplies. Increases in financial capital (incomes/ dividends) from sales of certified organic, shade-grown yerba mate will be post-project]*

Baseline data were collected on communities' needs and self-assessments of natural and other capitals in Years 1 and 2 and follow-up questionnaire surveys were carried out in Year 3 to assess the project impacts on community capacity and wellbeing. Data collection was carried out through semi-structured interviews with project beneficiaries and key informants, focal points and participative observation. A total of 43 individuals (out of the 45 beneficiary producers of the farmer communities) were interviewed, as well as the leaders of the Mby'a Guaraní IP community. Out of all of the interviewees, 93% expressed that they gained knowledge regarding crop management and formation pruning, which is vital for the productive yield of the yerba mate plants in the long-term. 18.6% expressed that they have learnt about fair-trade and financial management. 86% of the interviewees are part of some social organization in their community, and 37% of women interviewed are part of those committees. Regarding basic necessities, the farmer (*campesino*) communities listed health, education and work as their main necessities and the indigenous community from Arroyo Moroti stated that their main necessity is feeding. Most of the beneficiaries interviewed said the main reason they decided to become part of the project is to improve their incomes. The principal benefits of being part of the project to date included: obtaining yerba mate seedlings with no costs, increasing the yerba mate production area, receiving technical assistance for crop management. 95% of the beneficiaries expect to continue receiving training and technical assistance, which will be available through the cooperation agreement signed between Guyra Paraguay and the Guayaki SRP Company. Most *campesino* beneficiaries perceive that the project is a hope to improve their quality of life and the indigenous community perceived it principally as an opportunity to improve their food security. (See Annex 7.1 Socio-economic monitoring report).

Output 3. *Evidence-based guidelines on cultivation of shade-grown yerba mate are developed for farmers and agricultural agencies*

Indicator 3.2: *By middle of year 3, evidence-based guidelines on shade yerba mate produced and consulted on with relevant agencies and other stakeholders, and 2 awareness-raising/lesson-sharing workshops held (involving government administrations and agencies, NGOs, CBOs, producers and academics, etc.) from across Paraguay's Atlantic Forest region*

A “**Manual on shade-grown yerba mate production**” was produced, based on the experiences of the project's beneficiary communities, and encompassing the following topics:

- Seedling production: seeds collection, planting and preparing the plants for the forest.
- Planting: addressing the planting season, the planting density and parcel management.
- Product processing: the process to produce yerba mate tea.
- Organic and fair-trade standards: the requirements to fulfil to obtain a product that can be certified under these norms.
- Benefits of planting shade-grown yerba mate: why planting shade-grown yerba mate is important, how it can help to conserve biodiversity and obtain economic benefits.
- The importance of conserving the Atlantic Forest: why the Atlantic Forest is important for biodiversity and for people.

- Birds in shade-grown yerba mate parcels: why birds are indicators of ecosystem health and information on endemic birds recorded in the shade-grown yerba mate parcels.

In addition, abstracts of the main presentations given at the Shade-grown Yerba Mate Forum (see Table 1 above) were also collated and combined with the manual into a guidelines document uploaded to Guyra Paraguay's website and available for free download. These are great contributions available to any person interested in shade-grown yerba mate production, thus helping to replicate the experiences and the model beyond the immediate project beneficiaries (see Annex 7.6. Evidence-based guidelines – consultation draft).

Indicator 3.3: *Journal article on factors affecting biodiversity in shade yerba submitted to open access journal by year 3*

The publication is now being finalized by the biodiversity monitoring team, with input from BirdLife Secretariat (see Annex 7.15 Cabral et al, 2019 (*in prep*). *Draft MS*. 'Shade-grown yerba mate and conservation of Atlantic Forest biodiversity'). The publication of the article will be another great contribution of the project to science and civil society. The field work and publication of the article have enabled training of project technicians for methodology planning, data collection and data analysis. It is important to highlight that most of the volunteers and Guyra Paraguay's staff are conservationists in the early stage of their careers. In addition, the project monitoring programme enabled the professional growth of a total of five students of the National University of Asunción who completed internships, thesis and volunteer work under the project (see Annexes 5. Publications and 7.16 Student theses). Furthermore, two posters with preliminary results of the research on amphibians and reptiles were presented at the First Bolivian Congress of Herpetology, in La Paz, Bolivia in 2018, and at the XVIII Argentinean Congress of Herpetology in Salta, Argentina in 2017. These posters raised awareness of the project within the academic community, and also resulted in interesting discussions and suggestions for further research.

Output 4. *Government policy promotes shade-grown yerba mate as an appropriate, market-driven approach to conserve Atlantic Forest biodiversity in the long-term.*

The support and engagement of government was weaker than hoped-for (especially at national level), largely due to political instability (including around Presidential elections in 2018), which made Output 4 the most difficult to achieve. Unfortunately, none of the training workshops planned jointly with government institutions for 2018 was carried out and a Cooperation Agreement with the Paraguayan Institute of Agriculture (IPTA) was not achieved. Nevertheless, other important unexpected gains were achieved through continued lobbying and meetings with various authorities and agencies and through participation of the project team and beneficiaries in congresses/ forums. See Table 1 above, Annex 7.7 (Table of meetings held with government representatives and institutions) and specific achievements against indicators below.

Indicator 4.1: *Government are engaged with project, consulted and using project and Guyra Paraguay evidence, guidelines and policy proposals to strengthen national Atlantic Forest conservation and endorse shade-grown yerba mate as a model for forest conservation management and sustainable financing*

In the project's first and second years, relationships between several conservation NGOs and INFONA (national forestry authority) were in crisis, due to the release of a Presidential Decree (7702/17) in 2017 that modified the article 42 of the National Forestry Law (422/73) and enabled land use change in producers' legal forest reserves, with the option of buying certificates of environmental services (Law 3001/05) or foresting with 60% of native species. Several national NGOs disagreed with the new Decree, that put in danger the last forest remnants outside protected areas and would result in biodiversity loss. Guyra Paraguay tried to maintain good relationships with INFONA in order to keep on working jointly and continue with advocacy for public policies and the project. However, the general political instability in 2018 meant that little progress could be made regarding the specific policy engagement activities planned under the project. It is important to mention that due to all of these events, key authorities within INFONA changed twice during the project's lifetime (September 2017 and July 2018). Thanks to continued lobbying and efforts to engage them, most authorities and staff working with yerba mate in the public sector are now aware of the shade-grown yerba mate initiative and the model,

as well as the guidelines and community benefits and satisfaction. As a result of these contacts, the project team are constantly receiving information about training opportunities or funds and continue to lobby and engage decision-makers. (See 4.2 and 4.3, below).

Indicator 4.2: *By end of year 3, Itapúa State government has consulted with Guyra Paraguay and endorsed the draft project guidelines concerning biodiversity conservation and the production of shade-grown yerba mate in Atlantic Forests*

The evidence-based project guidelines are ready to be shared prior to publication (see draft at Annex 7.6). The publication process is now being carried out in collaboration with and supported by the Itapúa State Government.

Indicator 4.3: *By end of project, the shade-grown yerba mate model of Atlantic forest conservation is included in a Forest Management Plan for the Guyra Paraguay and Mby'a Guaraní-owned forest property (100 ha) and approved by INFONA as a "project of interest".*

The Forest Management Plan was not completed due to the political instability within INFONA and the high cost of this activity (consultancies and mapping to required standards). However, discussions are now well-advanced over a cooperation agreement to be signed between Guyra Paraguay and INFONA in 2019 to continue enhancing the forest conservation activities at San Rafael. In addition, two declarations of Interest in the Project were signed by the Municipality of Alto Verá and Itapúa State Government and a new cooperation agreement was also signed between Guyra Paraguay and MADES (Ministry of Environment) in April 2019, which will also facilitate much greater government cooperation in ongoing conservation and community activities at San Rafael (see Annex 7.8 Declarations of interest).

3.2 Outcome:

Shade-grown yerba mate reduces forest degradation at San Rafael, provides a poverty reduction route for 5 communities, and a sustainable land use model for additional c.80,000 ha of Paraguayan Atlantic Forest

The project Outcome was largely achieved, with demonstration of an effective, sustainable land use model (yerba mate grown organically, under shade in forest and through shade tree planting on farmland). The model is providing community benefits (4 communities, with a fifth joining in 2019) and alternatives to forest clearance or more destructive forms of farming in the project influence area. Involved communities are very convinced that this is the route to a more sustainable route to meet their needs and reduce poverty. Progress on government engagement and policy objectives was slower than hoped-for which makes wider adoption and replication at scale harder to achieve but at end of project decision-makers are starting to endorse and support the model and there is great interest from wider communities to join the San Rafael initiative (with ongoing support from Guyra Paraguay and private sector companies/ social enterprises).

Indicator 0.1: *By end of project, settled Mby'a Guaraní (120 people) and 3 campesino communities (1000 people) in San Rafael have improved wellbeing (as defined by the communities, and compared to year 1 baseline) and 50 ha of shade-grown yerba mate in production, with markets and buyers identified (first shade-grown harvests in 2020) and first audits and farm inspection completed towards organic and Fair-Trade certification*

The main contribution of the project was increasing the capacity of communities for organic shade-grown yerba mate cultivation, fair-trade and financial management. A total of 48 ha of organic shade-grown yerba mate were planted by the beneficiaries with support and technical assistance provided by the project. Thanks to the good experience of the project beneficiaries, more communities of San Rafael are interested in working with the shade-grown yerba mate system and a new (5th) community will start planting shade-grown yerba mate in 2019. Markets were successfully identified and steps for successful commercialization were planned, through the elaboration of a business plan. Deals were closed with the private sector, through the signature of a cooperation agreement with the Guayaki SRP Company, plus a letter of commitment from Guayaki to purchase the product and supporting the producers. First audits and farm inspection deals were completed and the first (organic and fair-trade) certification achieved (August 2019). See Outputs 1-3 (3.1 above), Annex 2 and 7 for details and evidence.

Indicator 0.2: *By end of project, participating communities have increased capacity for cultivation of shade mate, and for collective negotiation and marketing of their produce, through strengthened and empowered CBOs or other culturally appropriate social/ family groups representing shade-yerba producers.*

Capacities for shade-grown yerba mate cultivation were increased (evidenced through the results of assessments and monitoring – see Annex 7.1 Socio-economic monitoring report), and the excellent condition of more than 93% of the parcels established under the project. Capacities for shade-grown yerba mate cultivation and production is also evidenced by the deals closed with the Guayaki Company, who would only commit to work with the producers if they can obtain a product that fits their standards, passing the certification processes and able to enter a premium market. CBOs have been strengthened and registered formally and indigenous family groups fully represented in all negotiations and project activities. See Outputs 1 and 2 (3.1 above), Annex 2 and 7 for details and evidence.

Indicator 0.3: *Threats to the forest in areas occupied/used by participating Mby'a Guaraní and campesino communities (>7000 ha) reduced by EOP, compared with year 1 baseline. Measures include: at least 5% reduction in rate of land use change from illegal and unsustainable activities (encroachment by marijuana or other farms, timber cutting and forest fires)*

Threats appear to have decreased overall in the project's influence area, but significant threats remain in other areas of the Reserve for San Rafael National Park and its buffer zone. Monitoring results indicate that overall rates of land use change (loss of forest cover) have declined during the project period in almost all areas managed by project communities (apart from some increases in legal farming (mechanized and traditional) in the Oga Itá and Joveré community areas in the last monitoring period). It is important to highlight that none of the changes detected in the forest cover (losses) were identified within properties of project producers/ beneficiaries. It is too early to detect any increases in forest cover due to shade tree planting on farms.

A total of 98 cases of irregularities (illegal and unsustainable activities) were recorded from January 2017 to December 2018. The largest number of records were wood extraction (27 cases), followed by land use change (18 cases) and presumed illegal logging (14 cases). A total of 13 cases with no description were recorded. It is important to highlight that several of these cases were detected at the south of San Rafael, in the borders with the Joveré and Santa Ana communities. The neighbouring Taguató Property of Guyra Paraguay and the Sudameris Property (not part of the Darwin project) were other sites with a large number of illegal records. These areas remain highly insecure and subject to illegal invasions. Most land use change is directly related to illegal crops which remain an important economic activity in the area. People usually establish these crops in areas with difficult access, which allows the crops to be clandestine. It will be essential to continue monitoring in order to understand the impact of these illegal activities and the success of alternatives provided by the project (a legal shade yerba mate business) in combatting illegal incursions. (See Annex 7.3 Final Threat monitoring report).

Indicator 0.4: *By end of project, 50 ha of indigenous/campesino forest land in San Rafael shows how management can generate income (yerba mate) and retain suitable habitat for threatened/target Atlantic forest biodiversity, as demonstrated by biodiversity surveys (forest, forest-edge and on-farm) and presence of forest-dependent species (see indicator 2.4)*

Biodiversity monitoring was carried out successfully (and will continue under Guyra Paraguay's ongoing work at San Rafael). The results provide a baseline to understand the contribution of shade-grown yerba mate to biodiversity conservation. Project-developed guidance on managing shade yerba mate for biodiversity conservation has also been produced. See Outputs 2 and 3 above (section 3.1) and Annexes 7.6 Evidence-based guidelines and 7.15 Cabral et al, 2019 (*in prep*). *Draft MS. Shade yerba mate and Atlantic Forest Biodiversity*).

