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# **DIR28IN\1079**

## **Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships**

Although well-protected forests provide clean water, degraded forests do not. Construction of water access systems that do not consider upstream conservation will result in failure. This project will pilot an innovative financing model for integrated water access and conservation. We will first design the legal and financial pathways to implement a green/grey infrastructure model and persuade municipalities to finance pilots. This will help communities improve their water access to water and simultaneously conserve forests and demonstrate the value of integration.

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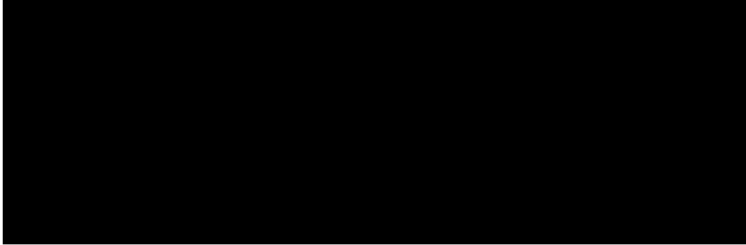
## Section 1 - Contact Details

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### PRIMARY APPLICANT DETAILS

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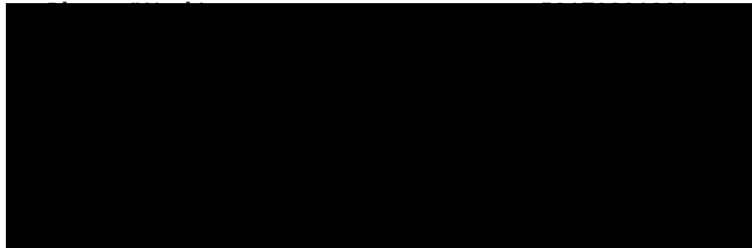
Title	Dr
Name	Nigel
Surname	Asquith



### GMS ORGANISATION

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Type	Local charity organisation
Name	Fundacion Natura Bolivia



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## Section 2 - Project Summary, Ecosystems, Approaches and Threats

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### Q3. Project Title

Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships

### Q4. Key Ecosystems, Approaches and Threats

Please select up to 3 biomes that are of focus, up to 3 conservation actions that characterise your approach, and up to 3 threats to biodiversity you intend to address, from dropdown lists.

#### Biome 1

Tropical-subtropical forests

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#### Biome 2

Shrublands & shrubby woodlands

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#### Biome 3

No Response

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#### Conservation Action 1

Land/water protection (area/resource/habitat)

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**Conservation Action 2**

Livelihood, economic & other incentives (incl. conservation payments)

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**Conservation Action 3**

Law & policy (legislation, regulations, standards, codes, enforcement)

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**Threat 1**

Agriculture & aquaculture (incl. plantations)

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**Threat 2**

Biological resource use (hunting, gathering, logging, fishing)

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**Threat 3**

*No Response*

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**Q5. Summary of project**

**Please provide a brief summary of your project, its aims, and the key activities you plan to undertake. Please note that if you are successful, this wording may be used by Defra in communications e.g. as a short description of the project on the website.**

**Please write this summary for a non-technical audience.**

Although well-protected forests provide clean water, degraded forests do not. Construction of water access systems that do not consider upstream conservation will result in failure. This project will pilot an innovative financing model for integrated water access and conservation. We will first design the legal and financial pathways to implement a green/grey infrastructure model and persuade municipalities to finance pilots. This will help communities improve their water access to water and simultaneously conserve forests and demonstrate the value of integration.

**Section 3 - Dates & Budget Summary****Q6. Project Country(ies)**

**Which eligible host country(ies) will your project be working in?**

**Country 1** Bolivia

**Country 2** *No Response*

**Country 3** *No Response*

**Country 4** *No Response*

**Do you require more fields?**

No

**Q7. Project dates**

**Start date:**

01 April 2022

**End date:**

31 March 2024

**Duration (e.g. 1 year, 8 months):**

2 years

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## Q8. Budget Summary

Darwin Funding Request	2022/23	2023/24	Total request
(Apr - Mar) £	£91,400.00	£93,809.00	185,209.00

Q9. Proportion of Darwin Initiative budget expected to be expended in eligible countries: %



Q10a. Do you have proposed matched funding arrangements?

Yes

What matched funding arrangements are proposed?

Coca Cola and Cuencas Sustentables will cover their own staff time ( [REDACTED] respectively). Municipal governments will cover the [REDACTED] cost of constructing the green/grey infrastructure. However, the innovation of this project is trying to ascertain if and how such municipal payments are legally, technically, and politically possible, so these match funds cannot yet be confirmed to come from municipal sources. Therefore – and in order to ensure that the project will be completed as planned – Cuencas Sustentables will guarantee this [REDACTED] match (i.e., if we cannot figure out a legal way that the municipal government can pay, Cuencas will cover the full amount). The innovative part of this proposal is thus at zero risk for Darwin.

