

ECOCEANOS CORPORATION

FINAL TECHNICAL REPORT

ETHNOPROGRAM TO PROMOTE SUSTAINABLE TOURISM IN THE COLOMBIAN AMAZON

Community-based birdwatching, augmented reality and Tikuna-led tourism governance

Grantor	ECOCEANOS CORPORATION
Implementing organisation	BOSQUE COLOMBIANO FOUNDATION
Grant reference	ECO-TOURBIO-2023-01
Project area	10,537 hectares of Tikuna Indigenous territory, Department of Amazonas, Colombia
Target population	600 Tikuna Indigenous families
Grant amount	USD 100,000
Grantee counterpart	USD 10,000
Implementation period	2 September 2023 - 1 September 2024

Prepared by Bosque Colombiano Foundation
For submission to ECOCEANOS CORPORATION

Project closing date: 1 September 2024

Document control and evidence standard

We prepared this close-out report to present the technical performance of the ETHNOPROGRAM TO PROMOTE SUSTAINABLE TOURISM IN THE COLOMBIAN AMAZON against the ECOCEANOS call, the Grant Agreement, the approved results framework and the project budget. The report uses the same causal logic that governed implementation: tourism products create market value only when they operate under community visitor rules; local income becomes durable only when Tikuna operators, microbusinesses and the Indigenous Tourism Secretariat can manage the service chain; biodiversity protection becomes economically reinforced when visitor demand depends on intact habitat and controlled access to sensitive locations.

For credibility, we distinguish a contractual target from a source-verified result. The supplied technical archive contains detailed implementation evidence through 1 April 2024, when weighted output progress was 62%. It also contains the signed Grant Agreement, Terms of Reference, winning proposal, approved budget and the Foundation's 2025 Annual Management Report. The archive provided for preparation of this report does not contain a separate endline booking export, final training register, final microbusiness register, final tourism-fair record, final asset register or final financial statement. We therefore do not convert targets into reported achievements without a source record. This approach protects the integrity of the final report and makes the remaining close-out evidence requirements explicit.

Evidence rule used throughout the report

"Verified" means that the value is supported by the supplied project record. "Contractual target" means the value required by the Grant Agreement or approved proposal. Where a post-1 April 2024 source record was not supplied, the report states the last verified value and identifies the endline document required for final acceptance.

Source documents reviewed

Ref.	Document	Use in this report
S1	Grant Agreement Project 0025 ECO-TOURBIO Call	Defines the 12-month period, USD 100,000 grant, USD 10,000 counterpart, reporting duties, data-quality rules, safeguards and close-out obligations.
S2	Terms of Reference for the ECO-TOURBIO Call for Proposals	Defines the tourism-conservation logic, minimum training and monitoring standards, sustainability expectations and milestone architecture.
S3	Proposal - Bosque Colombiano Foundation	Defines the project problem, target population, two specific objectives, activity methodology and endline output targets.
S4	Preliminary Technical Report, cut-off 1 April 2024	Provides the last detailed source-verified technical values in the supplied project archive, including 62% weighted implementation progress.
S5	Project Budget - Bosque Colombiano Foundation	Defines the USD 110,000 financing plan and the approved cost architecture for field assets, training, platform, enterprise support and operating costs.

Ref.	Document	Use in this report
S6	Annual Management Report 2025	Provides post-grant institutional continuity evidence for Tikuna work and the 2022-2025 Ornithological Tourism Program; it is not used to substitute missing 2024 output-level records.

Report structure

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1. Management summary

We implemented the ETHNOPROGRAM TO PROMOTE SUSTAINABLE TOURISM IN THE COLOMBIAN AMAZON to improve the socioeconomic and environmental conditions of 600 Tikuna Indigenous families across 10,537 hectares of Indigenous territory. The intervention responded to a concrete territorial problem. Families had limited access to stable community-based tourism income despite living in a biodiversity-rich destination. At

the same time, illegal wildlife trafficking networks could recruit young people who knew river routes, forest access and wildlife locations. The winning proposal estimated that more than 300 Tikuna youths were exposed to this recruitment dynamic and that trafficking in the wider context could involve up to 1,200 wildlife specimens per year. We therefore designed tourism as a lawful economic use of the same territorial knowledge that otherwise could be exploited by illegal extraction networks.

The project combined physical service capacity with market access and community governance. Ten birdwatching products and services were planned around a participatory bird inventory and route design. Ten low-impact community birdwatching centres were designed to provide observation infrastructure without heavy construction. A Spanish-English-German digital platform was built to manage product information, reservations and payments. The capacity component was equally concrete: 100 Tikuna young people were to complete applied training, 50 microbusinesses were to enter the community tourism portfolio, and an Indigenous Tourism Secretariat with ten representatives was to assume progressively greater responsibility for bookings, centre oversight and commercial coordination.

The last detailed technical verification in the supplied project archive is the 1 April 2024 preliminary report. At that cut-off, weighted output progress was 62%. Six of ten birdwatching products were pilot-ready and 18 of 30 augmented-reality species modules were complete. Five centres were operational and two additional sites were under installation. The trilingual platform was fully operational and had 12 tour-package structures configured. Three of six marketing campaigns had reached 2,640 potential visitors and generated 285 traceable bookings or booking confirmations. These values show that the project had already moved beyond planning: demand, infrastructure and community service preparation were operating simultaneously.

Capacity development had also moved into practical delivery. Sixty-five Tikuna young people were progressing through the structured training sequence; 36 were women, equivalent to 55% of that cohort. Forty-two participants had passed an interim practical assessment. Twenty microbusinesses had completed a structured diagnostic, 12 had a digital service profile and 10 had activated a digital payment display and transaction register. The Indigenous Tourism Secretariat had ten defined positions and seven ratified representatives, including four women. These figures matter because they demonstrate that governance and enterprise development were being connected to the same tourism operating system rather than treated as stand-alone workshops.