Indicator 0.5: *By end of project, the shade-grown yerba mate model has been accepted by government as an evidence-based component of the Atlantic Forest conservation model and included in a Forest Management Plan for the Guyra Paraguay and Mby'a Guaraní-owned forest property (100 ha) approved by INFONA as a "project of interest"*

The Forest Management Plan was not completed for reasons outwith the control of the project team - political instability nationally and within INFONA and the high cost of consultancies to produce it – see Indicator 4.1 and 4.3 (section 3.1 above). Discussions (post-project) are now

well-advanced over a cooperation agreement to be signed between Guyra Paraguay and INFONA in 2019 to continue enhancing the forest conservation activities at San Rafael. In addition, two declarations of Interest in the Project were signed by the Municipality of Alto Verá and Itapúa State Government and a new cooperation agreement was also signed between Guyra Paraguay and MADES (Ministry of Environment) in April 2019, which will also facilitate much greater government cooperation in ongoing conservation and community activities at San Rafael. (see Annex 7.8 Declarations of interest).

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

Impact: *Policy-driven cultivation of shade-grown yerba mate within and around Paraguay's Atlantic Forests provides a market-driven, culturally and environmentally appropriate land-use that reduces poverty, respects indigenous peoples' rights and conserves biodiversity*

The project made significant progress towards intended impact – notably in terms of developing capacity of communities to produce and market shade-grown yerba mate and demonstrating this as a model of sustainable land use that provides additional incomes and a route to poverty reduction, while also reducing threats to and conserving biodiversity within and outside San Rafael (Atlantic Forest) Reserve for National Park. The project team worked with both indigenous people inside the Forest Reserve and settled farming communities in the buffer zone, fully respecting peoples' rights, building local capacity and promoting involvement of women and equitable sharing of benefits in culturally appropriate ways, while also maintaining and monitoring forest biodiversity in the Reserve and increasing native tree cover in the buffer zone.

The first sales (at premium prices) from the San Rafael community business (organic, shade-grown yerba mate) were achieved at project end in 2019 (16,000 kg to Guayaki SRP Company) and the business is scheduled to achieve (organic and fair-trade) certification in August 2019. Training workshops and outreach have enabled neighbour communities to get interested in the production system and one more farmer community will start working with this model from 2019. The project has also reached other big companies from the private sector, such as the Eco Sauer Group, who are now familiar with this production model and are cooperating (post-project) as another key partner to help complete the first certified harvest and processing of San Rafael shade yerba mate in 2019.

The model is not yet 'policy-driven' and government engagement and support (regionally and nationally) was weaker than hoped-for. Significant progress was made at all levels, however, in raising awareness, demonstrating and promoting shade yerba mate as a sustainable forest harvest (agro-ecology) model, which supports both local livelihoods and biodiversity conservation. Guyra Paraguay (the implementing partner) signed a cooperation agreement with the Ministry of Environment (MADES) in May 2019 which significantly strengthens government/policy support to the ongoing work at San Rafael and will help to ensure sustainability of these Darwin project impacts.

Biodiversity monitoring has continued throughout the project and across its influence area, providing baselines to understand the impact of the production system in the long term and information for the evidence-based guidelines for integrating shade-grown yerba mate with Atlantic Forest conservation. Preliminary results show a greater diversity of birds with 'forest preference' in areas of forests and borders of forests with yerba mate (than in open areas), highlighting the importance of the conservation of forest remnants for birds (and probably the whole vertebrate community). This has also built significant capacity, enabling the academic formation of five students of the National University of Asunción, (5 degree theses and internship reports now available for other students). It has also enabled the professional development of Guyra Paraguay's technical team, comprised mainly of young conservationists in the early stages of their careers, who have developed a leadership capacity and better understanding of the conservation challenges of the Atlantic Forest, as well as the importance of providing alternatives to vulnerable communities (routes to poverty alleviation) in order to conserve biodiversity. Miguel Aquino, a field technician who was previously dedicated to producing conventional (non-shade) yerba mate, is now starting to transform the production method of seedlings and is starting technical assistance for organic shade-grown yerba mate production to other producers around San Rafael. (Annexes 3, 5 and 7 for details and supporting documents).

4. Contribution to Darwin Initiative Programme Objectives

4.1 Contribution to Global Goals for Sustainable Development (SDGs)

The project has empowered local communities at San Rafael (one indigenous Mby'a Guaraní community in the Reserve – 129 people - and 4 settled *campesino* farmer communities in the buffer zone (45 producers and their families)) to find sustainable ways to generate benefits and income while also contributing to forest and biodiversity conservation in and around the largest remaining remnant of a priority threatened habitat and biodiversity hotspot (72,849 ha of Atlantic Forest). Working with these communities, the project has built capacity and developed and demonstrated an agro-ecology model of sustainable land use (shade-grown, organic yerba mate production) which is providing benefits and income for project beneficiaries and generating interest from additional communities and policy-makers to join and replicate the model more widely. The San Rafael community business (now becoming certified and with first sales and incomes from organic, shade yerba mate secured in 2019) is providing a route to poverty reduction for the beneficiary communities, with the potential for wider replication of the model and benefits (see 4.3) and strengthened conservation of Atlantic Forest in Paraguay.

The project has made positive contributions to the following SDGs: By developing shade grown yerba mate alongside training for the local communities to develop a viable economic crop the project has worked towards goals 1. Ending all forms of poverty; 2. Ending hunger and achieving food security and improved nutrition; and 3. Good Health and well-being. In addition, indirect (and longer-term) impacts are anticipated in relation to SDG 8.2 (higher levels of economic productivity achieved by value-addition); 12.2 (sustainable management and efficient use of natural resources), and 12.8 (having the relevant information and awareness to live in harmony with nature). Finally, by developing shade grown yerba mate as an alternative to the normal cash crop grown in open farmland the project has contributed to goal 15. Protecting, restoring and promoting sustainable use of terrestrial ecosystems.

The specific achievements (relating to the project Log Frame indicators and targets) and evidence are detailed under each Output and the Outcome and Impact in Section 3.1 to 3.3 (and Annex 2) of the report, with supplementary materials and evidence supplied in Annexes 5 and 7.

4.2 Project support to the Conventions or Treaties (CBD, CITES, Nagoya Protocol, ITPGRFA)

The project has helped Paraguay implement the National Biodiversity Strategy and Action Plan (specifically preservation of Atlantic Forest which is a Paraguayan (NBSAP) priority) and to contribute to Aichi Targets. Guyra Paraguay has a long-term relationship with the CBD/ABS/ITPGRFA/CITES focal points, (all in the Secretariat of the Environment (SEAM)) and supports Government in achieving biodiversity conservation outcomes. San Rafael, and wider Atlantic Forest conservation is always a topic in discussions. The project works with both indigenous Mby'a Guaraní in the San Rafael 'Reserve for National Park' and the *campesino* farmers outside the Reserve, respecting ancestral and cultural rights and supporting communities to identify their needs and develop alternative livelihoods that also support forest conservation. All stages have been carried out consultatively and transparently, and in culturally appropriate ways, working with or supporting the establishment of community decision-making structures (indigenous family groups of Mby'a Guaraní and CBOs among the *campesino*) for sharing benefits. Thus, it has also contributed to the Nagoya Protocol at national level.

Through the cultivation of shade-grown yerba mate as a sustainable, organic and fair-trade farming alternative that benefits local communities economically, improving livelihoods, the project has contributed to conservation of Atlantic Forest and biodiversity which is threatened by persistent deforestation for extensive crops (soybean) and other (often illegal) activities. Working through local communities at San Rafael, it has contributed to the following Aichi Targets: AT5/ENPAB-Sustainable forest management; AT7/ENPAB-Agricultural Resources; AT11/ENPAB-Conservation of natural resources in situ; AT12/ENPAB-Threatened species; AT14/ENPAB-Urban and rural development; AT15/ENPAB-Degraded ecosystems restoration and contribution to carbon stocks; AT18/ENPAB-Indigenous territories.

4.3 Project support to poverty alleviation

The project has helped beneficiaries (yerba mate producers and communities – see numbers in 4.1 above) to develop a long-term, environmentally and economically, sustainable activity in their territories. Shade-grown yerba mate is providing these communities with an opportunity to sell and export products with added value, making sustainable use of resources and providing a level of income higher than that produced by ‘conventional’ (non-shade) yerba mate. A successful model of certification and export now being developed with private sector support and investment will enable communities to realise the benefits associated with sustainable production and marketing. At the end of the project, the sale of the first organic, shade-grown production and harvest (16,000 kg) was secured, providing new incomes to beneficiaries. Projections for future harvests and sales, together with costs and investments required, have been developed in a detailed business plan (see Annex 7.5). The project has guaranteed a national market initially through Guayaki (yerba mate marketing and export company) which provides technical assistance and is buying the first production at San Rafael (while also encouraging the San Rafael business to involve and sell to other private sector companies). At end of project the beneficiary communities expressed very high confidence in the project and the agro-ecology model and reported the view that the project and shade-grown yerba mate is already contributing to various forms of capital (natural, social, financial) – in particular, through the increased capacity and skills they have acquired and new opportunities/ lesson learning and local and national representation provided through the project. In addition, the new incomes will allow communities to improve their quality of life in terms of access to children’s health and education provision. (See this report Section 3, Outputs 1 and 2 and Annex 7.1 Socio-economic monitoring report).

The model is providing a route to poverty reduction for the immediate project beneficiary communities with the potential for wider replication (and with ongoing support from Guyra Paraguay, the private sector and project donors in place to achieve this). An estimated 3,000 people in the Reserve buffer zone could potentially become beneficiaries in the longer-term, directly as producers or employees in the San Rafael community shade yerba mate business and through support businesses (yerba mate drying plant, tree nurseries and woodlots, transport) and other ‘trickle-down’ effects into the local economy as communities spend new incomes.

4.4 Gender equality

The project has created opportunities and promoted women’s engagement in all activities, particularly training and capacity building, while also respecting and working within the different cultural and traditional norms of various beneficiary communities. In the *campesino* communities, both men and women can have land titles and own properties and project beneficiaries have included both women and men who are property owners as well as married couples/ families working together. The men tend traditionally to be in charge of yerba mate parcels (planting and maintenance) but women take on more responsibility, especially during the harvest and selection and packing of leaves (and this accords them high status). Four women producers in the *campesino* communities of Oga Itá and Santa Ana have been managing their own yerba mate parcels with encouragement and support of the project. There is no restriction on women being part of the CBOs established in campesino communities for yerba mate management and marketing but there are currently no women in this position. In the Mby’a Guaraní indigenous community, (Arroyo Moroti) the whole community has recognized ancestral land rights and all decision-making is made jointly by family groups and the Cacique (community head); women participate jointly and equally with other members of the community. All benefits are shared (including with other indigenous communities who might move into their area).

A training workshop on “financial goals” in June 2018 followed the methodology and trainers’ guidelines of the “*Más Vale Saber*” Programme (“*It is worth knowing*”), with copies of the materials supplied to every participant so that they could share with their families. Over 50 % of the project producers attended (22 men and 2 women) and discussed personal, family and community “life” goals, and the importance of saving (topics not often addressed by communities). The problem of attendance by women was highlighted – although men and women were invited equally, someone in the family (usually women) has to remain home with small children. Ways in which the project can facilitate attendance by women were discussed and put in place (organizing meetings and workshops at times when women can arrange child care more easily). The producers found the workshop very valuable and requested further business training. A second

workshop in September (25 men and 4 women) focussed on “Budget elaboration” and financial forecasting and management and was equally well-received. A Peace Corps volunteer working in Oga Itá with women’s groups and organic gardens for food also started to help the project to increase women’s engagement in training and other project activities in the final year.

At national level, the first “Yerba Mate Forum in Native Forest”, was held in Itapúa, Alto Verá, in September 2017, where 23 women participated out of 112 attendants. Guyra Paraguay have also held meetings with the Ministry of Women, at which they requested support and technical assistance from the Vice Minister and Manager of the Rural Women Area who provided contacts of leaders of Alto Vera Municipality’s Rural Women Department under the Governance of Itapúa. Progress has been slow but Guyra Paraguay continue this engagement and anticipate positive impacts on the empowerment of the women of the project as the regional authorities learn more about the project activities and successes and how to support women in the development of the local community yerba mate production and business model.

4.5 Programme indicators

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

Yes. The ‘Reserve for San Rafael National Park’ is not a legally designated protected area but the support from the project and from Guyra Paraguay (national conservation NGO) ensures greater recognition and representation of communities with local and national authorities in land use and conservation management structures in and around the Reserve. In the buffer zone, 45 producers and their families in 4 *campesino* (settled farmer) communities, were consulted about their needs (in preparation of the business plan for the San Rafael yerba mate community business and through socio-economic assessments and training/ capacity building). Two existing CBOs were strengthened and legally registered with local government authorities (the Municipality of Alto Verá) and an overall community cooperative structure is proposed for the next phase. In the Reserve, the Mby’a Guaraní indigenous community (129 people) were similarly involved and consulted over shade-grown yerba mate business planning and forest conservation management. In addition, the indigenous community at Arroyo Moroti own and manage land in condominium with Guyra Paraguay who continue discussions with INFONA (national forestry institute), and local and national government (Ministry of Environment), with and on behalf of San Rafael communities over conservation management and sustainable land use at San Rafael.