Q10b. Total confirmed & unconfirmed matched funding (£)



Q10c. If you have a significant amount of unconfirmed matched funding, please clarify how you fund the project if you don't manage to secure this?

All match funds are confirmed. If we end up failing to get the [REDACTED] match from municipal governments – i.e., the entire point of our innovation of Outputs 1 and 2 – this amount will be instead be matched by Cuencas Sustentables to ensure we achieve Outputs 3.

## Section 4 - Darwin Objectives and Conventions

Q11. Problem the project is trying to address

Please describe the evidence of the problem your project is trying to address in terms of biodiversity and its relationship with poverty. What is the need, challenge or opportunity? For example, what are the drivers of loss of biodiversity that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems?

Please cite the evidence you are using to support your assessment of the problem (references can be listed in a separate attached PDF document).

Bolivia's Santa Cruz Valleys are part of the tropical Andes biodiversity hotspot. Amboró National Park, the Valleys northern border, hosts >900 bird species, almost 10% of the bird species on earth. Many rural communities in the Santa Cruz Valleys – as in much of the developing world – depend on streams and rivers for their water supplies. Livestock often defecate in these water sources and are major contributors to contamination and concomitant health problems, especially amongst children. Moreover, extensive cattle grazing is one of the primary threats to global biodiversity and forest cover. Cows

enter riverine forests, to drink and graze. They disturb crush herbs and fungi, consume seedlings of endangered tree species, and disturb the habitat of small animals, thus severely reducing biodiversity. Cows also defecate and urinate in the streams and compact soil, leading to higher levels of faecal coliforms, increases in flooding and sedimentation, and decreases in dry season water flows and quality.

Diarrheal diseases account for 1 in 9 child deaths globally, making diarrhoea the second leading cause of death among children under the age of 5. Prevention focused on safe water and improved hygiene and sanitation is extremely cost effective: every £1 invested yields an average return of £25.50. A recent survey at our project sites found that 14% of families with young children had at least one child suffer from diarrhoea in the last two weeks. In the village of Pucara, cases of diarrhoea increased 700% when the community switched its water source from a protected forested catchment to a larger, deforested catchment with free ranging cattle. A meta-analysis of 300,000 children from 35 countries shows that higher tree cover upstream reduces the probability of reported diarrhoea. Indeed, the effect of a 30% increase in upstream tree cover on diarrhoea reductions was similar to the effect of improved sanitation.

Although protected forests can provide clean water, forests with cattle supply contaminated water. Thus, when communities and municipalities build new water supply systems without considering upstream conservation, their investments fail to provide clean and healthy water.

Even though Bolivian municipalities – and those in Peru, Ecuador and elsewhere – invest significant sums in water access projects, there is currently no financial or legal mechanism through which they can simultaneously invest in upstream conservation. Such “access only” systems are thus destined to provide users with drinking water that is legally unfit for human consumption. On the other hand, philanthropic investment in biodiversity conservation is decreasing, and once local communities realize that their water supplies are contaminated, it is often too late to resolve the problem of forest degradation inexpensively.

Our proposed innovation is to determine a legal pathway by which public funds being invested in water access projects can also be used to undertake upstream conservation. Such a mechanism would allow governments to simultaneously guarantee clean water supplies and to protect the biodiversity of some of the world’s most biodiverse forest, in a more efficient and effective way than trying to achieve these goals separately.

## **Q12. Biodiversity Conventions, Treaties and Agreements**

**Q12a. Your project must support the commitments of one or more of the agreements listed below.**

**Please indicate which agreement(s) will be supported.**

- Convention on Biological Diversity (CBD)
- United Nations Framework Convention on Climate Change (UNFCCC)
- Global Goals for Sustainable Development (SDGs)

## **Q12b. National and International Policy Alignment**

**Please detail how your project will contribute to national policy (including NBSAPs, NDCs, NAP etc.) and in turn international biodiversity and development conventions, treaties and agreements that the country is a signatory of.**

Bolivia’s NBSAPs under the CBD are outlined in the 2019-2030 National Biodiversity Strategy. This project will help achieve the following within Strategic Line 3: “Maintenance of environmental functions and Living Well in harmony with Mother Earth, by promoting regional, sub-national and local actions for the conservation of ecosystems and species of flora and fauna with a certain degree of threat and in the Transversal Lines: “contributing to ecosystem-based adaptation as a strategy for socio-ecological resilience to climate change in life systems” and “Adjusting regulations, programs, projects and actions to gender equality to ensure the equitable participation of women in Integral Management and Sustainable Biodiversity”

As part of its NDCs under the UNFCCC Bolivia expects to achieve a series of objectives in mitigation and adaptation by 2030. In terms of water, the project will specifically help “increase in a holistic manner the adaptation capacity and

systematically reduce the hydric vulnerability in the country” and provide a “Significant improvement of social participation for local water management” and “Increase food production under irrigation.