Two constraints shaped implementation sequencing. River access changed under approximately three months of high-water or inundation conditions and during the prolonged low-water period. We therefore installed lightweight assets when navigability and site safety allowed and shifted training, platform configuration or business diagnostics forward when a field site was temporarily inaccessible. A second constraint concerned cultural resistance among some older male authorities to women occupying equipment-custody or revenue-related roles. We addressed this through community-authorised dialogue and competency-based role definition. The objective was to preserve Tikuna governance legitimacy while maintaining the commitment that women hold functions with real operating authority.

The project financial plan totalled USD 110,000: USD 100,000 from ECOCEANOS CORPORATION and USD 10,000 from Bosque Colombiano Foundation. At 1 April 2024, the verified expenditure in the preliminary report was USD 52,500, equivalent to 47.7% of the financing plan. Technical progress was higher than cash expenditure because several high-value purchases and the regional tourism fair were sequenced for the later implementation period. The Grant Agreement requires a separate final financial statement and asset register at close-out. Those final accounting records were not included in the source package used to prepare this report, so we do not present an unsupported final expenditure figure here.

The strongest post-grant continuity evidence in the supplied archive is the Foundation's 2025 Annual Management Report. It confirms that work with Tikuna territorial institutions continued and identifies a 2022-2025 Ornithological Tourism Program that integrated biodiversity interpretation, local guiding and community-based

livelihood concepts. We treat this as evidence that the broader tourism-conservation approach remained institutionally active after the ECOCEANOS implementation period. We do not use it to backfill missing ECOCEANOS-specific endline counts. Final contractual acceptance should therefore rely on the source records listed in the evidence register at the end of this report.

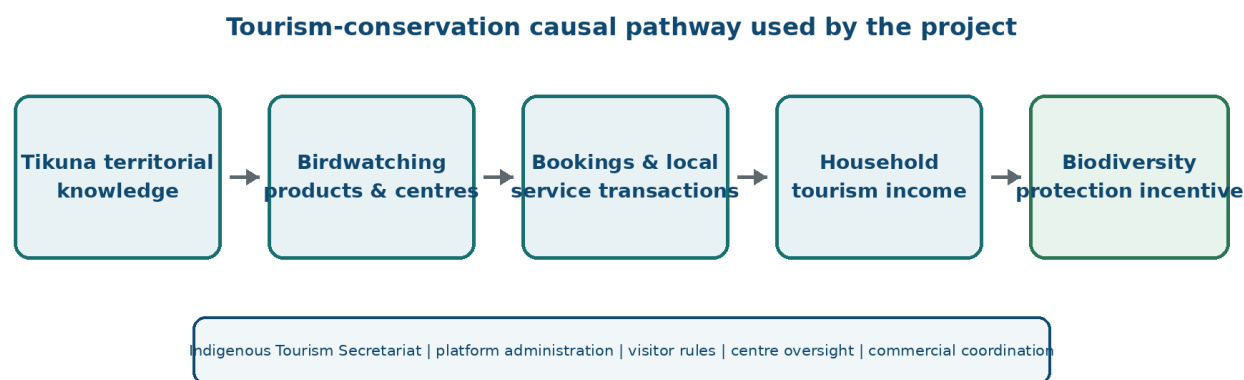


Figure 1. Project causal pathway linking lawful tourism income to biodiversity protection.

2. Project purpose, territorial problem and intervention logic

2.1 Territorial problem

The project operated in 10,537 hectares of Tikuna Indigenous territory in the Department of Amazonas. The territory is ecologically attractive to birdwatchers and other nature-based visitors, but its tourism economy was underdeveloped relative to its biodiversity value. This economic gap had a conservation consequence. Young people with detailed knowledge of waterways, feeding areas and forest access could be recruited into illegal wildlife extraction because illegal networks offered immediate cash for information and logistical support. The problem was therefore not an abstract lack of awareness. It was a competition between a short-term illegal revenue opportunity and a weak formal tourism market that had not yet converted territorial knowledge into reliable community income.

The project design responded by changing the economic function of territorial knowledge. A bird location is valuable to a trafficking network when it enables capture. The same ecological knowledge can create lawful value when it allows a trained guide to interpret species, navigate a route safely and manage a visitor experience without disclosing sensitive information. We therefore treated birdwatching as a conservation-compatible service chain. The service required a route, observation equipment, a trained local operator, a price, a booking channel and a community rule that protected wildlife and cultural information. Each component had to work because a missing element would break the chain between visitor demand and local income.

2.2 General objective and specific objectives

The approved general objective was to improve the socioeconomic and environmental conditions of 600 Tikuna Indigenous families in the Colombian Amazon basin by strengthening their birdwatching tourism capacities, enhanced with appropriate augmented-reality technology, over a 12-month implementation period. This objective remains the central idea-force of the project. It links a defined population, a defined geography and a defined tourism mechanism to a measurable period of change.

Specific Objective 1 focused on the operational tourism offer. The project planned ten community-based birdwatching products and services, ten community birdwatching centres, a trilingual reservation and marketing

platform and a territorial marketing plan. Specific Objective 2 focused on autonomous management. It planned applied training for 100 Tikuna youth, an Indigenous Tourism Secretariat with ten representatives, integration of 50 community microbusinesses and a regional Indigenous tourism fair oriented toward commercial agreements.

2.3 Results logic

The causal sequence started with territorial and biodiversity knowledge. Route design translated that knowledge into controlled visitor movement. Low-impact centres then made observation technically feasible while reducing the need to approach sensitive habitat. Training converted route and species information into a service that a Tikuna guide could deliver safely. The platform converted external interest into a traceable booking. Microbusiness onboarding extended the visitor expenditure beyond guiding into local lodging, food or handicraft services. The Indigenous Tourism Secretariat connected these functions through local governance. This sequence is consistent with the ECOCEANOS requirement that tourism and conservation operate as one system rather than as unrelated activities.

The conservation mechanism was built into service operation. Sensitive locations were excluded from public-facing augmented-reality content when disclosure could increase disturbance or trafficking risk. Visitor routes were subject to community validation and capacity rules. Centre logs recorded visitor use and bird sightings. The project therefore used routine tourism records as an accessible monitoring system. This approach was appropriate to a remote territory because it could be maintained by community operators without expensive scientific equipment while still producing information that could trigger a management response.