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

Discussions (Guyra Paraguay and communities) are ongoing with INFONA over the need and details of a Forest Management Plan (FMP) at Arroyo Moroti and Taguata (areas within the Reserve managed jointly by Mby’a Guaraní and Guyra Paraguay). Consultancy costs to complete an approved FMP and mapping as required by INFONA were too high for the project budget to cover preparation of the FMP and proposed changes in forest legislation and political instability in institutions including INFONA meant the Plan could not be produced. Negotiations are ongoing with INFONA to provide technical and other support to the FMP. The project output (evidence-based guidelines for managing shade-grown yerba mate and biodiversity conservation in Atlantic Forest) and other project research and monitoring outputs will be used in FMP preparation.

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

All project discussions and negotiations were participatory involving communities (*campesino* and indigenous people). Few women are producers in the *campesino* communities; by end of project they numbered 4 out of 45 (who were equally as involved in all project activities and management discussions as were male producers). The project also targeted women for training, particularly financial management and planning, in order to facilitate involvement in producers’

groups and the proposed collective San Rafael community yerba mate business. The project also trialled methods of engaging women more in all meetings (choosing appropriate times of day and helping to ensure availability of child care so that women can attend meetings and training workshops). In the Mby'a Guaraní, all meetings and decision-making traditionally involve whole family groups, with the Cacique or head man as leader and this practice was followed by the project as the culturally appropriate way to engage the whole indigenous community. The Cacique (and the young man who will succeed him) have benefitted from various project training and opportunities/ exposure to external stakeholders, events, meetings with private sector etc.

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

No increases in HH incomes were achieved during the project lifetime but new sales were secured during the project – for the first harvests from project-produced, organic shade yerba mate. The agreement (with Company Guayaki SRP) is for purchase of 16,000 kg of shade-grown, organic yerba mate in 2019 from producers in Oga Itá, Santa Ana, Jovere and Arroyo Moroti who have achieved organic and fair-trade status and sufficient production quality on their farms. (See sales purchase commitment letter from Guayaki, Annex 7.10).

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

No increases in income were measured during the project (see above). However, detailed baselines were collected (areas of production and incomes from 'conventional' (non-shade and non-organic) yerba mate production and other crops; areas and success of new shade planting etc.). In addition, detailed forecasts were developed in the business plan (anticipated harvests and prices per kilo for different grades of yerba mate production – 'conventional' to shade-grown, certified organic and Fair-trade) with support from the private sector company and project partner Guayaki and advice/ experience from other shade-grown producers elsewhere in the region. The business plan showed that a San Rafael business would become profitable within 5 years without certification and in 3 years with certification (and higher prices for certified product). It is the latter route which the communities are now pursuing under a next phase supported by Guyra Paraguay and various private sector partners. The first farm audits and certifications (45 producers for the organic certification and 17 producers for fair-trade) are being completed in August 2019.

4.6 Transfer of knowledge

The project has produced various technical outputs for dissemination (see Section 3; Annex 5. Publications and 7. Supplementary material). In particular, new knowledge about cultivation and production of yerba mate under shade was disseminated through project presentations, posters and videos - at Itapua State and national level, including at the Yerba Mate Forum in Native Forest and the Shade-grown Yerba Mate Forum in 2017; and at the first National Yerba Mate Congress organized by the Centro Yerbatero Paraguayo in 2018. The evidence-based guidelines were drafted from the various presentations to the Shade-grown yerba mate Forum (in which 20 project beneficiaries were also involved) and are under discussion for adoption at Itapua State level (see Section 3.1, Output 3, Annex 1 and Annex 7.6 Evidence-based guidelines). Internationally, 4 participants from beneficiary communities accompanied project staff to the South American Yerba Mate Congress in 2017 which was a huge learning experience and opportunity to promote the project and learn from other indigenous communities about regional experience of production and marketing of yerba mate.

An article based on the biodiversity monitoring in forest and shade yerba mate parcels at San Rafael is in preparation for publication in an open access journal and the biodiversity monitoring work enabled the professional growth of a total of five students of the National University of Asunción (internships, theses and volunteer work carried out under the project). The preparation and publication of the article is a significant contribution of the project to science and civil society and has enabled training of project technicians for methodology planning, data collection and data analysis. Most of the volunteers and Guyra Paraguay's staff involved are conservationists in the early stage of their careers. Two posters with preliminary results of the research on amphibians and reptiles were presented at the First Bolivian Congress of Herpetology, carried

out in La Paz, Bolivia in 2018 as well as at the XVIII Argentinean Congress of Herpetology carried out in Salta, Argentina in 2017. Two Paraguayans (both women) achieved degrees in Forest Engineering from the University of Asunción (project partner) based on field work and theses carried out as part of the collaborative programme at San Rafael between Guyra Paraguay science team and the University.

In the UK, the project was promoted, and knowledge shared through contributions to the Darwin Anniversary session at the 6th Global Botanic Gardens Congress in June 2017 ('Plant conservation and society through the lens of the Darwin Initiative'); the Darwin newsletter November 2018 ('Learning 'yerba mate' lessons with communities in Paraguay's San Rafael Atlantic Forest Reserve'); in the BirdLife International Annual Review (Local Engagement and Empowerment Programme), and through various activities and contributions to 2 BirdLife events in Cambridge in 2019. These were a Trillion Trees 'Forest Sustainability Accelerator' capacity building and knowledge-sharing event in April attended by the project team from BirdLife Partner Guyra Paraguay and a BirdLife/ Cambridge Conservation Initiative (CCI) event in July to promote and share experiences from 3 Darwin Initiative-funded BirdLife International LEEP flagship projects in Shea Landscapes in Burkina Faso, shade yerba mate in Paraguay and Nepal community forestry. See Annexes 5 and 7 for details and links to publications, promotion and presentations from these events, including a project video in English and Spanish prepared by Guyra Paraguay and the San Rafael communities and widely promoted to CCI members in 2019.

4.7 Capacity building

The project has built capacity at all levels – local communities; regionally and nationally in Guyra Paraguay and other national partners/ institutions and within wider international networks including BirdLife International and partners. Local communities report the training and increases in capacity as one of the main benefits to them of the project to date and this covers a wide range of skills and expertise acquired - for shade-grown yerba mate cultivation, processing and production, negotiation and sale of product, financial and business planning and management, forest conservation/ habitat enhancement, sustainable land use and biodiversity monitoring.

For Guyra Paraguay and partner the National University of Asunción, the biodiversity monitoring and research programme of the project has built significant capacity, enabling the academic formation of University students (5 degree theses and internship reports now available for other students). It has also enabled the professional development of Guyra Paraguay's technical team, comprised mainly of young conservationists in the early stages of their careers, who have developed a leadership capacity and better understanding of the conservation challenges of the Atlantic Forest, as well as the importance of providing alternatives to vulnerable communities (routes to poverty alleviation) in order to conserve biodiversity. Miguel Aquino, a locally-recruited field technician previously dedicated to producing conventional (non-shade) yerba mate, is now starting to transform the production method of seedlings and is starting technical assistance for organic, shade-grown yerba mate production to other producers around San Rafael.

Guyra Paraguay have also gained considerable knowledge and expertise in project management and tools such as Log Frames, theory of change, M+E and providing evidence of impact and changes attributable to project finance and actions. Although the policy objectives of the project were not fully achieved, Guyra has continued to develop its profile and advocacy influence in national conservation policy arenas and specifically with INFONA (forest institute) and other agencies which are beginning to recognize the value of the shade-grown yerba mate/ forest conservation and local community approaches. Individually, Guyra staff including Evelyn Brites (female) project monitoring coordinator, have gained significant expertise and learning and are exploring possibilities (supported by Guyra and the BirdLife Project Leader) to apply for Master's degree opportunities abroad and return to Paraguay to continue professional careers in conservation and development.

5. Sustainability and Legacy

Throughout the 3 years, the project has had a high profile and good engagement with local government (Itapua State and Alto Vera Municipality), private enterprise and other stakeholders implicated in yerba mate production and Atlantic Forest conservation. The livelihoods and conservation activities initiated are now continuing after the end of Darwin project funding and will be self-sustaining over time, (through generation of new/ enhanced incomes which are dependent on maintaining forest cover and forest biodiversity). The model of shade-grown yerba mate providing sustainable livelihoods and forest conservation has been demonstrated as effective (with strong commitment from local communities even though the new incomes from shade, organic yerba mate were only realized at the project end in 2019). The guidelines, best practice and learning have been disseminated effectively, and it is anticipated that impacts will continue to spread beyond the project area and help to support wider community livelihoods and Atlantic Forest conservation. Follow-on project funding is being sought by Guyra Paraguay but ultimately the business plan shows that this can be a self-sustaining community business at San Rafael (supporting forest conservation) without the need for continual external donor funding.

Local level support for the project is very high and additional *campesino* communities have come forward throughout implementation to request to join and plant shade-grown yerba mate and rehabilitate farmland habitats in the buffer zone through tree planting. Community level partnerships and capacity building are supported by Guyra Paraguay who have a long-term commitment to Atlantic Forest conservation and sustainable development for communities at San Rafael. This forms a sound basis for sustainability of the project impacts, even when national policy influence is hard to achieve and subject to the vagaries of changing administrations. Although national government endorsement and involvement has been harder to achieve, Guyra Paraguay continues to support this, with a cooperation agreement on forest conservation now signed with MADES (Ministry of Environment), expressions of interest in the project from regional government and discussions underway with regional government and INFONA for formal adoption of the Darwin project guidelines on growing shade yerba mate as a sustainable land use option for local communities which also supports Atlantic Forest conservation.

Support and engagement from private sector project partners has been strong throughout the project, including support to raising awareness and building capacity of producers through learning about the requirements of certification, marketing and negotiation for sales of yerba mate and providing information and introductions to national and export markets. Guayaki Company in particular has been a very supportive project partner and continues to advise on development of the business model and certification at San Rafael, while also advocating that the local community business should negotiate sales with other private sector partners as well. Post-project, another private sector company (the Eco Sauer Group, who are familiar with this production model) are also cooperating as another key partner to help complete the first certified harvest and processing of San Rafael shade yerba mate in July 2019.

The continuing focus on sound science and developing the evidence base through monitoring of project impacts (socio-economic and capacity building; land use change and threats; forest biodiversity and habitats) is also important and continues to be supported (post-project) by Guyra Paraguay. This means evidence and positive justification for the linked biodiversity conservation and livelihoods approaches and the resultant co-benefits will continue to be provided.

BirdLife International will also continue to support forest conservation and livelihoods at San Rafael through both the Global (Cambridge) and Americas Regional Secretariat (Quito) offices and Global Programmes, with technical assistance and support to fundraising and helping to maintain synergies with other Atlantic Forest conservation programmes in the wider region. Guyra Paraguay (the San Rafael project team) were included in a 2019 Global BirdLife workshop ('Forest Landscape Sustainability Accelerator') which promoted the project and helped build Guyra's capacity for ongoing fundraising and donor approaches for follow-on initiatives and funding for work at San Rafael, under the BirdLife and other partners' Trillion Trees⁷ initiative.

⁷ <https://www.trilliontrees.org/>

6. Lessons learned

The greatest challenge in the project has been to engage policy and decision-makers effectively in the concept (of shade-grown yerba mate as a forest crop) and to gain policy support (Output 4) for the approaches and the sustainable land use model (combining shade yerba mate production for community livelihoods and wellbeing, with Atlantic Forest conservation). This was acknowledged as a risk/ assumption in the original Log Frame but a series of events outwith the control of the project team made it much harder to engage national government than anticipated.

Instead of engaging INFONA and others immediately with the project, the team first had to raise awareness and demonstrate the working model of shade yerba mate contributing local benefits. (In Paraguay it is not widely recognized as a viable 'forest crop' which can command premium prices and provide income-generating alternatives for communities if produced to high quality, not just sold locally for traditional mate (tea)). Various contributions to national and regional yerba mate conferences, outreach materials, draft guidelines on shade yerba mate and biodiversity conservation, involvement of officials in community workshops and many meetings between Guyra Paraguay and State and national government officials and agencies helped to start changing attitudes. The project achieved formal endorsements from State government (Itapua) and Alto Vera Municipality and also from the national Ministry of Environment (MADES). Post-project (Darwin funding) Guyra are continuing negotiations with INFONA (national forestry institute) to obtain formal endorsement and support to development of a Forest Management Plan for areas in the Reserve managed jointly by indigenous Mby'a Guaraní at Arroyo Moroti and Guyra. During the project, negotiations were made harder due to national circumstances, including political instability around the national elections in 2018, changes in Ministries and civil service staffing and a joint challenge by national environmental NGOs to proposed reforms of the Forest Law which were considered detrimental to conservation objectives in Paraguay.