In terms of forests the project will “increase the capacity of joint adaptation and mitigation through the comprehensive and sustainable management of forests” by “increasing forest areas with integrated and sustainable community management approaches” and “strengthening environmental functions (carbon capture and storage, organic matter and soil fertility, biodiversity conservation and water availability)”.

Natura has a formal cooperation agreement with the Bolivian governments “Mother Earth Authority” which commits Natura to provide “Technical and coordination support for the preparation of Bolivia’s Nationally Determined Contributions”, specifically through the “Technical, logistical and coordination support for the assignment of three municipalities of the Chaco region to the Joint Mechanism for Adaption and Mitigation”.

The results of this project will thus directly help the implementation of Bolivia’s NDCs.

## Section 5 - Method, Innovation, Capability & Capacity

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### Q13. Methodology

**Describe the methods and approach you will use to achieve your intended Outcome and contribute towards your Impact. Provide information on:**

- How have you reflected on and incorporated evidence and lessons learnt from past and present similar activities and projects in the design of this project?
- The need for this work and a justification of your proposed approach.
- How you will undertake the work (materials and methods).
- What will be the main activities and where will these take place?
- How you will manage the work (roles and responsibilities, project management tools, risks etc.).

**Please make sure you read the guidance documents, before answering this question.**

Reciprocal watershed agreements – otherwise known as Watershared agreements – are simple, grassroots versions of incentive-based conservation that help upper watershed forest and land managers to sustainably manage their forest and water resources to benefit both themselves and downstream water users. Watershared agreements focus on changing behaviour through economic and non-economic incentives and building institutional capacity.

Natura initiated the first Watershared Program in 2003 between the villagers in the upstream town of Santa Rosa and irrigators in the downstream town of Los Negros. The basic intervention has been refined and improved since then, but the model – with its climate, development, social, environmental and economic benefits – has proved remarkably robust. Indeed, since 2003, 80 municipal governments in Bolivia, Colombia, Peru and Ecuador have adopted Watershared, with more than 16,000 upstream landowners conserving 500,000 hectares of forested “water factories” in return for [REDACTED] worth of development projects (irrigation systems, fruit tree seedlings etc.) each year.

The weakness of the model, however, is that it requires philanthropic funds to get started. In this project we will build upon the basic Watershared model to develop a version that can be fully financed by local governments, thus creating the potential for cost effective scaling.

All project activities will take place in Bolivia. Natura will be responsible for overall project management, and implementation, focusing especially, developing the technical and financial models, on the lesson learning and component 3. CEJIS will be responsible for developing the legal model (1.2), Coca Cola will be responsible for designing and implementing a communication and diffusion strategy. Cuencas Sustentables will be responsible for leading components 2. Natura will be responsible for M&E and ensuring that the project is implemented as planned.

Major activities comprise:

- 1.1. Analyse literature, design draft model, finalize model and present to municipal collaborators.
- 1.2. Analyse legal precedents, design draft of proposed legal pathways, finalize and present to municipal lawyers.
- 1.3. Identify potential communities, develop concept proposals for green/grey infrastructure, submit proposals into annual

municipal budgeting process, work with municipal technicians to ensure acceptance

1.4. Publish and distribute lessons learned

2.1. Build grey infrastructure systems, deliver functioning water access system to communities

2.2. Hold meetings to discuss and implement new community-based maintenance tariffs,

2.3. Identify community members and train them in system management, and maintenance

3.1. Negotiate compensation packages, sign contracts and deliver compensation packages

3.2. Patrol and report incursions or other threats, sanction infractors, and repair damages to watershed.

Risks will be tracked and managed by a team of representatives of each institution, who will also form the project governing body. This body will guide implementation, ensuring that all laws and donor requirements are followed, and that outputs and activities are completed on schedule.

## **Q14. Innovation**

**Please specifically outline how your approach or project is innovative, noting the opportunity to describe the methodology is next.**

**Is it the application of existing evidence/technology/approach in a distinctly different sector, the development of new technologies/approach in an existing area, or is it a totally disruptive approach?**

Municipal governments use of public funds for water access projects has traditionally been restricted to only building grey infrastructure such as pipelines, dams, and potabilization systems. The upstream “water factories” that feed this grey infrastructure are ineligible to receive public funds for their maintenance and protection. Water production areas thus degrade, and sedimentation, erosion and contamination by livestock leaves them unable to provide clean water for downstream users.