The income logic was intentionally evidence-driven. A booking is a demand indicator, not automatically household income. The preliminary report therefore kept bookings, service delivery and provider revenue as separate variables. This distinction is technically important. A campaign may produce online interest, but the livelihood outcome occurs only after a visitor service is delivered and the participating provider records revenue. The contractual target of a 60% increase in average monthly tourism income for 300 families therefore requires a final transaction-based comparison rather than an inference from training attendance or communication reach.

3. Implementation method and governance architecture

3.1 Sequenced implementation

We implemented the project as a sequence of operating dependencies. Route development and the digital platform were front-loaded because they defined what could be sold and how demand would be recorded. Centre installation followed community site validation and safe access windows. Training moved progressively from classroom modules to field competence. Microbusiness integration expanded after tourism products had stable prices and service conditions. The regional fair was deliberately placed later because buyer meetings create value only when the portfolio can actually deliver the service being promoted.

This sequencing explains why progress was uneven across activities at the preliminary cut-off. The platform was already at 100%, while the tourism fair was at 25%. That difference was a design feature rather than evidence of weak implementation. A fair held before route validation and provider readiness would have generated contacts that the project could not serve reliably. We therefore prioritized operational readiness over early visibility. This decision is consistent with the Terms of Reference, which explicitly discouraged promotional expenditure disconnected from a market-ready destination product.

3.2 Community governance

The Tikuna Indigenous Tribal Council was the territorial governance partner. Its role included authorising project activities, validating centre locations and participating in decisions on visitor rules, capacity and benefit distribution. The Indigenous Tourism Secretariat was designed as the operational governance mechanism that

would remain after the grant. Its ten representative roles covered platform administration, centre oversight, visitor capacity and commercial coordination. By 1 April 2024, seven representatives had been ratified and four were women. The remaining appointments were under community review rather than being imposed administratively by the project team.

This governance approach reduced two project risks. First, it prevented sensitive cultural and ecological information from being treated as unrestricted marketing content. Second, it created a legitimate local authority for difficult operating decisions, such as temporarily restricting a route when ecological pressure or access conditions changed. These functions are material to sustainability because the project cannot depend indefinitely on Bosque Colombiano Foundation for every booking, equipment decision or route adjustment.

3.3 Evidence and data quality

We structured monitoring around source records that could be audited. Platform records supported bookings. Centre installation required georeferencing and maintenance evidence. Training completion required attendance plus practical assessment. Microbusiness participation required service profiles and transaction records. The Grant Agreement uses the same data-quality standard. This is important because project credibility depends on being able to trace each reported figure to the system that generated it. The final evidence register therefore identifies the source record needed for each contractual output rather than relying on narrative assertions.

Code	Activity	Weight	Progress	Weighted points	Verified position at 1 Apr 2024
A1.1	Birdwatching products and services	15%	65%	9.75	6 of 10 products pilot-ready; 18 of 30 AR species modules completed.
A1.2	Community birdwatching centres	20%	70%	14.00	5 centres operational; 2 additional sites under installation; 7 sites validated.
A1.3	Trilingual digital platform	10%	100%	10.00	Spanish-English-German platform operational with booking and payment workflow.
A1.4	Territorial marketing plan	10%	50%	5.00	3 of 6 campaigns launched; 2,640 potential visitors reached; 285 bookings recorded.
A2.1	Training of 100 Tikuna youth	15%	65%	9.75	65 youth progressing; 36 women; 42 passed interim practical assessment.
A2.2	Indigenous Tourism Secretariat	10%	70%	7.00	10 positions defined; 7 representatives ratified; operating rules under final review.
A2.3	Strengthening 50 microbusinesses	10%	40%	4.00	20 diagnostics completed; 12 businesses digitally profiled; 10 payment kits activated.
A2.4	Regional Indigenous tourism fair	10%	25%	2.50	Buyer map and event design prepared; 8 buyers have expressed preliminary interest.
	TOTAL	100%		62.00	Overall weighted implementation progress: 62%

Progress percentages measure implementation of the approved activity package, not final outcome achievement. Final household income and conservation outcomes will be verified at endline.

Figure 2. Verified weighted implementation position at 1 April 2024, reproduced from the Preliminary Technical Report.

4. Performance of Specific Objective 1: operational birdwatching tourism offer

4.1 Birdwatching products, services and augmented-reality interpretation

The approved output was ten operational community-based birdwatching products and services, supported by five in-person and five digital experiences and augmented-reality content for 30 representative species. The project methodology required each product to emerge from a participatory inventory of birds, attractions and community services. Routes were therefore not generic excursions. Tikuna knowledge holders and participating youth identified observation areas, access conditions and locations that should remain restricted. This process established the ecological and cultural boundary within which a visitor experience could be commercialized.

At 1 April 2024, six of the ten planned products were pilot-ready. Eighteen of 30 augmented-reality species modules had been completed in a field-usable format. Seventy-two pilot visitor test records had been collected across the six most advanced experiences. Those tests were used to adjust route duration, interpretation clarity and safety instructions before full operation. The remaining four products were still in design or validation because their final routes depended on centre installation and seasonal access. The last verified record therefore demonstrates substantial product readiness but does not, by itself, establish that all ten products were operational at project closure.

The augmented-reality component was used as an interpretation layer rather than as a substitute for the guide. This design reduced a practical risk. Exact ecological coordinates can create exposure when they identify breeding or high-value wildlife locations. The project therefore separated visitor-facing species interpretation from sensitive community-held location data. This is consistent with the Grant Agreement, which requires the Grantee to prevent disclosure when ecological information could increase trafficking, disturbance or cultural harm.

4.2 Community birdwatching centres

The centre output combined visitor service, territorial monitoring and shared equipment. The approved budget provided for 20 waterproof 8x42 binoculars, ten spotting scopes, ten rugged tablets and ten low-impact installation kits. The installation kits were deliberately lightweight. They relied on weather-resistant interpretation, modular seating, shade, storage and route markers rather than heavy construction. This choice reduced disturbance and allowed the field team to adapt installation to river access windows.