Community engagement and commitment to the project exceeded expectations, despite the fact that project beneficiaries will only receive the first incomes from project planted shade yerba mate in 2019 (post-project). Communities (Mby'a Guaraní in the Reserve and *campesino* in the buffer zone) all reported significant benefits and expectations of future benefits from the approach, particularly in terms of the capacity they have acquired to produce, market and sell shade yerba mate as an additional income-generating activity (and an alternative to more destructive and dangerous forms of land use such as illegal marijuana farming). The constant support from Guyra Paraguay project technicians in the field and the support and advice from the private sector company Guayaki to develop the business model have been key in this capacity building and maintaining the confidence and commitment of communities.

Another lesson is the importance of sharing experience and difficulties with other people and organizations involved in shade yerba mate production. The visits made to the Ache Koe Tuvy community, and the participation in the Yerba Mate Forum in Native Forest and in the South American Yerba Mate Congress were very important for information and learning exchange between the beneficiaries of the project (including the Cacique of the Mby'a Guaraní at Arroyo Moroti, *campesino* representatives and others), where the impacts and benefits of shade-grown yerba mate production could be analysed collectively.

A series of lessons were learned relating to production, marketing and certification of shade-grown yerba mate. In the original project design there was an implicit assumption that 'organic' forest-grown yerba mate from San Rafael would command premium prices (including for export). The business planning process showed that it would be possible to achieve a viable business based on 'traditional' production methods (largely organic and using traditional methods of yerba mate drying with smoke) and without certification. However, the projected profits/ rate of return are much better with a certified and quality assured product which is also more attractive to export markets. (See Annex 7.5 Business Plan). The project and communities, advised by company Guayaki, have therefore decided to go down this route and started the processes of certification (organic and Fair-trade) and seeking funding for the additional investments required (costs of initial certification and to build or have access to a commercial dryer to produce higher quality product). By end of project the first farm audits had been completed and certification of these farms will follow in July 2019. Guyra Paraguay have obtained commitments of future support (including from Guayaki) to help fund additional costs of certification and the commercial dryer and are continuing to fund raise with donors for a second project phase which will help communities to implement the business plan and establish the San Rafael, certified community

yerba mate business. Guyra Paraguay staff had limited experience of the certification processes and market analyses so the input from consultants (including Nelson Garay from Guayaki) was invaluable. In future project phases there will also be input from staff and advisers with relevant experience in marketing and commercialisation of commodities.

Biodiversity and socio-economic monitoring are essential to demonstrate (in the longer-term) the biodiversity conservation and socio-economic impacts of yerba mate production both in intact forest inside the Reserve and for the recovery of degraded areas on (*campesino*) farms in the buffer zone. The monitoring programmes conducted under the project have established essential baseline in order to demonstrate the project impact in the long term (with ongoing monitoring and evaluation coordinated by Guyra Paraguay under future project phases).

6.1 Monitoring and evaluation

One Change Request relating to the Log Frame was submitted and approved at the end of Year 2 of the project. The revised Log Frame is presented at Annex 1. The revisions were made following a 'mid-term' internal review (including site visit to San Rafael) by the Project Officer from the BirdLife Americas team and the Project Lead/ Adviser from Global BirdLife Secretariat. The review and Log Frame revisions were discussed with advisors at LTSI and related mainly to revising targets from the original Log Frame, either because these were originally over-ambitious or poorly-worded or because of changes in circumstances outwith the project (especially Output 4 and policy engagement – see 6. Challenges above).

There was no formal Project Steering Committee for the project (it proved impossible to establish this with government engagement as originally proposed – see Lessons learned). Instead, the Monitoring and Evaluation (M+E) Steering Committee adopted the role of overall project oversight, monitoring and guidance and this worked well despite difficulties in arranging meetings in English and Spanish and different time zones. The M+E Committee was composed of key project staff in BirdLife Secretariat/ offices and the national Partner (Guyra Paraguay), together with University staff and consultants involved in all the aspects of project M+E. It met 4 times per year (usually by Skype) and carried out two site visits to San Rafael. Other key experts were invited as required to M+E Committee meetings (social science/ socio-economic and biodiversity monitoring science advisers from BirdLife Global Secretariat). The final meeting was held at BirdLife Global Secretariat in the David Attenborough Building in Cambridge, involving all BirdLife Secretariat and Guyra Paraguay departments contributing to conclusion of the project and final write-ups and publication of project achievements and findings (see Annexes 5 and 7 for relevant outputs published or in prep.). This was possible due to the attendance of the Guyra and BirdLife Americas project staff (funded by the 'Trillion Trees' programme) at the BirdLife International 'Forest Sustainability Accelerator Event' in March/ April 2019.

6.2 Actions taken in response to annual report reviews

All issues raised in Annual Report reviews were shared and discussed with project partners and answered in subsequent reports. The Change Request and revised Log Frame were included in the Year 2 AR, but these were submitted late, and the reviewer also received the original Log Frame, which led to some confusion in the review (subsequently clarified by Darwin/ LTSI). The reviewer commented that changes to the Log frame should be discussed with Darwin (which had already happened, and changes approved). The other issues raised in AR2R have all been dealt with in the Year 3 Half Year report and this Final Report as follows:

- *'Provide the business plan translated into English'*. (Now included in Annex 7.5)
- *'Comment on how much certification costs, what the timeline for achieving this funding is and how long certification will take to achieve'*. (The initial Year 1 certification (organic and Fair-trade) for 45 farms has now been completed in 2019 at a cost of USD 7,840 (IMOCERT and Ecocert consultancies) plus the project staff costs of supporting producers through the audit and certification processes and managing the contracts. Fundraising by Guyra Paraguay is ongoing to cover the costs of building the commercial yerba mate dryer and achieving certification of the overall business. Recurrent annual certification costs are built into the business plan).

- *'Comment on the knowledge of the project team with regards to agribusiness, market systems and private sector development'*. The Guyra Paraguay team had limited experience in these areas but the private sector support from Company Guayaki included in-kind support of their experienced regional advisor, Nelson Guaray (and the parent social enterprise company in the USA) and an external consultant was hired to consult, carry out market analysis and prepare the business plan. In the final year, new staff at Guyra were appointed with wider experience of agribusiness and marketing who are now involved in the next project phases and fundraising. BirdLife Secretariat can also provide expertise and advise on commodities approaches in other sectors (e.g. cocoa) from experience in the wider BirdLife network; Guyra have already benefitted from some of these exchanges of experience (for example through the Forest Landscapes Sustainability Accelerator/ Trillion Trees Programme workshops in Cambridge in April 2019 – see section 5. above).

Another comment in AR2R was that *'.... participants' expectations may have been set too high for this project. There is a risk that, with few benefits attained by the end of project either participants are at risk of harm (due to needing to wait a further 2 years (minimum) before seeing a return), or that land set aside for shade yerba mate may be converted back to grow more immediate production that provides economic return.....There is clearly little that can be done at other communities, they should be extremely cautious about signing up new participants until proof of concept is achieved.'*

This is a valid comment, but it is not the experience or view of the project team that communities or the project concept and achievements are at risk in the way it suggests. The field team have worked closely at all stages with the project beneficiaries (producers and their families) and the questionnaire surveys in January 2019 showed that beneficiaries already see many benefits from the project (increased capacity, skills and improved quality of their organic and shade production) and are very confident that they will also start to receive income benefits with the first 'project' harvests in July 2019 and thereafter. Most new planting (both yerba mate and shade trees) is not on land 'set aside' or replacing other crops – it is either in forest in the Reserve (Mby'a Guaraní) or on-farm in between other crops and where old trees (exotic and/ or no longer viable) are being replaced by native species with shade yerba mate beneath. The communities confirm that shade yerba mate is not displacing other crops but is complementary to them (Annex 7.1 Socio-economic monitoring report). New shade planting on farmland is native trees which will also be of value to communities (often replacing old, low value exotics such as 'Tung'). The greatest risk to the overall sustainable land use model of shade-grown yerba mate supporting forest conservation by providing (community) alternatives to more destructive forms of agriculture or income-generation remains the threat from external groups - illegal encroachment for marijuana farms or large developers and conversion of land to soy farms.

7. Darwin identity

The project has been widely promoted locally, nationally, regionally and internationally through various media and attendance at national, regional and international events and through publications, presentations, radio, newspaper and magazine articles, and blogs and articles on web sites and social media. Project participation in the Yerba Mate Forum and the South America Yerba Mate Congress in Brazil, as well as BirdLife 'Darwin' events in the UK and Europe were important ways to promote the Project and Darwin support for this important initiative in San Rafael. The Darwin logo and acknowledgement of UK government funding are used on all project promotion, reports and publications and in presentations to stakeholders and project partners. (See Section 4.6 and Annexes 5 and 7 for lists and examples of presentations, publications, media articles, videos etc.).

The project was seen as a discrete 'Darwin project' both nationally in Paraguay and in global BirdLife International promotion, with matching funding from other donors also duly acknowledged.

8. Finance and administration

If all receipts have not yet been received, please provide indicative figures and clearly mark them as Draft. The Actual claim form will be taken as the final accounting for funds.

8.1 Project expenditure - **DRAFT**

Project spend (indicative) since last annual report	2018/19 Grant (£)	2018/19 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			2%	
Consultancy costs			6%	
Overhead Costs			10%	
Travel and subsistence			28%	both T&S and operating costs in Paraguay required more expenditure due to additional field visits to San Rafael; purchases of extra yerba mate seedlings for replacement and new planting; project support to some initial costs of yerba mate certification not included in original budget. In addition, fall in value of pound against dollar reduced in-country value of dollar/ Gs budget throughout project (2016 onwards – savings made elsewhere, and these field budget lines prioritized)
Operating Costs			24%	See above (T&S)
Capital items (see below)				
Others (see below)			12%%	
Monitoring and evaluating			11%	
Audit costs			0	
TOTAL				

Staff employed (Name and position)	Cost (£)
Nonie Coulthard – PCCD Programme Manager/ Advisor	
Keith Madden – Conservation Project Officer Quito Office	
Alessandra Cappelli – Finance Business Partner	
Amanda Tapia – Finance Manager Quito Office	
Ana Inigo – Biodiversity Conservation Manager Quito Office	
Alberto Yanosky – Executive Director Guyra Paraguay	
Cristina Alvarez – project Administrator, Guyra Paraguay	
Daniel Espinola – Community Mobilisation, Guyra Paraguay	
Evelyn Britez – Monitoring Coordinator, Guyra Paraguay	
Javier Gauto – Consultant, Guyra Paraguay	

Joe Luis Cartes – Acting ED Guyra Paraguay	2240.94
Rodolfo Ruiz - Monitoring and Evaluation Officer, Guyra Paraguay	250.61
Rodrigo Zarate – National Coordinator, Guyra Paraguay	6350.71
Sebastian Pellegrini – Administrative assistant, Guyra Paraguay	1500.49
TOTAL	45673.57

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

Other items – description	Other items – cost (£)
Sundry vehicle maintenance, translation, materials, volunteer and staff costs In Paraguay (detailed in final claim)	
TOTAL	

8.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
San Rafael Biodiversity Conservation Fund. (Trust Fund [endowment] established with capital from Conservation International and World land Trust)	
Conservation Fund for Paraguay's Forests (30-year Trust Fund capitalised by Swire Pacific Offshore and World Land Trust)	
National University of Asunción (In-kind)	
Yerba mate companies (In-kind contribution from Guayaki and Lauro Raatz)	
Guyra Paraguay (In-kind)	
National Council of Science and Technology (In-kind contribution to support communication among experts through social media)	
BirdLife Tokyo Gala Dinner (funds from private donors in Japan)/	
Guayaki SRP company (USD 7,000)	
TOTAL	
(*) Aage V. Jensen Charitable Trust (Securing long term conservation in the Atlantic Forest) (3 years + 1 year no-cost extension): €224,957	
(*) LUSH	

(*) **NB** the two bottom rows are complementary funding (not included in total 'additional funds'). AV Jensen was 'Unsecured' at proposal stage, later confirmed ("*for additional, complementary activity focused on protection of San Rafael through strategic land purchases, conservation easements, PES and continuation of forest restoration. This Darwin project is not dependent on the success of this application*"). LUSH funds obtained during implementation for forest restoration, biodiversity conservation and monitoring at San Rafael Reserve (not yerba mate production, processing or development of the Darwin-funded agro-ecology & livelihoods model).

Source of funding for additional work after project lifetime	Total (£)
Aage V. Jensen Charitable Trust (Atlantic Forest Conservation). San Rafael is a component part of a wider regional project: Paraguay, Argentina and Brazil. Guyra Paraguay (San Rafael) component: €600k for 4 years.	
LUSH	
TOTAL	

NB Jensen and LUSH funding (as in top table) are for complementary work at San Rafael, (some Jensen funding may be used for direct 'Darwin project' follow-on but LUSH funds only for direct conservation activities, not to support the San Rafael yerba mate business).