Meanwhile, philanthropic donations are insufficient to finance upstream conservation, leading biodiversity to disappear at an ever-increasing rate. This project’s innovation will be to create a legal and financial pathway by which finance for water access projects can be also allocated to securing upstream water sources. This will have to produce two major benefits:

- 1) A new financial mechanism for upstream conservation, that will allow significantly more biodiverse upper watersheds to be protected, and
- 2) Ensure that new dams and pipe systems do not become “stranded assets” but instead actually improve their performance – versus traditional benchmarks – in providing clean water to downstream communities.

This innovation meets a clear need in Bolivia, and we expect that once we have navigated the legal and financial pathways to make the model feasible, there will be significant demand from water providers across the country. Our experiences suggest that such a model could then be applied in other Andean countries such as Peru and Ecuador.

## **Q15. Capability and Capacity**

**How will you support the strengthening of capability and capacity in the project countries at organisational or individual levels, please provide details of what form this will take and the post-project value to the country.**

Our project will allow – for the first time – municipal governments in Bolivia to invest public money in upstream conservation, thus safeguarding their (often very expensive) physical assets of water access systems.

At the organizational level, we will build the capacity of municipal governments and communities to think and act in an integrated manner and create water access systems that link the previously disparate strands of grey and green infrastructure. We will pilot this new approach at three sites, which we believe will become reference cases as we repeat, replicate, and scale the new model. This will build on the trainings in watershed management we have undertaken across Bolivia over the last decade.

At the individual level the new model will put the responsibility of water quality maintenance in the hands of community members. For the first time, they will be trained in the importance of upstream conservation to maintain their children’s

health. Community members will also be given the tools – new water access systems coming from conserved watersheds, and institutions to collect funds for system maintenance – to ensure that they are sufficiently empowered to look after their water system in the future.

We can imagine a post-project sea change in how water access projects are implemented in the future. New York City's Catskill watershed conservation program changed the way cities have been able to link their grey infrastructure to green. We hope to do the same at a micro scale. By having Coca Cola as project partner – and already investing millions of pounds a year in co-financing upstream conservation with municipal governments – we expect to be able to share and apply our results widely.

## Section 6 - Gender, Awareness, Change Expected & Exit Strategy

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### Q16. Gender equality

**All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain how your project will collect gender disaggregated data and what impact your project will have in promoting gender equality.**

In the often-male dominated culture of Bolivia, women's and especially girl's voices are rarely heard. Many women own land in Bolivia's Santa Cruz valleys but are unable to use it effectively. Traditional development projects that focus on improving crop yields and productivity invariably benefit men. Our project will be different. Women are most usually responsible for collecting and managing household water supplies. By enhancing water access, we will immediately improve the living standards of many women.

Secondly, in exchange for conservation commitments, we will provide economic development projects to each upstream family. We will specifically prioritize types of compensation that benefit women, such as beehives and other tools for honey production. Finally, we will prioritize signing such compensation agreements with females, and guarantee that a female is a co-signer on all agreements.

Of our eight core team members, four are female. We recognize that this in itself will not promote gender equality, but it is an internal policy of Natura, that whenever possible, females make up the majority of team members. To increase the chance of gender equity, a woman (Maria Teresa Vargas) will be responsible for project evaluation, and she will be specifically charged with ensuring that gender issues are considered, including reporting on the number of female beneficiaries.

### Q17. Awareness and understanding

**How will you raise awareness and understanding of biodiversity-poverty issues in your stakeholders, including who are your stakeholders, what approaches/formats/products will you use, how you will ensure open and free access to all data, and how will you know that the messages are understood?**

Lack of clean water in sufficient is one of the greatest poverty issues facing Bolivia today. Climate change will only make this problem worse. There is thus no need to raise awareness and understanding about the need for water access projects. Less understood is the need to protect the watersheds which feed the dams, reservoirs, and water intake pipes. There is thus a fundamental need for communication to community members, and local and national governments, that the municipal governments responsibility is not just providing water in quantity, but also in quality.

On the other hand, Watershared is a well-known mechanism within Bolivia, with upstream conservation programs being implemented in more than 10% of the country's municipalities (the program is known as Acuerdos Recíprocos por Agua (ARA) or Reciprocal Watershed Agreements). We thus already have considerable local awareness of, and support for, upstream conservation activities.