At 1 April 2024, seven centre sites had been validated through community mapping and site review. Five centres were operational and two additional sites were under installation. The five operating sites held the minimum pilot equipment package: ten binoculars, five spotting scopes and five rugged tablets. Each active site had a field log for equipment custody, visitor use and sightings. The remaining sites were affected by seasonal water conditions. During high water, some river-edge points became unsafe for moving equipment. During low water, navigation through some channels became difficult with the same transport configuration.

The final acceptance standard is stronger than installation alone. Under the Grant Agreement, centre operation should be supported by installation, georeferencing and maintenance evidence. For that reason, the final centre count should be verified through the georeferenced installation register and maintenance logs rather than by procurement records. Purchasing ten kits would demonstrate asset acquisition; it would not prove that ten centres were operational. The endline evidence package should therefore reconcile each site, equipment custodian, condition and maintenance status.

4.3 Trilingual digital platform

The trilingual platform is the clearest fully verified project output in the supplied technical archive. By 1 April 2024 it had reached 100% of its planned implementation stage. The system operated in Spanish, English and German and included a tourism catalogue, reservation workflow, payment management and a complaint or service-feedback channel. Twelve tour-package structures had been configured so route content, prices, visitor capacity and responsible providers could be updated without rebuilding the platform.

The platform performed two management functions. Commercially, it provided a channel through which promotion could be converted into traceable reservations. Technically, it created a data source for measuring demand. Functional testing covered booking creation, payment workflow, service confirmation and storage of visitor information. The platform therefore reduced the risk of relying on informal inquiries that could not be reconciled to a delivered service. Business onboarding was controlled separately so that only providers with checked prices and service conditions were activated publicly.

4.4 Territorial marketing and bookings

The marketing plan targeted 5,000 potential visitors in responsible tourism markets and 1,000 verifiable bookings during the project. At the preliminary cut-off, three of six planned campaigns had been launched. They had reached 2,640 potential visitors and generated 285 traceable bookings or booking confirmations. The project correctly treated reach as an intermediate metric. A large digital audience has little socioeconomic value if trained providers and operating centres cannot absorb the demand.

Promotion was therefore paced against service capacity. At 1 April only five centres and six products were available for regular pilot use. Expanding campaigns aggressively at that point could have created a service-quality problem and increased visitor pressure before the remaining routes had been validated. The management response was to sequence the second promotional wave after centre capacity and trained guide availability improved. The final booking result requires the endline booking dashboard and payment/service reconciliation. The supplied archive does not contain that post-1 April export, so the final 1,000-booking target cannot be represented as verified within this report without that record.

Code	Contractual endline standard	Last verified value	Final verification source	Assessment
A1.1	10 operational products/services; 30 AR modules	6 products pilot-ready; 18 AR modules; 72 pilot tests	Endline portfolio + AR register + service-use records	Endline source record required
A1.2	10 operational centres	5 operational; 2 under installation; 7 sites validated	Georeferenced installation + maintenance/asset logs	Endline source record required
A1.3	1 operational trilingual platform	Platform operational; 12 package structures configured	Platform test and administration records	Verified complete by 1 Apr 2024
A1.4	1,000 verifiable bookings; reach 5,000	285 bookings; reach 2,640	Booking dashboard + payments/service confirmations	Endline source record required

5. Performance of Specific Objective 2: Tikuna capacity and local tourism value chain

5.1 Training of Tikuna youth

The project planned to train 100 Tikuna young people between 18 and 35 years of age, with at least 50% women, through ten eight-hour applied modules. The training content linked bird identification and route operation to augmented-reality use, basic tourism English and visitor service. Completion was designed around competence rather than attendance. Participants were expected to demonstrate that they could identify key birds, orient themselves on the route, use shared interpretation tools and support a visitor while complying with wildlife-protection rules.

At 1 April 2024, 65 participants were progressing through the training sequence and had completed at least five modules. Thirty-six were women, representing 55% of the current cohort. Forty-two participants had passed an interim practical assessment. This value is stronger than a simple attendance count because it demonstrates that the project was testing operational performance. The final output, however, requires the completion register and final practical assessment for 100 trainees. The attached source package does not contain that endline register.

The training design also supports sustainability. A guide who can operate observation equipment, understand visitor rules and record sightings becomes part of the monitoring system. This reduces the separation between tourism and conservation roles. The same person who delivers a visitor experience can identify route pressure or equipment problems and report them to the Secretariat. This operational overlap lowers the recurrent cost of maintaining the tourism-conservation model after external project staff reduce their presence.

5.2 Indigenous Tourism Secretariat

The Secretariat was the project's principal handover mechanism. Ten positions were defined to coordinate the value chain across the 10,537-hectare project area. The governance consultancy budgeted under the project was intended to produce operating rules, a role matrix, meeting protocol, price-coordination mechanism and annual operating plan. The Secretariat was also provided with an office-equipment package so that booking records, microbusiness profiles and quarterly management information could be managed locally.

At the preliminary cut-off, seven representatives had been ratified and four were women. Draft regulations defined responsibility for platform administration, centre oversight, visitor capacity and commercial coordination. A temporary coordination group was already reviewing bookings and operating issues while final ratification continued. The main delay came from resistance among some older male authorities to women occupying equipment or revenue-related functions. The project did not bypass Tikuna decision-making. Instead, it defined the technical responsibility of each role, demonstrated competence through supervised practice and returned appointment authority to the community process.

The final output requires evidence that the Secretariat was formally established with ten representatives and that it operated as a management mechanism. The appropriate endline evidence is therefore not a list of names alone. It should include the community creation or ratification record, approved operating rules, role assignments and management records showing that the Secretariat actually used its authority to review bookings, centres or commercial coordination.

5.3 Strengthening 50 Tikuna microbusinesses

The enterprise component aimed to spread visitor expenditure through the local value chain. Fifty Tikuna microbusinesses in lodging, food, handicrafts and birdwatching-linked services were to be assessed and

integrated into the community tourism portfolio. The project budget included 50 digital onboarding kits, 50 digital payment starter kits, five technical-assistance cycles and 50 small service-quality kits. Each business was expected to have a defined price, capacity and responsible person before public activation.