8.3 Value for Money

Value for money was achieved in several ways:

- The project built on existing in-country partnerships and 20 years' experience of Guyra Paraguay working and collaborating with communities. As a result, Guyra were able to start project activities almost immediately and also input considerable in-kind support (staff time and facilities: Guyra Reta Ranger station in the San Rafael Reserve).
- Careful budget management – particularly when currency exchange losses (falling value of the pound) meant the in-country USD budget decreased significantly. Some project activities were dropped or reduced (exchange visits) to stay within budget and prioritise key activities with communities (yerba mate production and development of the livelihoods/ biodiversity model). Other (BirdLife) budgets were used (e.g. for international travel for M+E review visits to Paraguay and for the project team to travel to UK in March 2019 as part of the BirdLife Trillion Trees Forest Sustainability Accelerator Programme).
- Significant matched funding (for the Darwin project and for parallel conservation activities at San Rafael) was obtained before, during and after the Darwin project both in the region and internationally, by Guyra and with BirdLife Secretariat. support – see 8.2 above.

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

Note: Insert your full logframe. If your logframe was changed since your Stage 2 application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the Stage 2 logframe.

Revised Log Frame (*Change Request approved by LTSI April 2018 and submitted/ used for Year 2 Annual Report and Final Report*)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Policy-driven cultivation of shade-grown yerba maté within and around Paraguay's Atlantic Forests provides a market-driven, culturally and environmentally appropriate land-use that reduces poverty, respects indigenous peoples' rights and conserves biodiversity.			
<p>Outcome: 30 words</p> <p>Shade-grown yerba mate reduces forest degradation at San Rafael, provides a poverty reduction route for 5 communities, and a sustainable land use model for additional c.80,000 ha of Paraguayan Atlantic Forest.</p>	<p>0.1 By end of project, settled Mby'a Guaraní (120 people) and 3 campesino communities (1000 people) in San Rafael have improved wellbeing (as defined by the communities, and compared to year 1 baseline) and 50 ha of shade-grown yerba mate in production, with markets and buyers identified (first shade-grown harvests in 2020) and first audits and farm inspection completed towards organic and Fair-Trade certification.</p> <p>0.2 By end of project, participating communities have increased capacity for cultivation of shade mate, and for collective negotiation and marketing of their produce, through strengthened and empowered CBOs or other culturally appropriate social/ family groups representing shade-yerba producers.</p> <p>0.3 Threats to the forest in areas occupied/used by participating Mby'a Guaraní and campesino communities (>7000 ha) reduced</p>	<p>0.1 Household/community income and wellbeing survey reports (livelihoods and wellbeing measures identified through participatory surveys, focus groups and qualitative methods)</p> <p>0.2 Constitution and registration documents; Capacity assessment report from CBO; reports of harvests/yields of yerba mate</p> <p>0.3 Reports of threat monitoring surveys and land use change analyses</p> <p>0.4 Report of on-farm biodiversity surveys; area of managed shade-grown mate; order/sale agreements with companies; draft evidence-based guidelines for shade-grown yerba mate (see Output 3)</p> <p>0.5 Records of government input and attendance at project awareness-raising and training events; draft Forest Management Plan for Guyra/ Mby'a Guaraní property; published INFONA statement of "project of interest".</p>	<p>Indigenous communities and campesinos continue to be receptive to the project</p> <p>San Rafael is not threatened by new impacts that advance too quickly for the project to address, such as property invasion by squatters</p> <p>Local and national authorities continue to provide appropriate political support for the conservation of San Rafael and Atlantic Forest</p>

	<p>by EOP, compared with year 1 baseline. Measures include: at least 5% reduction in rate of land use change from illegal and unsustainable activities (encroachment by marijuana or other farms, timber cutting and forest fires).</p> <p>0.4 By end of project, 50 ha of indigenous/campesino forest land in San Rafael shows how management can generate income (yerba mate) <i>and</i> retain suitable habitat for threatened/target Atlantic forest biodiversity, as demonstrated by biodiversity surveys (forest, forest-edge and on-farm) and presence of forest-dependent species (see indicator 2.4).</p> <p>0.5 By end of project, the shade-grown yerba mate model has been accepted by government as an evidence-based component of the Atlantic Forest conservation model and included in a Forest Management Plan for the Guyra Paraguay and Mby'a Guaraní-owned forest property (100 ha) approved by INFONA as a “project of interest”.</p>		
<p>Outputs:</p> <p>1. Institutional frameworks (CBOs or other culturally appropriate social/family groups) with the capacity (social and institutional capital) for cultivation, marketing and benefit-sharing of shade-grown yerba mate established through a participatory process among settled Mby'a Guaraní and campesino communities in San Rafael.</p>	<p>1.1 By the end of year 1, communities have established organisations regarding yerba mate production, with culturally-appropriate and equitable representation from women and men.</p> <p>1.2 By the end of year 1, capacity needs of CBO members for shade-grown yerba mate cultivation,</p>	<p>1.1 Registration documents, constitution and membership lists</p> <p>1.2 Capacity assessment report</p> <p>1.3 Business plans</p> <p>1.4 Training course attendance certificates</p> <p>1.5 Minutes of meetings between CBOs and buyers</p>	<p>The local CBOs establish themselves with sufficient capacity and remain viable and engaged</p> <p>IPs and campesinos remain committed and interested in the cultivation and marketing of shade yerba mate</p>

	<p>management and marketing completed.</p> <p>1.3 By the end of year 2, CBOs have developed plan(s) for production and marketing of shade yerba mate being grown by communities in San Rafael.</p> <p>1.4 By the end of year 3, community/CBO representatives (women and men) have received training in numeracy, literacy and basic accounting, to support fair and effective engagement in markets.</p> <p>1.5 By middle of year 3, the CBOs are in direct discussion with private sector buyers concerning their shade yerba mate.</p>		
<p>2. Shade-grown yerba mate is being grown in 50ha of indigenous peoples' and campesino forested lands increasing incomes and restoring/maintaining habitat suitable for threatened Atlantic forest endemics.</p>	<p>2.1 By end of month 9, communities have decided on locations for shade-grown yerba production and have planted 25 ha.</p> <p>2.2 By mid-point of Year 3, 50ha of shade-grown yerba mate have been established (10ha at indigenous community of Arroyo Moroti; 40ha at campesino communities).</p> <p>2.3 From middle of year 2 to end year 3, yerba mate farmers from San Rafael make 2 visits: one to the Ache of Kue Tuvy and one to an Mby'a Guarani community in Brazil, for peer-to-peer learning.</p> <p>2.4 By first/ second quarter of year 3, the importance of retaining Atlantic Forest habitat has been demonstrated through biodiversity surveys (in forest, forest-edge and</p>	<p>2.1 Maps and satellite images</p> <p>2.2 On-site farm surveys</p> <p>2.3 Photographic/video diary of visits</p> <p>2.4 Reports on biodiversity surveys</p> <p>2.5 Reports on success of planting (yerba mate and native tree seedlings for forest restoration on farms)</p> <p>2.6 Farm and sales records kept by CBOs/ family groups</p> <p>2.7 Report of community wellbeing surveys and/or evidence of changes in community/ family social, natural, financial capitals</p>	<p>Existing Mby'a Guarani mechanisms for distributing benefits equitably across the community are applied to the benefits from shade-grown yerba mate</p>

	<p>on-farm plots and all seasons) and the presence of forest-dependent species; to feed into the guidelines (Output indicator 3.2) and to act as a baseline for long-term biodiversity and habitat monitoring in San Rafael</p> <p><i>2.5 Removed (as it was the same as indicator 0.3 in original Log Frame – which relates to threats under Outcome)</i></p> <p>2.6 By the end of year 3, participating communities (over 1,000 people) are benefitting from increased community capacity, improved production and progress towards certification and sale of certified shade-grown yerba mate products. Direct project beneficiaries are 340 individuals (producers and their families - indigenous and campesino). Estimates of harvest and sale in year 3 (organic, conventional yerba mate from project producers in Oga Itá) are 20,600 kgs (70% at approx. 0.21 USD/ kg.; 30% (leaves only) at 2.5 USD/ kg.). <i>The predicted future price of certified, shade-grown product (leaves) is at least 2.5 USD per kg. – first harvests in 2020</i></p> <p>Baseline: 14,000kg “conventional production” (16 producers) sold in 2017/ Year 2 for c. 2,940 USD</p> <p>2.7 By the end of the project, communities are reporting capacity and wellbeing benefits (increases in social and natural capitals and progress towards meeting identified basic necessities through yerba mate production, certification, sales</p>		
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	<p>and marketing). [Socio-economic consultation and examples seen elsewhere (peer to peer learning visits) suggest initial priorities will be for food, education, solar panels, health care and improved water supplies. Increases in financial capital (incomes/ dividends) from sales of certified organic, shade-grown yerba mate will be post-project].</p>		
<p>3. Evidence-based guidelines on cultivation of shade-grown yerba mate are developed for farmers and agricultural agencies.</p>	<p>3.1 By end of year 1, a research and monitoring programme has been established at the demonstration farms to improve knowledge on effective management of shade yerba, which maximises biodiversity value, yerba mate productivity and other ecosystem service benefits.</p> <p>3.2 By middle of year 3, evidence-based guidelines on shade yerba mate produced and consulted on with relevant agencies and other stakeholders, and 2 awareness-raising/lesson-sharing workshops held (involving government administrations and agencies, NGOs, CBOs, producers and academics, etc.) from across Paraguay's Atlantic Forest region.</p> <p>3.3 Journal article on factors affecting biodiversity in shade yerba submitted to open access journal by year 3</p>	<p>3.1 Report of research survey and design protocols</p> <p>3.2 Draft guidelines document (printed and in PDF form); workshop attendances and evaluation reports</p> <p>3.3 Confirmation email from journal</p>	<p>Government and other stakeholders are receptive to the research findings and management recommendations from the project and endorse and support the awareness-raising workshops.</p>
<p>4. Government policy promotes shade-grown yerba mate as an appropriate, market-driven approach to conserve Atlantic Forest biodiversity in the long-term.</p>	<p>4.1 Government are engaged with project, consulted and using project and Guyra Paraguay evidence, guidelines and policy proposals to strengthen national Atlantic Forest conservation and endorse shade-</p>	<p>4.1 Attendance lists/ feedback forms from project awareness-raising etc. meetings/ conferences</p> <p>4.2 Uptake/ use and comments on draft evidence-based guidelines on shade yerba mate in Atlantic Forest (by Government and</p>	<p>Government remains committed to conservation of Atlantic Forest and to finding innovative solutions for engaging IPs in protected areas.</p>

	<p>grown yerba mate as a model for forest conservation management and sustainable financing.</p> <p>4.2 By end of year 3, Itapua State government has consulted with Guyra Paraguay and endorsed the draft project guidelines concerning biodiversity conservation and the production of shade-grown yerba mate in Atlantic Forests.</p> <p>4.3 By end of project, the shade-grown yerba mate model of Atlantic forest conservation is included in a Forest Management Plan for the Guyra Paraguay and Mby'a Guaraní-owned forest property (100 ha) and approved by INFONA as a "project of interest"</p>	<p>stakeholders in Atlantic Forest conservation)</p> <p>4.3 Published Forest Management Plan and INFONA statement of "project of interest"</p>	<p>Indigenous Peoples communities in other Atlantic forest PAs are interested in learning from the project.</p>
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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)

Output 1: Institutional frameworks (CBOs) with the capacity (social and institutional capital) for cultivation, marketing and benefit-sharing of shade-grown yerba mate established...

- 1.1 Presentation of the approved project to the communities and local authorities, including description of: objectives, plans and timing, legal constitution, register of documents and list of participating community members
- 1.2 Production of the legal contract and placing orders with providers of yerba mate seedlings
- 1.3 Training workshops (on technical aspects of tree care and management; harvesting; processing etc.) for technicians, leaders and members of the indigenous and farmer communities
- 1.4 Develop participatory community business and enterprise plans, with support from the private sector.
- 1.5 Training of the communities on farm and business management, focused on marketing and commercialization
- 1.6 Meetings, negotiation and agreements with the companies committed to and interested in the purchase of the product

Output 2: Shade-grown yerba mate is being grown in 50ha of indigenous peoples' and campesino forested lands increasing incomes and restoring/maintaining habitat suitable for threatened Atlantic forest endemics.

- 2.1 Visit to the beneficiaries and identification of the sites allocated for production
- 2.2 Planting of 10 ha of yerba mate in the communities of Arroyo Claro and Arroyo Moroti; 40 ha in the farmer communities
- 2.3 Exchange visits with the community Aché of Kue Tuvy

- 2.4 Review and develop biodiversity monitoring protocols (building on existing) and methods for threat monitoring, and establish baselines
- 2.5 Monitor biodiversity in the parcels of production of yerba mate
- 2.6 Monitor livelihoods and wellbeing impacts, based on participatory indicators identified at household and/or community level, and against a year 1 baseline
- 2.7 Monitoring of the forest cover through satellite images; monitor incidences of environmental crimes and other threats
- 2.8 Develop the process for harvest and sale of organic/shade yerba mate
- 2.9 Documentation of benefits of the commercialization of yerba mate

Output 3: Evidence-based guidelines on cultivation of shade-grown yerba mate are developed for farmers and agricultural agencies.