To build support for the fusion of grey and green infrastructure into an integrated project (i.e., water access plus watershed protection), our marketing and communication strategy will focus on two main messages:

1) Clean water is a human right, and investment should be in both constructing water distribution systems and in also



protecting the forested upstream “Water Factories”

2) Such investments should be structured in the same way as school and hospital construction are financed, through public investments by municipal authorities.

To increase public demand for this new model, we will create TV and radio spots, interviewing community members about their experiences. Coca Cola staff will lead the design and implementation of this communication strategy. In addition, all project outputs will be made available online and free to users.

## **Q18. Change expected**

**Detail the nature of the outputs you expect from the project (for example report, practical demonstration, know-how, new process, product or service design) and how these will help you to target the identified need, challenge or opportunity in terms of biodiversity and poverty reduction, and links between them.**

**You should identify what will change and who will benefit a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended).**

**When talking about how people will benefit, please remember to give details of who will benefit, differences in benefits by gender or other layers of diversity within stakeholders, and the number of beneficiaries expected. The number of communities is insufficient detail – number of households should be the largest unit used.**

This project has three primary outputs:

1. The technical, legal, and financial pathway to implement a green/grey infrastructure public-private partnership model for water access and sustainable watershed management is designed
2. A green/grey infrastructure public-private partnership model for water access and sustainable watershed management is tested by local stakeholders
3. Local communities manage their water supplies sustainability through newly developed institutional and physical structures financed by municipal governments

Natura Bolivia has spent the last 15 years developing the model to achieve Output 3, and more recently, with support from the Nordic Development Fund, UNDP and the Government of South Korea has piloted parts of Output 2.

The short-term primary beneficiaries of Outputs 2 and 3 of the project will be 100 families of the Santa Cruz valleys (of which 200 of the beneficiaries are female) who will benefit from improved access to clean water. Females will benefit disproportionately from reductions in their daily burden of water collection. Children under five will also benefit disproportionately, as it is they who suffer the most gastro-intestinal diseases from polluted water. In the long term, potential beneficiaries of the new model will be the hundreds of thousands of families in rural Bolivia who have no access to clean water. Our new financing model will ensure that when access to water is provided by their municipal government, it will contain less faecal coliforms because of the healthier upstream ecosystem.

The innovative change that this project will create is Output 1: a public-private financing model for water access and watershed management. We believe that such a model could fundamentally disrupt the currently entirely independent financing mechanisms for water access and for conservation. While the financing of upstream conservation remains an independent environmental issue its potential will remain small and subject to donor whims. While the financing of rural water access project remains an independent poverty alleviation measure, it will not attract private capital.

Melding these two discrete financing needs into one raises the potential to trigger a significant investment multiplier effect. If a water access project includes an upstream conservation component, it can provide significant externalities such as biodiversity protection and carbon sequestration. The provision of such public goods can greatly increase the potential for outside interest in investing in such projects. For example, an investor may be interested in earning carbon credits by financing forest conservation. With a prove integrated grey-green infrastructure model, such an investor could gain both the carbon credits and at the same time contribute to the secondary co-benefit of increasing villagers’ access to clean water.

## **Q19. Pathway to change**

**Please outline your project's expected pathway to change, including how your outcome can be scaled. This should be an overview of the overall project logic and outline why and how you expect your Outputs to contribute towards your overall Outcome and, longer term, your expected Impact.**

**This should directly relate to your overall project's Theory of Change which must be uploaded alongside your logframe at Q24. See the separate [Theory of Change Guidance](#) and [Section 2.3.2 of the Darwin Initiative Innovation Supplementary Guidance](#) for further information on your Theory of Change.**

Municipal governments in Bolivia have historically spent (and wasted) hundreds of millions of pounds on water access projects that have ignored upstream landuse. This is especially ironic given that Natura's experiences show that watershed conservation can be remarkably inexpensive (less than £1 /ha/year).

Significant municipal investments in integrated water access/watershed conservation thus seem financially possible (and indeed logical). What we don't yet know are the precise mechanisms by which we can such make integrated green/grey projects technically, legally, and politically possible (and then widespread)

The fundamental assumptions underlying this proposal are that a) we can integrate grey and green infrastructure into one single project, and b) an integrated project will be only marginally more expensive than a standard grey infrastructure project, and c) we can convince municipal governments to pay for such integration.

We have already proven in our previous work that assumptions a) and b) are correct. Output 1 of this project will test assumption c), thus allowing us to fully identify the best technical, legal, and financial pathway to implement a green/grey infrastructure public-private partnership model for water access and watershed management.