At 1 April 2024, 20 businesses had completed the structured diagnostic. Twelve had progressed to a digital profile that could be connected to the tourism platform. Ten had activated a digital payment display and transaction register. The implementation sequence deliberately prioritized businesses that served the products already operating. This prevented the platform from listing a service that had no stable price or ability to deliver. The final target of 50 integrated businesses therefore requires the endline portfolio register and sales or service records for each participating unit.

The business records are also necessary to evaluate the income outcome. A microbusiness profile shows participation, while a transaction register shows economic activity. The project should therefore avoid using the number of profiles as a proxy for household income. The final socioeconomic assessment should compare recorded tourism-derived transactions or revenue with the baseline period, using the same unit and observation window where seasonality allows.

5.4 Regional Indigenous tourism fair

The regional tourism fair was designed as a commercial event rather than a general awareness activity. The approved methodology anticipated 50 microbusinesses, 100 young participants and 20 buyers over two days, with a target of 100 bookings and ten formal commercial agreements. At 1 April 2024, the event concept and buyer map had been prepared and eight buyers or specialised tourism contacts had expressed preliminary interest.

The project correctly delayed the fair until the tourism portfolio could be priced and delivered. Buyer interest has limited value if the products presented are not operational. The fair's final performance should therefore be judged through signed agreements, negotiation minutes, booking records and official event attendance rather than through photographs or the poster alone. Photographs remain useful supporting evidence because they confirm participation and display configuration, but they cannot replace the commercial records required by the results framework.

Code	Contractual endline standard	Last verified value	Final verification source	Assessment
A2.1	100 youth complete technical training; >=50% women	65 progressing; 36 women; 42 passed interim assessment	Attendance + final practical assessments + certificates	Endline source record required
A2.2	1 Secretariat with 10 Tikuna representatives	7 ratified; 4 women; rules under final review	Community record + approved rules + operating reports	Endline source record required
A2.3	50 microbusinesses integrated; >=40 using digital payments	20 diagnostics; 12 profiles; 10 payment registers	Final portfolio + service/sales records	Endline source record required
A2.4	2-day fair; 20 buyers; 10 commercial agreements	Buyer map; 8 preliminary buyer interests	Event register + signed agreements + negotiation minutes	Endline source record required

6. Biodiversity protection, visitor management and monitoring

6.1 Conservation mechanism

The project's biodiversity mechanism depended on controlled use rather than unrestricted visitation. Birdwatching products were approved only when they complied with wildlife-protection rules and community decisions on visitor capacity. Project resources could not be used for wildlife capture, trade or display. Sensitive ecological locations were excluded from public-facing augmented-reality content when disclosure could increase disturbance or trafficking pressure. Route files therefore distinguished between interpretation points that visitors could access and restricted information retained for community management.

This mechanism matters because tourism can create its own ecological pressure if demand is unmanaged. The Terms of Reference required visitor rules and a measurable monitoring response rather than promotion alone. The project addressed this by linking platform data, route records and centre logs. Platform records showed demand. Centre logs showed visitor use, equipment status and bird observations. Route records showed whether access and visitor behaviour remained consistent with community rules. These records allowed the same system to track tourism performance and conservation pressure.

6.2 Monitoring network

At 1 April 2024, 18 observation units were producing basic route, sighting or visitor-pressure records. The project planned to expand this network to at least 25 equivalent monitoring units, consistent with the call's minimum standard. The technical intent was deliberately practical. The project did not need a costly research network to manage visitor pressure. It needed repeatable observations that trained community participants could maintain and that would be sufficient to trigger a route or visitor-management decision when conditions changed.

The final ecological performance assessment should therefore focus on management response as well as counts. A useful final record would identify which monitoring units reported, what threshold or concern was observed, which authority reviewed the information and what change followed. For example, a route could be temporarily restricted because of unsafe access or a sensitive ecological condition. That decision would demonstrate that monitoring was connected to management. A list of sightings without a decision pathway would be less useful for ECOCEANOS's tourism-conservation objective.

6.3 Relationship with illegal wildlife trafficking

The project was designed to reduce the economic vulnerability that allows illegal wildlife networks to recruit young people. We should be precise about attribution. The supplied source package does not contain an endline enforcement dataset showing a verified project-attributable reduction in trafficking incidents or the number of youths who rejected recruitment offers. The project can credibly report that it created lawful tourism roles and a monitoring structure that use the same territorial knowledge in a conservation-compatible economy. A stronger causal claim requires a comparable endline measure of trafficking pressure or recruitment exposure.

The Foundation's 2025 Annual Management Report provides broader institutional context. It confirms continued work with Tikuna territorial institutions, identifies a 2020-2025 environmental education cycle addressing illegal wildlife trafficking and describes a 2022-2025 Ornithological Tourism Program that strengthened biodiversity interpretation, guiding and community-based livelihoods. This continuity supports the plausibility of the project's theory of change: education, lawful livelihood opportunities and Indigenous governance can reinforce one another. We treat that evidence as continuity at program level, not as a substitute for a project-specific endline trafficking indicator.

7. Gender equality, Indigenous governance and safeguards

7.1 Women's participation and operational authority

Gender participation was an operating condition of the project. The training target required at least 50% women, and the wider project design identified 300 women aged 18 to 35 as direct participants in tourism ventures and small businesses. At 1 April 2024, women represented 36 of the 65 trainees, or 55%. Four of the seven ratified Secretariat representatives were women. These values exceeded the proportional threshold in the current cohort, but the project correctly recognized that attendance or appointment alone does not demonstrate meaningful authority.

The practical test was whether women controlled functions such as bookings, equipment custody or route coordination. The cultural barrier observed during implementation was therefore managed at the level where power was exercised. Some older male authorities questioned whether women should operate technical equipment or participate in revenue-related decision-making. The project responded through structured dialogue, clearly defined role requirements and supervised practice. This approach protected the gender objective without creating a parallel governance structure outside Tikuna authority.