- 3.1 Document the approach used for monitoring of biodiversity
- 3.2 Develop a guidance/manual document about the process of production and commercialization of shade grown yerba mate
- 3.3 Provide training on shade yerba mate to government technicians and development NGOs working around forest in Itapua
- 3.4 Publication of articles about the factors that affect biodiversity in the process of production of yerba mate
- 3.5 Production of a short video on community-based production of shade yerba mate and biodiversity conservation, local livelihoods and indigenous culture, for showing national, regionally and internationally.

Output 4: Government policy promotes shade-grown yerba mate as an appropriate, market-driven approach to conserve Atlantic Forest biodiversity in the long-term.

- 4.1 Draw up an advocacy and communications plan for different audiences
- 4.2 Meetings with government authorities to promote the farming of shade grown yerba mate as a market-based approach supporting the conservation of Atlantic Forest biodiversity
- 4.3 Through provision of information, meetings and proposed text, lobby authorities of the Governorship of Itapúa for the inclusion of the production model of shade grown yerba mate as a state policy to conserve biodiversity
- 4.4 Prepare Forest Management Plan for Guyra Paraguay and Mby'a Guaraní – owned property at San Rafael
- 4.5 Provide information to and lobby the National Forestry Institute to use and help promote the project's lessons, approach and evidence-based guidelines to establish the shade-grown yerba mate model as part of an Atlantic Forest conservation strategy (Paraguay and regionally)

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

Project summary	Measurable Indicators	Progress and Achievements to end of project
<p>Impact: Policy-driven cultivation of shade-grown yerba mate within and around Paraguay's Atlantic Forests provides a market-driven, culturally and environmentally appropriate land-use that reduces poverty, respects indigenous peoples' rights and conserves biodiversity.</p>		<p>The project made significant progress towards intended impact – notably in terms of developing capacity of communities to produce and market shade-grown yerba mate and demonstrating this as a model of sustainable land use that provides additional incomes and a route to poverty reduction, while also reducing threats to and conserving biodiversity within and outside San Rafael (Atlantic Forest) Reserve for National Park. The project team worked with both indigenous people inside the Forest Reserve and settled farming communities in the buffer zone, fully respecting peoples' rights, building local capacity and promoting involvement of women and equitable sharing of benefits in culturally appropriate ways. The first sales (at premium prices) from the San Rafael community business (organic, shade-grown yerba mate) were achieved at project end in 2019 and the business is due to achieve (organic and fair-trade) certification in August 2019. The model is not yet 'policy-driven' and government engagement and support (regionally and nationally) was weaker than hoped-for. Significant progress was made at all levels, however, in raising awareness, demonstrating and promoting shade yerba mate as a sustainable forest harvest (agro-ecology) model, which supports both local livelihoods and biodiversity conservation. Guyra Paraguay (the implementing partner) signed a cooperation agreement with the Ministry of Environment (MADES) in April 2019 which significantly strengthens government/ policy support to the ongoing work at San Rafael and will help to ensure sustainability of these Darwin project impacts.</p>
<p>Outcome</p> <p>Shade-grown yerba mate reduces forest degradation at San Rafael, provides a poverty reduction route for 5 communities, and a sustainable land use model for additional c.80,000 ha of Paraguayan Atlantic Forest.</p>	<p>0.1 By end of project, settled Mby'a Guarani (120 people) and 3 campesino communities (1000 people) in San Rafael have improved wellbeing (as defined by the communities, and compared to year 1 baseline) and 50 ha of shade-grown yerba mate in production, with markets and buyers identified (first shade-grown harvests in 2020) and first audits and farm inspection completed towards organic and Fair-Trade certification.</p> <p>0.2 By end of project, participating communities have increased capacity for cultivation of shade mate, and for collective negotiation and marketing of their produce, through strengthened and empowered CBOs or other culturally appropriate social/ family groups</p>	<p>A total of 45 farmer/ campesino producers (in 4 communities) and one indigenous community (129 people) have increased their area of shade-grown yerba mate by 48 hectares, and begun transformation of additional areas of conventional (non-shade) yerba mate to be part of the agroforestry model (through planting of indigenous shade trees). Four new campesino producers in a 5th community (Perlita) started planting shade-grown yerba mate in 2019.</p> <p>Baselines for socio-economic monitoring were collected in 2018 and 2019 so there are no measures of improved wellbeing attributable to the project. However, producer perceptions of the project and benefits to them as individuals/ families and communities are very positive. Beneficiaries interviewed in 2019 reported very high satisfaction with the project, the training and capacity building received and particularly the increase in areas of shade yerba mate and their (community) capacity to cultivate, produce and market the product (93% of respondents had received technical assistance and training they are putting into practice and 95% expected this technical assistance support to continue). All anticipate improvements in quality of life and incomes from the San Rafael community shade yerba mate business and are very committed to achieving certification and implementing the San Rafael community business plan to ensure sustainability of incomes and a sustainable business in the long-term.</p>

	<p>representing shade-yerba producers.</p> <p>0.3 Threats to the forest in areas occupied/used by participating Mby'a Guaraní and campesino communities (>7000 ha) reduced by EOP, compared with year 1 baseline. Measures include: at least 5% reduction in rate of land use change from illegal and unsustainable activities (encroachment by marijuana or other farms, timber cutting and forest fires).</p> <p>0.4 By end of project, 50 ha of indigenous/campesino forest land in San Rafael shows how management can generate income (yerba mate) <i>and</i> retain suitable habitat for threatened/target Atlantic forest biodiversity, as demonstrated by biodiversity surveys (forest, forest-edge and on-farm) and presence of forest-dependent species (see indicator 2.4).</p> <p>0.5 By end of project, the shade-grown yerba mate model has been accepted by government as an evidence-based component of the Atlantic Forest conservation model and included in a Forest Management Plan for the Guyra Paraguay and Mby'a Guaraní-owned forest property (100 ha) approved by INFONA as a "project of interest".</p>	<p>Deals were closed with the private sector (Guayaki SRP Company), who will buy 16,000 kg of organic and shade-grown yerba mate in 2019; the first audits and farm inspections (for certification purposes) were carried out in 2019 and will be completed in August 2019.</p> <p>2 local CBOs (producers' groups) were established and registered with local authorities; a third one still has to be legally registered. They received training and support and were helped to negotiate the first sales of organic shade-grown yerba mate. They require further strengthening in organizational and financial management and support to future implementation of the San Rafael community business plan prepared under the project. Formation of a pre-cooperative producer group for all San Rafael producers was recommended by the socio-economic consultant. This will be included in future project phases/ donor funding applications.</p> <p>Threats to the forest appear to have been reduced (in some cases significantly) in the project's influence area. Land use changes (loss of forest cover), declined in most areas of project influence over the project three years and no increases in land use change/ deforestation occurred on project beneficiaries' properties. However, threats (land use change – due to incursions from illegal marijuana farms) have increased in other areas of San Rafael. This is related to the difficult economic situation in the area and lack of security and enforcement of forest protection regulation (all the incursions are clandestine and illegal).</p> <p>Biodiversity monitoring compared richness of birds, amphibians and reptiles in forests with yerba mate; border of forests with yerba mate; and open areas. A total of 120 bird species were recorded (20 endemic); 14 of these endemic species were recorded in forests with shade-grown yerba mate parcels. Preliminary results show a greater diversity of birds in areas of forests and borders of forests with yerba mate (than in open areas). Regarding amphibians and reptiles, 10 species were recorded in total. Three species were recorded in forest, and only one in the forest edge. Records represent 17% of the species for the country and 11.5 % of the amphibian and reptiles previously recorded for San Rafael. It is anticipated that more species will be found with continuing survey work in the same sites.</p> <p>The biodiversity monitoring has also provided baselines for the next project phase and longer-term monitoring which Guyra Paraguay will continue at San Rafael. This will allow for ongoing surveillance and assessment of the suitability and quality of the different habitat types for targeted Atlantic Forest biodiversity and monitoring of impacts of project interventions (shade-grown yerba mate planting, cultivation and habitat enhancement work) in the same sites.</p> <p>The private sector, local authorities and State government are starting to understand and engage with the implementation of the shade-grown yerba mate model. This is evidenced by the signature of a cooperation agreement between Guyra Paraguay and the Guayaki SRP Company and two Declarations of Interest, signed by the Municipality of Alto Vera and Itapúa State Government.</p> <p>The Forest Management plan and approval as a "project of interest" were not completed due to the political instability at INFONA (the National Forestry Institute) before and after the presidential elections in April 2018 and the high costs/ quotes for consultant experts to complete a management plan to the level required by INFONA. Guyra Paraguay are continuing these</p>
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		<p>discussions and are well advanced with the preparation of a Cooperation Agreement to continue enhancement of forest conservation activities at San Rafael and eventual 'project of interest' approval by INFONA in 2019.</p> <p>In April 2019 Guyra Paraguay signed a cooperation agreement with the Ministry of the Environment (MADES) in order to strengthen the cooperation for the joint intervention for activities related to the environment and sustainable development and improving life conditions of different sectors of the population. This cooperation agreement will facilitate bigger impact and dissemination of the conservation actions and results at San Rafael.</p>
<p>Output 1. Institutional frameworks (CBOs or other culturally appropriate social/family groups) with the capacity (social and institutional capital) for cultivation, marketing and benefit-sharing of shade-grown yerba mate established through a participatory process among settled Mby'a Guaraní and campesino communities in San Rafael.</p>	<p>1.1 By the end of year 1, communities have established organisations regarding yerba mate production, with culturally-appropriate and equitable representation from women and men.</p> <p>1.2 By the end of year 1, capacity needs of CBO members for shade-grown yerba mate cultivation, management and marketing completed.</p> <p>1.3 By the end of year 2, CBOs have developed plan(s) for production and marketing of shade yerba mate being grown by communities in San Rafael.</p> <p>1.4 By the end of year 3, community/CBO representatives (women and men) have received training in numeracy, literacy and basic accounting, to support fair and effective engagement in markets.</p> <p>1.5 By middle of year 3, the CBOs are in direct discussion with private sector buyers concerning their shade yerba mate.</p>	<p>1.1 Organisations have been established in Oga Itá and Joveré, these organisations are acknowledged by and registered with the Municipality of Alto Verá, See Annex 7.2 Constitutions and registration documents.</p> <p>1.2 Capacities of CBO members for shade-grown yerba mate cultivation, management and commercialisation have been strengthened, however producers still need to gain capacities of organisation management. See Report section 3.1. (Indicator 1.2) and Annex 7.1 Socioeconomic monitoring report.</p> <p>1.3 A business plan for shade-grown yerba mate has been developed successfully, see Report section 3.1 (Indicator 1.3) and Annex 7.5 Business plan (English translation).</p> <p>1.4 Training on financial management has been carried out successfully to support fair and effective engagement in markets, see report section 3.1. (Indicator 1.4) and Annex 7.13 Training workshop records.</p> <p>1.5 Discussions between CBOs and private sector have been carried out successfully and a deal for the sale of 16,000 kg of certified organic and fair-trade yerba mate signed for 2019. See report section 3.1 (Indicator 1.5) and Annex 7.10 Guayaki purchase commitment. And Annex 7.9 Meetings with potential buyers.</p>
<p>Output 2. Shade-grown yerba mate is being grown in 50ha of indigenous peoples' and campesino forested lands increasing incomes and restoring/maintainin</p>	<p>2.1 By end of month 9, communities have decided on locations for shade-grown yerba production and have planted 25 ha.</p> <p>2.2 By mid-point of Year 3, 50ha of shade-grown yerba mate have been established (10ha at indigenous communitiy of Arroyo Moroti; 40ha at campesino communities).</p>	<p>2.1. Communities have decided on locations for shade grown yerba mate successfully. (See Annex 7.11 Darwin producers' information).</p> <p>2.2. A total of 48 hectares of shade-grown yerba mate was established successfully (8 hectares in Arroyo Moroti (indigenous community) and 40 hectares at campesino communities), see report section 3.1 (Indicator 2.2; Table 2) and Annex 7.11 Darwin producers' information and maps (2019).</p>