Outputs 2 and 3 will then implement our learning and pilot the new model

## **Q20. Exit strategy**

**How will the benefits or outcome be sustained post-funding? Will the innovation be mainstreamed into "business as usual" to continue to deliver the benefits? How will the required capability and capacity remain available to sustain the benefits? How will your approach, if proven, be scaled? Are there any barriers to scaling and if so, how will these be addressed?**

"Business as usual" for water access projects across the Andes is that investments are made in grey infrastructure without any concern for upstream watershed management. Pipes quickly clog, dams fill with sediment, and drinking water is contaminated with faecal coliforms. "Business as usual" for environmentalists is to invest donor funds and new water user tariffs to try to recover the situation through upstream restoration.

Our objective is a new "business as usual", which a priori melds the civil engineering of grey infrastructure with the protection, maintenance, (and if necessary, restoration) of existing green infrastructure. Such integration will happen before the grey infrastructure is built to 1) ensure that upstream degradation does not prejudice the new investment and 2) "piggyback" the costs of the inexpensive green infrastructure protection onto the far more expensive grey infrastructure construction costs.

Given that thousands of rural Bolivian communities lack access to potable water and that protected forested watersheds can help clean water at low cost, we expect that the model will spread rapidly. Natura already works in more than 60 municipalities across Bolivia, and so we have direct access to hundreds of decision makers and thousands of communities where the new model could function.

We will then spread our learnings to our implementing partners in Colombia (Corporacion Valle de Cauca), Peru (Insituto de Bien Comun) and Ecuador (ETAPA).

The major barrier to scaling this model is that it has never yet been used. It is new and will require a change in thinking for community members and municipal authorities. Our colleagues in Coca Cola will assist as we try to market this proposed new "business as usual".

## Section 7 - Risk Management

### Q21. Risk Management

Please outline the 6 key risks to achievement of your Project Outcome and how these risks will be managed and mitigated, referring to the [Risk Guidance](#). This should include at least one Fiduciary, one Safeguarding Risk, and one Delivery Chain Risk.

Projects should also draft their initial risk register, using the [Risk Assessment template](#), and be prepared to submit this when requested if they are recommended for funding. Do not attach this to your application.

Risk Description	Impact	Prob.	Gross Risk	Mitigation	Residual Risk
<b>Fiduciary</b> Partners, especially program participants who are not staff, misuse funds or payments are not accounted for	moderate	rare	low	Natura accounting and safeguards system has been used with and approved by donors including USAID (5 years [REDACTED]), the European Union (8 years, [REDACTED]) and the Interamerican Development Bank (5 years, [REDACTED]).	minor
<b>Safeguarding</b> Participants will travel significantly along potentially dangerous roads, resulting in risk of accidents causing death or serious injury	moderate	rare	low	Natura's travel policies require no travel after dark, respect of speed limits, defensive driving, and vehicle tracking in real time using GPS. We will also take out accident insurance policies for all participants.	minor
<b>Delivery Chain</b> Municipal governments do not provide the expected funding the three green/grey infrastructure initiatives	severe	moderate	possible	Natura annually leverages significant municipal funds for conservation, so we think we can manage this risk. However, if funds cannot be raised for the three projects, then our innovation attempt will have failed. This will not be catastrophic though, as Cuencas Sustentables has committed to providing the required [REDACTED].	severe
<b>Risk 4</b> Sexual or other harassment or abuse of participants and project staff	minor	unlikely	low	All participants will have to read and sign our safeguards policy. We will identify and publicise the contact details of a female project staff member to be the point of contact for complaints and concerns, to whom anonymous complaints can be made.	minor

<b>Risk 5</b> Delivery Chain: Communities and municipalities do not see the need for investments in green infrastructure	severe	possible	moderate	Our objective is to see if this new green/grey model can work. If a community or municipality is not interested in such a project, then we will simply invite the next community/municipality. More than 30 communities have already expressed interest, so we believe that we can find enough appropriate communities	minor
<b>Risk 6</b> Delivery Chain: Conflict between upstream and downstream communities	moderate	possible	moderate	Our negotiation model is a cooperative community-based participative process, and so can help resolve such conflicts. Our offer to invest along with our primary concept of reciprocity has been shown to be a low-cost, local mechanism for conflict resolution	minor

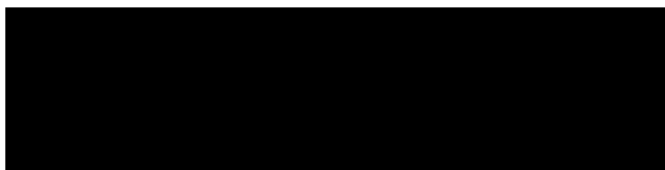
## Section 8 - Implementation Timetable

### Q22. Provide a project implementation timetable that shows the key milestones in project activities

Provide a project implementation timetable that shows the key milestones in project activities. Complete the Word template as appropriate to describe the intended workplan for your project and upload this below as a PDF.