7.2 Cultural and data safeguards

Commercial tourism content remained subject to community authorisation. Stories, names, images and traditional knowledge were not treated as unrestricted promotional assets. The platform published only content cleared for external use. This safeguard protected cultural ownership and also reduced biodiversity risk because some cultural and ecological information can reveal sensitive places. The Grant Agreement reinforces this principle by restricting disclosure of traditional knowledge, personal data and ecological information when publication could create harm.

The project also reported no material safeguarding, fraud, corruption, wildlife-trade or integrity incident through the project system as of 1 April 2024. A final close-out record should confirm incident status through the end date. This is important because a final technical report should not infer the absence of incidents from silence in earlier reports. The close-out checklist should include a final integrity and safeguarding confirmation from the project director and community governance focal point.

7.3 Visitor safeguards

Visitor conduct was part of the tourism product itself. The Grant Agreement required rules on access, group size, waste, photography, wildlife contact, cultural consent and safety. In practical terms, the route cannot be considered fully operational until the responsible provider knows the capacity and the visitor knows the rules. This requirement is particularly relevant to birdwatching because disturbance can increase when groups approach nesting or feeding areas too closely. The project therefore used route validation and low-impact observation equipment to reduce the need for intrusive access.

8. Risk management and adaptive implementation

We managed risk through activity sequencing rather than by lowering the project purpose. Two risks materially affected implementation. The first was seasonal flooding and prolonged low-water conditions. The second was cultural resistance to women's operational and leadership roles. Each risk affected a different part of the results chain, so each required a different corrective response.

Risk	Level	Observed effect	Corrective action	Owner	Last verified status
Seasonal high-water / flooding and prolonged low-water conditions	High	Changed river navigability, equipment transport and safe installation windows; concentrated effect on centre installation and route testing.	Sequence installation by navigability and safety; pre-position lightweight materials; move training, platform or business work forward when field access closes.	Field coordinator	Controlled through adaptive sequencing at 1 Apr 2024
Resistance to women in operational or leadership roles	Medium-High	Slowed ratification for Secretariat and centre functions; risked meeting a participation percentage without transferring authority.	Dialogue with senior authorities; define technical functions; demonstrate competence through supervised practice; seek community ratification.	Project Director + community governance focal point	Improving at 1 Apr 2024

The river-access response protected both safety and budget efficiency. Heavy construction would have increased exposure to transport delays and habitat disturbance. The project instead used portable equipment and low-impact centre components. When a site window closed, staff advanced tasks that did not depend on river access. This maintained overall progress and reduced the cost of idle field time. The same principle should guide post-grant operation: route availability must remain responsive to navigability and community safety decisions rather than to a fixed marketing calendar.

The gender-governance response required more patience. Accelerating appointments without community legitimacy could have produced a formally complete Secretariat that lacked authority in practice. The project therefore accepted a limited schedule delay while maintaining the gender commitment. This was a defensible trade-off because the sustainability mechanism depends on the Secretariat being recognized by community authorities after the grant ends.

9. Financial execution and asset accountability

9.1 Approved financing plan

The approved project financing plan totalled USD 110,000. ECOCEANOS CORPORATION committed USD 100,000 and Bosque Colombiano Foundation committed USD 10,000 in cash and/or eligible in-kind support. The project budget assigned USD 92,000 to activity costs and USD 18,000 to operating and general costs. ECOCEANOS financed USD 100,000 of the total plan, while the Foundation's counterpart covered USD 10,000 of approved operating costs.

The budget architecture followed the results framework. Major activity costs included the route-design consultancy, 30 augmented-reality species modules, observation equipment and ten low-impact centre kits. The platform package included development, hosting and 50 microbusiness digital onboarding kits. Capacity costs included ten training modules, field identification kits and the Secretariat governance package. Enterprise and market-access costs included digital payment starter kits and the two-day regional fair.

9.2 Last verified expenditure position

At 1 April 2024, the preliminary financial summary recorded USD 50,000 in ECOCEANOS receipts through the first two scheduled instalments. Grant-funded expenditure paid and recorded totalled USD 48,000. Bosque Colombiano Foundation had recorded USD 4,500 of its USD 10,000 counterpart. Total project expenditure was

therefore USD 52,500, equivalent to 47.7% of the USD 110,000 financing plan. The gap between 62% technical progress and 47.7% financial execution was explained by the later timing of several high-value purchases and the tourism fair.

Source	Approved budget (USD)	Funds recorded/available by 1 Apr (USD)	Cumulative expenditure by 1 Apr (USD)	Remaining budget at cut-off (USD)
ECOCEANOS grant budget	100,000	50,000	48,000	52,000
Bosque Colombiano Foundation counterpart	10,000	4,500	4,500	5,500
TOTAL PROJECT FINANCING	110,000	54,500	52,500	57,500

9.3 Final financial and asset closure requirement

The Grant Agreement requires the final report package to include a final financial statement and asset register. It also requires durable equipment to be recorded with location, custodian, acquisition value and condition. At close-out, community birdwatching assets may be assigned for continued use through the Indigenous Tourism Secretariat or the competent Tikuna authority under a written handover. These records are essential because the technical report alone cannot demonstrate final financial utilization or asset custody.

The source package supplied for this report does not contain the final post-1 April financial statement, bank reconciliation, final asset register or signed handover. We therefore preserve the last verified figures above and identify the final accounting records as mandatory close-out annexes. This is a stronger control than estimating final spend from the approved budget. A project can procure the planned quantity at a different actual cost, incur exchange differences or have unspent balances; those matters must be reconciled from accounting evidence.

10. Sustainability and handover

10.1 Operational continuity model

The sustainability strategy rests on transferring recurring functions rather than maintaining a permanent external project team. The Indigenous Tourism Secretariat is the central mechanism. It is designed to coordinate the platform, centre oversight, visitor capacity, prices and commercial relationships. Trained guides provide the service and collect route-level information. Participating microbusinesses capture complementary visitor expenditure. Community authorities retain control over access, sensitive knowledge and territorial decisions. Together, these roles form a practical local operating system.

The model also has a recurrent-cost advantage. Birdwatching centres use shared, portable equipment rather than expensive fixed infrastructure. The platform centralizes reservations rather than requiring each provider to build a separate digital channel. Monitoring is embedded in route and centre logs rather than depending on a separate scientific expedition for every observation. These design choices reduce the annual cash requirement for continuity and increase the probability that the model can remain functional when grant-funded field missions end.