<p>g habitat suitable for threatened Atlantic forest endemics.</p>	<p>2.3 From middle of year 2 to end year 3, yerba mate farmers from San Rafael make 2 visits: one to the Ache of Kue Tuvy and one to an Mby'a Guarani community in Brazil, for peer-to-peer learning.</p> <p>2.4 By first/ second quarter of year 3, the importance of retaining Atlantic Forest habitat has been demonstrated through biodiversity surveys (in forest, forest-edge and on-farm plots and all seasons) and the presence of forest-dependent species; to feed into the guidelines (Output indicator 3.2) and to act as a baseline for long-term biodiversity and habitat monitoring in San Rafael</p> <p>2.5 Removed (as it was the same as indicator 0.3 – which relates to threats under Outcome)</p> <p>2.6 By the end of year 3, participating communities (over 1,000 people) are benefitting from increased community capacity, improved production and progress towards certification and sale of certified shade-grown yerba mate products. Direct project beneficiaries are 340 individuals (producers and their families - indigenous and campesino). Estimates of harvest and sale in year 3 (organic, conventional yerba mate from project producers in Oga Itá) are 20,600 kilos (at approx. 0.5 USD per kilo). The predicted future price of certified, shade-grown product is at least 2.5 USD per kilo – first harvests in 2020</p> <p>2.7 By the end of the project, communities are reporting capacity and wellbeing benefits (increases in social and natural capitals and progress towards meeting identified basic necessities through yerba mate production, certification, sales and marketing). [Socio-economic consultation and examples seen</p>	<p>2.3. One exchange visit to the Aché of Kue Tuvy was carried out successfully, however the visit to the Mby'a Guarani Community in Brazil had to be cancelled due to the high costs of this activity and the need to reallocate budget to yerba mate planting activities, see report section 3.1 (Indicator 2.3).</p> <p>2.4. A baseline in order to identify the importance of retaining Atlantic Forest habitat was established through biodiversity surveys and a total of 14 Atlantic Forest endemic species have been recorded in forests with shade-grown yerba mate parcels. The diversity of birds with forest preference was higher in both forests and borders of forests with yerba mate (than in open areas). See report section 3.1 (Indicator 2.4); Annex 7.4 Cabral Biodiversity Monitoring Report and Annex 7.15 Cabral et al, 2019 (<i>in prep</i>). <i>Draft MS. 'Shade yerba mate and Atlantic Forest Biodiversity'</i>..</p> <p>2.6. Beneficiary questionnaires and monitoring showed increased capacity in the communities for successful new production and the conversion of conventional yerba mate plantations to organic yerba mate crops, where natural forest regeneration is being enhanced. Direct project beneficiaries will process 16,000 kg of organic shade-grown yerba mate in 2019 to be sold at premium price to the Guayaki SRP Company. New communities and producers request to join the San Rafael initiative on an ongoing basis. See report section 3.1 (Indicator 2.6) and Annex 7.1 Socio-economic monitoring report.</p> <p>2.7. Socio-economic monitoring indicated improved capacity within all beneficiary communities and very high levels of satisfaction and anticipation of ongoing benefits arising from the project and the development of the business and forest conservation model for San Rafael. No income from shade-grown yerba mate sales was received by communities during the project's lifetime but surveys indicated that project beneficiaries see their increased areas of shade yerba mate as an asset and are confident that (with ongoing support from Guyra Paraguay) this will lead to future incomes (including first sales confirmed for June 2019) and associated benefits and increases in wellbeing. See report section 3.1 (Indicator 2.7) and Annex 7.1 Socio-economic monitoring report.</p>
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	elsewhere (peer to peer learning visits) suggest initial priorities will be for food, education, solar panels, health care and improved water supplies. Increases in financial capital (incomes/ dividends) from sales of certified organic, shade-grown yerba mate will be post-project].	
Output 3. Evidence-based guidelines on cultivation of shade-grown yerba mate are developed for farmers and agricultural agencies.	<p>3.1 By end of year 1, a research and monitoring programme has been established at the demonstration farms to improve knowledge on effective management of shade yerba, which maximises biodiversity value, yerba mate productivity and other ecosystem service benefits.</p> <p>3.2 By middle of year 3, evidence-based guidelines on shade yerba mate produced and consulted on with relevant agencies and other stakeholders, and 2 awareness-raising/lesson-sharing workshops held (involving government administrations and agencies, NGOs, CBOs, producers and academics, etc.) from across Paraguay's Atlantic Forest region.</p> <p>3.3 Journal article on factors affecting biodiversity in shade yerba submitted to open access journal by year 3</p>	<p>3.1. The research and biodiversity monitoring programme was established and implemented successfully to improve the knowledge on and demonstrate effective management of shade yerba mate on farms and in forest</p> <p>3.2. Evidence-based guidelines were produced. The Shade-Grown Yerba Mate Forum was carried out in year 2 as a gathering of people from the yerba mate guild to exchange experiences. In addition, Guyra Paraguay held a stand in the National Yerba Mate Forum to spread information about the project and the main results. See Report section 3.1 (Indicator 3.2) and Annex 7.6 Evidence-based guidelines.</p> <p>3.3. A draft of the journal article was elaborated during the project's lifetime. External (BirdLife) support is helping refine the analyses and edit the draft which will be submitted for publication in 2019. In addition, the monitoring programme enabled the professional growth of five students of the National University of Asunción who completed internships, theses and volunteer work under the project and Guyra staff who presented posters at various congresses (see Annexes 5. Publications and 7.16 Student theses). See Report section 3.1 (Indicator 3.3) and Annexes 5. Publications; 7.15 7Cabral et al, 2019 (<i>in prep</i>). <i>Draft MS. 'Shade yerba mate and Atlantic Forest Biodiversity'</i>; 7.16 Student theses.</p>
Output 4. Government policy promotes shade-grown yerba mate as an appropriate, market-driven approach to conserve Atlantic Forest biodiversity in the long-term.	<p>4.1 Government are engaged with project, consulted and using project and Guyra Paraguay evidence, guidelines and policy proposals to strengthen national Atlantic Forest conservation and endorse shade-grown yerba mate as a model for forest conservation management and sustainable financing.</p> <p>4.2 By end of year 3, Itapua State government has consulted with Guyra Paraguay and</p>	<p>4.1. Government engagement activities were not fully achieved, in large part because of the political instability before and after the Presidential elections in April 2018. However, significant progress was made in raising awareness and support for the shade-grown yerba mate forest conservation model and two Declarations of Interest, were signed - by the Municipality of Alto Vera and Itapúa State Government. Guyra Paraguay are continuing (post-project) to build on these advances and advocate for increasing local and national policy engagement and support. (On 3rd May 2019, Guyra Paraguay signed a new cooperation agreement with the Ministry of Environment (MADES) which will greatly strengthen government engagement and support Guyra Paraguay and the communities' ongoing forest</p>

	<p>endorsed the draft project guidelines concerning biodiversity conservation and the production of shade-grown yerba mate in Atlantic Forests.</p> <p>4.3 By end of project, the shade-grown yerba mate model of Atlantic forest conservation is included in a Forest Management Plan for the Guyra Paraguay and Mby'a Guaraní-owned forest property (100 ha) and approved by INFONA as a "project of interest"</p>	<p>conservation initiatives at San Rafael.). See Report section 3.1 (Indicator 4.1) and Annex 7.8 Declarations of interest.</p> <p>4.2 The guidelines were produced by end of Year 3 (See Report section 3.1 (Indicator 4.2) and Annex 7.6 Evidence-based guidelines) but with insufficient time to obtain Itapua State government endorsement. The guidelines were promoted at and developed from presentations to the National Yerba Mate Forum (see 3.2 above and Annexes 3. Standard Measures and 5. Publications).</p> <p>4.3. The Forest Management Plan was not completed because there was not sufficient budget available (consultancy costs for completing this to INFONA standards were too high) and it was unlikely to be approved during the project timeframe due to the political instability in the relevant institutions. Guyra Paraguay are well advanced with discussions with INFONA and the preparation of a Cooperation Agreement to continue enhancement of forest conservation activities at San Rafael. In addition, declarations of Interest and cooperation agreements signed with other local and national authorities will also facilitate much greater government cooperation in ongoing conservation and community activities at San Rafael – see 4.1 above; Report section 3.1 (Indicator 4.3) and Annex 7.8 Declarations of interest.</p>
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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 Master qualifications obtained						
3	Number of other qualifications obtained	2	Paraguayan	F	Listed in Annex 7	Spanish	Forest engineer degrees
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)	12	Paraguayan	Women and men	Various – conservation and monitoring Atlantic Forest, San Rafael	Spanish	
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)	1	Paraguayan	M			Field technician (local community at San Rafael)
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	48	Paraguayan, Including indigenous Mby'a Guaraní	Women and men	Various – see report 3.1 (Outputs 1 & 2)		Community beneficiaries – training/ capacity building
6b	Number of training weeks not leading to formal qualification	At least 10 weeks plus exchange visits and conferences	Paraguayan, Including indigenous Mby'a Guaraní	Women and men	Various – see report 3.1 (Outputs 1 & 2)		see Section 3.1, Table 1 and Annex 7 for topics and lists/ attendees

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.						
11a	Number of papers published or accepted for publication in peer reviewed journals	2					1 other (socio-economic) in prep.
11b	Number of papers published or accepted for publication elsewhere	3					Additional (Darwin newsletter) articles, abstracts, posters)
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/ b	Number of species reference collections established (a) or enhanced (b) 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	2	Paraguayan and various (in UK)	Women and men	Shade-grown Yerba Mate Forum; 'Darwin event' DAB Cambridge Jul '19	Spanish and English	See details in Report and Annexes 5 and 7
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	5	Paraguayan and various (in UK)	Women and men		Spanish and English	Details in Report & Annex 5 & 7

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)	1,133	Lap top and GPS
21	Number of permanent educational, training, research facilities or organisation established		
22	Number of permanent field plots established		Please describe

Financial Measures		Total £	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work <i>(includes parallel conservation activities at San Rafael – not all was co-funding 'Darwin project activities')</i>	64,902 during project (+ 226,163 associated conservation work at San Rafael); 581,020 post-project	World Land Trust (UK)/ Guayaki SRP/ BirdLife Tokyo Gala Dinner (funds from private donors in Japan)/ Lush/ Aage V Jensen Charitable Trust In-kind from: National University of Asunción/ National Council of Science and Technology/ Yerba mate companies/ Guyra Paraguay

Annex 4 Aichi Targets

Please note which of the Aichi targets your project has contributed to.

Please record only the **main targets** to which your project has contributed. It is recognised that most Darwin projects make a smaller contribution to many other targets in their work. You will not be evaluated more favourably if you tick multiple boxes.

	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 * (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)
Website	Entrega de plantines de yerba mate (*)/ Daniel Espínola/ 2017	Paraguay	Paraguay	Male	Guyra Paraguay, Asunción	https://guyra.org.py/entrega-de-plantines-de-yerba-mate/
Radio's Website	Foro de Producción de Yerba Mate Bajo Sombra/ Lidia Samudio/ 2017	Paraguay	Paraguay	Female	Puhoe.com Caronay	http://puhoe.com/2017/08/09/foro-de-produccion-de-yerba-mate-bajo-sombra/
Newspaper	Foro sobre cultivo de yerba mate/ Juan Augusto Roa/ 2017	Paraguay	Paraguay	Male	Diario Abc Color, Asunción	http://www.abc.com.py/edicion-impresa/interior/foro-sobre-cultivo-de-yerba-mate-1627086.html
Website	Foro sobre cultivo de yerba mate/ Juan Augusto Roa/ 2017	Paraguay	Paraguay	Male	Pressreader, Asunción	https://www.pressreader.com/paraguay/abc-color/20170830/282097751842324
Online channel (youtube)	Foro sobre producción de yerba mate en montes nativos de Alto Verá/ Itapúa en Noticias, 2017	Paraguay	Paraguay		Itapúa en Noticias, Encarnación	https://www.youtube.com/watch?v=tvM4oJs8s5I
Newspaper	Organizan foro de cultivo de yerba mate/ Juan Augusto Roa, 2017	Paraguay	Paraguay	Male	Diario Abc Color, Asunción	http://www.abc.com.py/nacionales/organizan-foro-de-cultivo-de-yerba-mate-1626883.html
Online news- paper	Producirán yerba mate dentro de bosques nativos en Alto Verá/ Itapúa en Noticias, 2017	Paraguay	Paraguay		Itapúa en Noticias, Encarnación	http://itapuanoticias.tv/produciran-yerba-mate-dentro-de-bosques-nativos-en-alto-vera/
Online news- paper	Foro sobre producción de yerba mate en montes nativos de Alto Verá/ Itapúa en Noticias, 2017	Paraguay	Paraguay		Itapúa en Noticias, Encarnación	http://itapuanoticias.tv/foro-sobre-produccion-de-yerba-mate-en-montes-nativos-de-alto-vera/

News-paper	Foro sobre cultivo de yerba en Alto Verá/ Juan Augusto Roa, 2017	Paraguay	Paraguay	Male	Diario Abc Color, Asunción	http://www.abc.com.py/edicion-impresia/interior/foro-sobre-cultivo-de-yerba-en-alto-vera-1628909.html
Website	Foro de Producción de Yerba Mate Asociada al Monte Nativo/ Procosara 2017	Paraguay	Paraguay		Procosara, Alto Verá	http://procosara.org/es/noticias/Otras-Actividades (down in the webpage)
Website	Foro sobre cultivo de yerba mate en Alto verá	Paraguay	Paraguay		Nearural.com	http://www.nearural.com/cross-h/0MwElcross.html
Website	Foro sobre cultivo de yerba mate en Alto Verá, Itapúa	Paraguay			Worldnews.com	https://article.wn.com/view/2017/08/30/Foro_sobre_cultivo_de_yerba_mate_en_Alto_Vera_lta_pua/
Website	Foro de producción de yerba mate asociada al monte nativo/ Unidad de Difusión, Agronomía, UNA, 2017	Paraguay	Paraguay		Unidad de Difusión, Agronomía, UNA, San Lorenzo	Was published but now the link has expired because the event has finished http://www.agr.una.py/Difusion/promociones.html
Website	Foro sobre producción de yerba mate en montes nativos de Alto Verá/ Paraguay News, 2017	Paraguay	Paraguay		Paraguay News	<i>Was published but now the link has expired</i> http://paraguay.shafaqna.com/ES/PY/215389
Website	Relevamiento de datos para el monitoreo biológico del Proyecto “Yerba Mate”/ Daniel Espínola and Evelyn Brítez, 2017	Paraguay	Paraguay	Male & Female	Guyra Paraguay, Asunción	https://guyra.org.py/relevamiento-de-datos-para-el-monitoreo-biologico-del-proyecto-yerba-mate/
Website	Yerba mate – Operativo Ka’a 2017 (*)/ Daniel Espínola, 2017	Paraguay	Paraguay	Male	Guyra Paraguay, Asunción	https://guyra.org.py/yerba-mate-operativo-kaa-2017/
Website	Excelente evolución de plantines de yerba mate bajo sombra en la Reserva para Parque Nacional San Rafael (*)/ Evelyn Brítez, 2017	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	https://guyra.org.py/excelente-evolucion-de-plantines-de-yerba-mate-bajo-sombra-en-la-reserva-para-parque-nacional-san-rafael/