[Implementation Timetable Template](#)

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and fill/shade only the quarters in which an activity will be carried out.



## Section 9 - Monitoring and Evaluation

### Q23. Monitoring and evaluation (M&E)

Describe how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E.

Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E (see [Financial Guidance](#)).

Given that this is an Innovation project, it is especially important that we manage adaptively. The major risk to success is that we are unable to find a way that municipalities can legally fund the maintenance of green infrastructure with public money. We fully expect that we will be able to innovate a solution, but we presume that we will first need to go down, and then come back up, several legal and political blind alleys.

We are confident of our technical abilities to the complete project i.e., Outputs 2 and 3 (see attached list of our publications demonstrating this), so we will focus our M&E on Output 1, including undertaking scenario analyses to map the probability of different outcomes. For example, we view it as possible (although unlikely) that the municipal governments will not be able to fund the projects. We have therefore already mitigated this risk by securing a guarantee of this match funding from Cuencas Sustentables. We will invest significantly in "gaming" other scenarios during the first year of the project, as our perception of the probability of using different legal pathways changes.

At various moments in the project, we will pause to evaluate progress, taking advantage of our outside collaborators to provide feedback. Such "pause" moments will include activities 1.1.2. Meet with 20 municipal authorities and technicians to discuss concept and analyse options 1.1.4 Finalize model and present to municipal collaborators for approval. 1.2.2. Meet with 10 municipal lawyers to discuss concepts and analyse options, 1.2.4 Finalize model and present to municipal lawyers for approval, 1.3.6. Work with municipal technicians to ensure acceptance of proposals into municipal budgets, and 1.4.2. Organize meetings and workshops to present findings in 100 municipalities across Bolivia.

M&E will be led by Maria Teresa Vargas, who will monitor the following performance aspects:

Results: ensuring that the project is on track against intended milestones and targets and will scan for and track unintended consequences. This will be undertaken primarily through interviews and follow up with implementing the institutions and participants

Activities and Organisational: ensuring implementation of activities according to the work plan. We will also tracking the internal capacity of each of the partner institutions in their use and management of funds, and their performance in undertaking activities and delivering expected results. This will be achieved through written and verbal reports from each institution's staff.

Compliance, situation/context and financial: ensuring that the project complies with all laws and meets Darwin's and other ethical and safe-guarding requirements. We will also monitor risks and assumptions, as well as political and institutional factors that influence project progress. Finally, we will track the use of inputs for activities and the forecasting of costs and budget monitoring, ensure that there are clear and audited accounting procedures, and adequate safeguards to prevent fraud and corruption. This will be undertaken through visits to each partner's offices and verbal and written reports from Natura's administrative and accounting team.

**Total project budget for M&E (this may include Staff and Travel and Subsistence Costs)**

██████████

**Percentage of total project budget set aside for M&E**

██████████

**Number of days planned for M&E**

90

## Section 10 - Logical Framework

---

### Q24. Logical Framework

**Darwin Initiative projects will be required to monitor (and report against) their progress towards their expected Outputs and Outcome. This section sets out the expected Outputs and Outcome of your project, how you expect to measure progress against these and how we can verify this.**

[Logframe Template](#)

Please complete your full logframe in the separate Word template and upload as a PDF using the file upload below. Copy your Impact, Outcome and Output statements and your activities below - these should be the same as in your uploaded logframe.



**Impact:**

Bolivian water users achieve water neutrality (100% replenish) through upstream forest conservation

**Outcome:**

An innovative, self-financing water access model, integrating grey and green infrastructure, is piloted by local municipalities, conserving 4000 hectares of forest and replenishing 2 million m3 of water annually

---

**Project Outputs**

**Output 1:**

The technical, legal, and financial pathway to implement a green/grey infrastructure public-private partnership model for water access and sustainable watershed management is designed

**Output 2:**

A green/grey infrastructure public-private partnership model for water access and sustainable watershed management is financed by municipal governments and tested by local stakeholders.

**Output 3:**

Local communities manage their water supplies sustainability and conserve their forests

**Output 4:**

*No Response*

**Output 5:**

*No Response*

---

**Do you require more Output fields?**

**It is advised to have less than 6 Outputs since this level of detail can be provided at the activity level.**

No

**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**

- 1.1.1. Analyse literature to evaluate previous similar experiences in other fields
- 1.1.2. Meet with 20 municipal authorities and technicians to discuss concept and analyse options
- 1.1.3. Design draft model, share with partners and refine based on feedback
- 1.1.4. Finalize model and present to municipal collaborators for approval.
- 1.2.1. Analyse legal precedents to identify options
- 1.2.2. Meet with 10 municipal lawyers to discuss concepts and analyse options
- 1.2.3. Design draft of proposed legal pathways, share with partner lawyers and refine based on feedback
- 1.2.4. Finalize

model and present to municipal lawyers for approval.