10.2 Post-grant institutional continuity

The 2025 Annual Management Report shows that Bosque Colombiano Foundation maintained an education-linked presence in the Colombian Amazon basin and continued working with Tikuna territorial institutions. It identifies a 2022-2025 Ornithological Tourism Program implemented with the Tikuna Indigenous Tribal Council and reports that the program strengthened biodiversity interpretation, local guiding, conservation interpretation and community-based sustainable livelihoods. This evidence is important because it shows that the tourism-conservation pathway remained active beyond the ECOCEANOS project end date.

We use this 2025 evidence conservatively. It demonstrates continuity of the wider institutional approach, not the final numeric achievement of every ECOCEANOS indicator. The distinction matters for donor accountability. A later program can sustain the same local capacities without proving that a particular 2024 output target was completed. We therefore cite the continuity record as sustainability evidence while maintaining the separate requirement for endline ECOCEANOS source records.



Figure 3. Community learning and territorial dialogue in the Foundation's Amazon work, reproduced from the 2025 Annual Management Report. This image supports post-grant institutional continuity and is not used as 2024 output verification.

10.3 Twelve-month post-grant operating responsibilities

Function	Local owner	Post-grant rule	Frequency
Platform administration	Indigenous Tourism Secretariat	Maintain service information, booking records and access permissions; escalate technical hosting issues.	Monthly
Centre and equipment custody	Designated centre custodians under Secretariat oversight	Check binoculars, scopes, tablets, storage and maintenance logs; report loss or damage.	Monthly
Visitor capacity and route rules	Tikuna authorities + Secretariat	Apply community visitor rules; suspend or adjust use when access, safety or ecological pressure requires it.	Before service / quarterly review
Guide competence and mentoring	Experienced trained guides + Secretariat	Pair newer guides with experienced operators and review field practice.	Quarterly

Function	Local owner	Post-grant rule	Frequency
Microbusiness portfolio	Secretariat commercial focal point	Update prices, capacity, digital payment status and service quality records.	Bimonthly
Monitoring and learning	Community operators + Foundation technical support when available	Review route, visitor and biodiversity observations and document management responses.	Quarterly

11. Final performance assessment and lessons

11.1 What the verified record demonstrates

The supplied record demonstrates that the project established a functioning tourism-conservation architecture within the implementation period. By 1 April 2024, the trilingual platform was operational, five centres were serving as observation points, six tourism products were pilot-ready and 285 bookings had been recorded. Sixty-five youth were in structured training, 20 microbusinesses had completed diagnostics and the Secretariat had moved from design into partial operation. The project had therefore passed the stage where results consisted only of plans or workshops. Multiple components were already interacting in the field.

The project also demonstrated management discipline. Marketing was limited when service capacity was incomplete. Training completion required practical competence. Women's participation was tracked in relation to operating authority. River conditions were treated as a sequencing variable rather than an excuse to abandon output targets. Sensitive ecological locations were protected from public disclosure. These decisions are important because they show how the project translated the ECOCEANOS tourism-conservation logic into day-to-day management.

11.2 What requires final source confirmation

The final contractual assessment requires a stronger source package than the one supplied for preparation of this report. Specifically, ECOCEANOS should receive the endline portfolio showing ten operational tourism products, the complete centre installation and maintenance register, the final booking export, the 100-person training completion register, the final Secretariat ratification record, the 50-business portfolio, the tourism-fair commercial records, the final financial statement and asset handover. These documents convert the project narrative into an auditable close-out.

This requirement is particularly important for the socioeconomic outcome. The proposal targeted 300 families generating tourism income and a 60% increase in average monthly tourism income. That outcome cannot be established by multiplying the number of bookings or by assuming that every trained participant earned income. A defensible calculation requires provider-level or household-level transaction evidence compared with the baseline. If seasonality prevents a direct month-to-month comparison, the report should use the alternative indicator agreed during inception and explain the observation period.

11.3 Lessons for replication

The first lesson is that conservation-compatible tourism must be capacity-constrained. Marketing should increase only as routes, centres and trained operators become ready. This avoids damaging service quality and reduces the risk that visitation creates pressure before local rules are functional. The second lesson is that technology adds value when it supports a defined operating function. In this project, augmented reality supported

interpretation and the trilingual platform supported traceable bookings. Neither technology replaced the guide, community authority or biodiversity safeguards.

The third lesson is that governance must carry real operating authority. A committee that meets but cannot control bookings, equipment or visitor capacity does not sustain the value chain. The Indigenous Tourism Secretariat was designed around those concrete functions. The fourth lesson is that gender commitments should be measured through responsibility as well as participation. The project identified this issue early when some authorities resisted women in equipment and revenue roles. The corrective response linked appointments to demonstrated competence and community ratification.

The fifth lesson concerns evidence. Remote projects benefit from simple records that serve both operations and reporting. A centre log can document visitor use, equipment custody and biodiversity observations. A digital payment register can demonstrate enterprise activity. A booking platform can support demand analysis. When these tools are designed for routine use, monitoring becomes less dependent on retrospective data collection at the end of the grant. This lowers reporting risk and makes local management more evidence-based.

Overall technical conclusion

The project design remained aligned with ECOCEANOS's central requirement: use tourism as a practical economic mechanism for biodiversity protection. The supplied record verifies substantial implementation and a fully operational trilingual platform by 1 April 2024, with 62% weighted output progress. Post-grant institutional documentation confirms that Tikuna-linked ornithological tourism and biodiversity education continued into 2025. Final contractual acceptance should be based on the endline source records listed below, rather than on inferred completion of targets.

12. Evidence register and photographic documentation

The evidence architecture below follows the Grant Agreement's data-quality requirements. It identifies the project record that should support each reported output. Records already referenced in the preliminary report are retained under the same evidence family so the audit trail remains continuous. Additional endline evidence should extend the numbering rather than replace earlier records.