Facebook	¡Inscripciones abiertas para el Foro de Producción de Yerba Mate Asociada al Monte Nativo!! Guyra Paraguay, 2017	Paraguay	Paraguay		Guyra Paraguay, Asunción	https://www.facebook.com/permalink.php?story_fbid=1359004847501130&id=153106734757620
Radio's Website	Foro sobre cultivo de yerba mate en Alto Verá, Itapúa/ Radio Cumbre, 2017	Paraguay	Paraguay		Radio Cumbre, Caronay	http://www.radiocumbre.com.py/index.php/actualidad/item/3426-foro-sobre-cultivo-de-yerba-mate-en-alto-vera-itapua
Website	Elaboración de estrategias para la comercialización de yerba mate orgánica para preservar el Bosque Atlántico/ Evelyn Brítez, 2017	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	https://guyra.org.py/elaboracion-de-estrategias-para-la-comercializacion-de-yerba-mate-organica-para-preservar-el-bosque-atlantico/
Note in the Website	INFONA and Guyra Paraguay Meeting Summarize/ 2017	Paraguay	Paraguay		Instituto Nacional Forestal	http://www.infona.gov.py/index.php/noticias/proyecto-yerba-mate-bajo-sombra
Website	Almuerzo de fin de año con los beneficiarios del Proyecto Yerba Mate/ Daniel Espínola Jara, 2017	Paraguay	Paraguay	Male	Guyra Paraguay, Asunción	http://guyra.org.py/almuerzo-de-fin-de-ano-con-los-beneficiarios-del-proyecto-yerba-mate/
Website	Avances con el plan de negocios de yerba mate bajo sombra (*)/ Evelyn Brítez, 2017	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/avances-con-el-plan-de-negocios-de-yerba-mate-bajo-sombra/
Website	Limpieza de parcelas de Yerba Mate (*)/ Daniel Espínola Jara, 2017	Paraguay	Paraguay	Male	Guyra Paraguay, Asunción	http://guyra.org.py/limpieza-de-parcelas-de-yerba-mate/
Website	Dictan cursos de capacitación para producción de yerba mate/ Evelyn Brítez, 2017	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/dictan-cursos-de-capacitacion-para-produccion-de-yerba-mate/
Website	Guyra Paraguay, presentó al INFONA los proyectos de producción de yerba mate bajo sombra/ Evelyn Brítez, 2017	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/guyra-paraguay-presento-al-infona-los-proyectos-de-produccion-de-yerba-mate-bajo-sombra/
Online Magazine	Las aves en las parcelas de yerba mate orgánica bajo sombra/ Evelyn Brítez, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/urutau-2018/ (Urutaú N°2)

Website	Planifican nuevas capacitaciones a productores indígenas y campesinos sobre proyecto de yerba mate bajo sombra/ Evelyn Brítez and Rodolfo Ruíz, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/planifican-nvas-capacitaciones-a-productores-indigenas-y-campesinos-sobre-proyecto-de-yerba-mate-bajo-sombra/
Website	Nuevo voluntario del equipo de Monitoreo de Biodiversidad del Proyecto de Producción de Yerba Mate bajo Sombra/ Evelyn Brítez, Viviana Rojas, Hugo Cabral, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/nvo-voluntario-del-equipo-de-monitoreo-de-biodiversidad-del-proyecto-de-produccion-de-yerba-mate-bajo-sombra/
Website	Investigan influencia del estrato arbóreo en la yerba mate bajo sombra/ Evelyn Brítez and Cecilia Pizzurno, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/investigan-influencia-del-estrato-arboreo-en-la-yerba-mate-bajo-sombra/
Website	Evalúan resultados preliminares del proyecto Yerba Mate bajo sombra/ Enrique Bragayrac and Evelyn Brítez, 2018	Paraguay	Paraguay	Male	Guyra Paraguay, Asunción	https://guyra.org.py/evaluan-resultados-preliminares-del-proyecto-yerba-mate-bajo-sombra/
Website	Colecta de materiales audiovisuales sobre producción de yerba mate bajo sombra/ Evelyn Brítez and Cindy Galeano, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	https://guyra.org.py/colecta-de-materiales-audiovisuales-sobre-produccion-de-yerba-mate-bajo-sombra/
Website	Tercer año de implementación del proyecto de yerba mate bajo sombra/ Evelyn Brítez, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	https://guyra.org.py/tercer-ano-de-implementacion-del-proyecto-de-yerba-mate-bajo-sombra/
Website	Primer Foro de Yerba Mate asociada al Monte Nativo/ Evelyn Brítez, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/wp-content/uploads/2018/12/Memoria-foro-yerba-mate-.pdf
Online magazine	Muestras de Yerba Mate en homenaje al Dr. Claudio Prieto/ Evelyn Brítez, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/wp-content/uploads/2018/10/Bionoticias-37-01-10-18.pdf

Online magazine	Colaboradores en la Estación Kanguery/ Evelyn Brítez, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/wp-content/uploads/2018/12/Bionoticias-39-30-11-18-.pdf
Online magazine	Presentan poster sobre Herpetofauna asociada al Bosque Atlántico/ Evelyn Brítez, 2018	Paraguay	Paraguay	Female	Guyra Paraguay, Asunción	http://guyra.org.py/wp-content/uploads/2019/02/Bionoticias-40-31-12-18-1.pdf
Abstracts' book	Herpetofauna asociada a paisajes yerbateros del Bosque Atlántico de Paraguay, Departamento de Itapúa/ Lucas, Cañete, Diana Coronel-Bejarano, & Hugo Cabral, 2018	Paraguay	Paraguay	Male	Área de Herpetología - Colección Boliviana de Fauna Museo Nacional de Historia Natural Instituto de Ecología	N/A
Facebook Fanpage	Untitled (video)/ Guyra Paraguay and Guaraní Soul, 2019	Paraguay	Paraguay	-	Guyra Paraguay, Asunción	https://www.facebook.com/guyraparaguay/
Twitter	Untitled (video)/ Guyra Paraguay/ 2019	Paraguay	Paraguay	-	Guyra Paraguay, Asunción	https://twitter.com/guyraparaguay?lang=es
Youtube video - English	Yerba mate, a market-driven model to conserve Atlantic Forest/ Guyra Paraguay/ 2019	Paraguay	Paraguay	-	-	https://www.youtube.com/watch?v=44MjAk9w9rw
Draft Manual	Manual de producción de yerba mate bajo sombra/ Rodolfo Ruiz & Evelyn Brítez, 2018	Paraguay	Paraguay	Male & Female	Guyra Paraguay, Asunción	See Final Report Annex 7.6 'Evidence-based Guidelines'-draft out for consultation with government and others
Draft journal manuscript	Can shade-grown yerba mate plantations contribute to conserve the Atlantic Forest's biodiversity? An analysis on birds, amphibian and reptile communities/ Hugo Cabral, Diana Coronel-Bejarano, Rodolfo Ruiz, Lucas Cañete, Evelyn Brítez, Viviana Rojas, 2019	Brazil	Brazil/ Paraguay	Male	Universidade Estadual Paulista, São José do Rio Preto, SP, Brazil; Guyra Paraguay, Asunción	See Final Report Annex 7.15. Draft MS (Shade-grown yerba mate and Atlantic Forest biodiversity conservation) – <i>in prep.</i> , submission 2019

Student these and reports	Various titles – research as part of Project Biodiversity Monitoring programme at San Rafael, supported by Universidad Nacional de Asunción	Paraguay	Paraguay	Female (3), Male (2)	la Carrera de Ingeniería Forestal, Facultad de Ciencias Agrarias, Universidad Nacional de Asunción	See examples Final Report Annex 7.16. Student theses – 2 for Degree of Forest Engineer; others internship reports
PowerPoint slides/ abstract	Contribution to Stephen Blackmore presentation: Darwin Anniversary session: 'Plant conservation and society through the lens of the Darwin Initiative' at Global Botanic Gardens Congress, 2017	UK	UK	Female	BirdLife International, LEEP - Local Engagement & Empowerment Programme, Cambridge	See Final Report Annex 7.17; and https://www.bgci.org/resources/bgci-tools-and-resources/bgci-global-congress-proceedings/
Darwin newsletter article	Learning 'yerba mate' lessons with communities in Paraguay's San Rafael Atlantic Forest Reserve/ Nonie Coulthard, 2018	UK	UK	Female	BirdLife International, LEEP, Cambridge	https://www.darwininitiative.org.uk/assets/uploads/Darwin-Newsletter-November-18-Unexpected-Achievements-FINAL.pdf
PowerPoint, video, seminar; BirdLife Annual Review & magazine	Various Darwin project promotion within BirdLife International and CCI (Cambridge Conservation Initiative), Nonie Coulthard, 2017-2019	UK	UK	Female	BirdLife International, LEEP, Cambridge	https://www.birdlife.org/sites/default/files/attachments/report2018.lor es-plan.pdf Other examples: Final Report Annex 7.17. (UK promotion yerba mate/ Guyra Paraguay Darwin project 2016-19)

Annex 6 Darwin Contacts

Ref No	23-016
Project Title	Yerba mate – a market-driven model for conserving Paraguay's Atlantic Forest
Project Leader Details	
Name	Dr Nonie Coulthard
Role within Darwin Project	Darwin Project Leader/ Consultant Advisor to BirdLife LEEP
Address	
Phone	
Fax/Skype	
Email	
Partner 1	
Name	Evelyn Britez; Rodrigo Zarate
Organisation	Guyra Paraguay
Role within Darwin Project	Monitoring Coordinator/ National Coordinator
Address	
Fax/Skype	
Email	
Partner 2 etc.	
Name	Itala Yopez; Arturo Mora
Organisation	BirdLife International – Quito Office
Role within Darwin Project	Head of Conservation – Americas; Biodiversity Conservation Manager – Americas
Address	
Fax/Skype	
Email	

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

Complete list of Annexes (7.1-7.17) given here, followed by short summaries/ titles and links where relevant (Annex 7 submitted as separate document from Main report). Larger documents (pdf documents and PowerPoint) compiled and supplied in separate 'package' from Main Report (by e mail).

Annex 7.1 Socioeconomic monitoring report (*EN summary attached here*)

Annex 7.2 Constitutions and registration documents (*in separate 'package'*)

Annex 7.3 Final landscape analysis and threat monitoring report (*EN summary attached here*)

Annex 7.4 (Cabral) Biodiversity Monitoring Report (*EN summary attached here*)

Annex 7.5 Business Plan (*full plan in English supplied in separate pdf Annexes 'package' – 'BUSINESS PLAN: Production of Yerba Mate in Tekoha Guasu, San Rafael, 2019'*)

Annex 7.6 Evidence-based guidelines/ Manual for Shade-grown Yerba mate production (*EN introduction attached here - full consultation draft in Spanish supplied in separate 'package'*)

Annex 7.7 Table of meetings held with government representatives (*attached here*)

Annex 7.8 Government declarations of interest in the project and cooperation agreements: signed by Municipality of Alto Vera; State government of Itapua; Ministry of Environment and Sustainable Development (MADES) (*pdf copies in 'package' of Annexes supplied separately*)

Annex 7.9 Table of meetings held with potential yerba mate buyers (*attached here*)

Annex 7.10 Guayaki SRP company purchase commitment (*carto compromiso*) March 2019 (*in separate 'package'*)

Annex 7.11 Darwin producers' information and maps (*in separate 'package'*)

Annex 7.12 6-monthly threats data (*in separate 'package'*)

Annex 7.13 Training workshops records (*in separate 'package'*)

Annex 7.14 Training workshops chart (Table 1 in main report) - (*attached here*)

Annex 7.15 Cabral et al, 2019 (*in prep*). Shade-grown yerba mate and conservation of Atlantic Forest biodiversity. *Draft MS (EN): Introduction & Conclusions - attached here*

Annex 7.16 Examples of student theses (*3 abstracts/ EN summaries – attached here*)

Annex 7.17 Examples of UK Darwin project promotion – (*attached here and PowerPoints in separate 'package'*)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@itsi.co.uk putting the project number in the Subject line.	✓
Is your report more than 10MB? If so, please discuss with Darwin-Projects@itsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need 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 want 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.	
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.	