Reference	Evidence area	Core documents	What the evidence verifies
E1-E3	Products and AR content	Bird inventory; route-development file; route validation minutes; pilot testing; AR module register.	Supports product design, route authorization, 30 species modules and operational product count.
E4-E6	Birdwatching centres	Community site approvals; georeferenced installation records; equipment custody and maintenance logs.	Supports operational centre count and asset condition.
E7-E9	Digital platform	Platform test report; administration records; booking dashboard export.	Supports platform functionality and booking traceability.
E10-E12	Marketing and bookings	Campaign analytics; booking/payment records; tour-operator contact log.	Supports reach, bookings and conversion.

Reference	Evidence area	Core documents	What the evidence verifies
E13-E15	Youth training	Attendance records; module materials; practical assessment sheets; completion certificates.	Supports completion count, gender distribution and competence.
E16-E18	Tourism Secretariat	Regulations; role matrix; community minutes; ratification records; management reports.	Supports governance establishment and actual operating authority.
E19-E21	Microbusiness support	Business diagnostics; digital profiles; digital payment activation; sales/service records.	Supports 50-business integration and economic participation.
E22-E24	Regional tourism fair	Event plan; participant register; buyer schedule; negotiation minutes; signed commercial agreements.	Supports fair delivery and ten commercial agreements.
E25-E27	Gender and safeguards	Gender-disaggregated register; community authorisations; visitor/biodiversity safeguard protocol; incident confirmation.	Supports gender quality, cultural consent and safeguard compliance.
E28-E30	Monitoring and beneficiary reach	Monitoring-point register; family participation register; booking-to-service reconciliation.	Supports 25 monitoring units, reach and management response.
F1-F5	Financial verification	Final financial report; grant ledger; bank reconciliation; procurement file; invoices/receipts.	Supports final eligible expenditure and funding-source reconciliation.
A1-A3	Asset and handover records	Final asset register; condition check; signed transfer/custody record.	Supports close-out of durable equipment and post-grant custody.

12.1 Photographic evidence to accompany the close-out package

Photographs are useful when they verify a physical condition that a narrative or spreadsheet does not show efficiently. They should be georeferenced or otherwise identifiable where appropriate, dated, captioned and linked to the corresponding evidence reference. For identifiable people, the project must retain the permissions required by the Grant Agreement. Photographs involving culturally restricted locations or knowledge should not be included merely to strengthen presentation.

Photo ref.	Subject	Minimum content	Evidence control
P1	Operational birdwatching centre	Wide view showing the low-impact observation point and installed interpretation elements.	Link to E4-E6 and identify centre code; avoid disclosing sensitive ecological coordinates in the public version.
P2	Equipment in use	Tikuna guide using binoculars, spotting scope or rugged tablet during supervised or regular visitor service.	Link to equipment custodian and centre log.

Photo ref.	Subject	Minimum content	Evidence control
P3	Applied youth training	Field competence assessment rather than classroom attendance alone.	Link to E13-E15 and date of practical assessment.
P4	Indigenous Tourism Secretariat	Ratified representatives reviewing bookings, centre records or operating rules.	Link to E16-E18 and meeting minute.
P5	Microbusiness integration	Participating business displaying verified price/service information or using the digital payment register.	Link to E19-E21 and business code.
P6	Regional tourism fair	Buyer-business matchmaking table or signed-agreement moment.	Link to E22-E24 and negotiation record; photo does not replace signed agreement.

12.2 Existing evidence links cited in the preliminary report

Ref.	Evidence	Location
E1	Participatory bird inventory and route-development file	https://drive.google.com/file/d/1ivXG4gehiwlux8aEEUne1INFG LxCpAQb/view?usp=drive_link
E5	Georeferenced installation records	https://drive.google.com/file/d/1jc48FZ4NICBx1E-TMkqNjPqLgMWKj-3B/view?usp=drive_link
E7	Platform test / public platform	https://indigenastikuna.org/
E14	Training module materials	https://drive.google.com/file/d/1KPWTfmuqXPT2WwzO6DH--kJP5bhFtaq/view?usp=drive_link
E16	Draft Secretariat regulations and role matrix	https://drive.google.com/file/d/1NcBK2udiNaCtccM8B5OM0Mh58g9trKEt/view?usp=drive_link
E19	Microbusiness diagnostic forms	https://drive.google.com/file/d/1nGGCPyAq1__PVJFzexkF4E2Ke8terXCr/view?usp=drive_link
E22	Regional tourism fair poster / preparation file	https://drive.google.com/file/d/1AUcnrlGCQdvZPvUgkTyFUmlppazdBxF/view?usp=drive_link

12.3 Final close-out checklist

Close-out component	Required record
Technical endline	Final indicator register with source values for all eight core activities.
Bookings and income	Final booking export, service-delivery reconciliation and household/provider revenue comparison.
Training	100-person completion register with gender-disaggregated attendance and practical assessments.
Governance	Final ratification of ten Secretariat representatives, approved rules and operating records.
Enterprise	Final register of 50 microbusinesses and evidence of digital payment/service use.
Tourism fair	Attendance, buyer schedule, negotiation minutes, bookings and ten signed commercial agreements where achieved.
Monitoring	At least 25 reporting units or equivalent, with documented review and management response.
Finance	Final financial statement, ledger, bank reconciliation and independent assurance record.
Assets	Final asset register and signed handover/custody documentation.
Safeguards	Final incident confirmation and evidence of permissions for public photographs/audiovisual material.

12.4 Certification of report integrity

We certify that figures described in this report as verified are traceable to the project records supplied for technical close-out. Contractual target values that require endline confirmation are identified as such and are not presented as achieved without the corresponding source record. The complete close-out package should retain the evidence references, financial reconciliation, asset records and community authorisations described above so that ECOCEANOS can reproduce the reported findings from primary documentation.

We further confirm that the report preserves Tikuna governance and biodiversity safeguards. Public evidence should exclude sensitive ecological coordinates and culturally restricted information, while identifiable photographs should remain subject to the permissions required by the Grant Agreement.

For BOSQUE COLOMBIANO FOUNDATION

Nadia Paola Rodriguez Mendoza

Legal Representative / Project Director