- 1.3.1. Analyse municipal documents and landuse maps to identify potential communities.
- 1.3.2. Discuss potential sites with municipal leaders and community members
- 1.3.3. Develop concept proposals for green/grey infrastructure in 10 communities and discuss with stakeholders
- 1.3.4. Select sites with greatest potential and finalize project design,
- 1.3.5. Submit proposals into annual municipal budgeting process
- 1.3.6. Work with municipal technicians to ensure acceptance of proposals into municipal budgets
- 1.4.1. Publish and distribute lessons-learned document
- 1.4.2. Organize meetings and workshops to present findings to 100 municipal leaders across Bolivia
- 2.1.1. Build grey infrastructure systems (pipes, dams, tanks, chlorinators/purifiers etc.),
- 2.1.2. Deliver functioning water access system to community members and municipal officials,
- 2.1.3. Municipal governments reimburse project for funds expended in construction
- 2.2.1. Hold meetings to discuss new community based maintenance tariffs,
- 2.2.2. Community members organize implement new tariff system
- 2.3.1. Identify community members and train them in system management and monitoring,
- 2.3.2. Community members manage chlorination systems to maintain free chlorine at a concentration of 0.3-0.5 mg/l in community water supplies
- 2.3.3. Chlorine tablets are replaced on schedule and system is maintained
- 3.1.1. Present and discuss watershed conservation agreement model with landowners and community members.
- 3.1.2. Negotiate compensation packages, and draft contracts that define responsibilities and rights.
- 3.1.3. Sign conservation agreements and deliver compensation packages such as fruit tree seedlings, honey production equipment etc.
- 3.2.1. Community members walk transects within the conservation area and report incursions or other threats to local and municipal authorities.
- 3.2.2. Define penalties for infractions, notify and sanction infractors, and repair damages to watershed, such as replanting

## Section 11 - Budget and Funding

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### Q25. Budget

**Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet.**

**Note that there are different templates for projects requesting under £100,000 and over £100,000. Please refer to the Finance Guidance for more information.**

- [Budget template for projects under £100k](#)
- [Budget template for projects over £100k](#)

**Please ensure you include any co-financing figures in the Budget spreadsheet to clarify the full budget required to deliver this project.**

**NB: Please state all costs by financial year (1 April to 31 March) and in GBP. The Darwin Initiative cannot agree any increase in grants once awarded.**

**Please note the next section is about the financial aspects of your project, rather than technical elements.**



### Q26. Funding

**Q26a. Is this a new initiative or does it build on existing work (delivered by anyone and funded through any source)? Please give details.**

Development of existing work

**Please give details.**

In 2019 Natura, Cuencas and CEJIS implemented a project in La Asunta community that build the grey infrastructure of 2000 metres of pipeline, installed a water tank and chlorination unit, and secured and conserved 1500 hectares of upper watershed forest. This project provided clean water for 33 indigenous Monkoxi families at a total cost of less than [REDACTED]. Similarly, project partners have constructed green/grey infrastructure projects in three other communities in the Chiquitania, with funds from UNDP and the Embassy of South Korea, again at a cost of less than [REDACTED] per system. Neither of these projects attempted to get municipal government finance, but instead relied on donor funds.

Thus, despite the innovative success of integrating grey and green infrastructure development into one project, the conservation of the biodiverse Chiquitano forests was still funded by donors (albeit donations for water access, not for biodiversity).

Our proposed project aims to take the innovation one step further, to try and figure out a way to use municipal public funds for such integrated water systems. Facilitating local governments to pay for biodiversity from within water access budgets, could lead to a quantum leap for conservation financing in Bolivia.

**Q26b. Are you aware of any current or future plans for similar work to the proposed project?**

Yes

**Please give details explaining similarities and differences, and explaining how your work will be additional and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits:**

The inspiration from this project comes from New York City's conservation program in the Catskill mountains. By melding green and grey infrastructure investments, planners were able to save the city billions of dollars. This model – popularized by the concepts of Payments for Ecosystem Services (PES) and (by the Nature Conservancy) Water Funds – has led to investments in improved management of hundreds of thousands of hectares of upper watersheds. Such initiatives, however, have focused on large urban centers, where significant numbers of users who pay for their water are concentrated, creating financing economies of scale.

In contrast, Natura's "Watershared" model serves small communities, in which users are poor and often do not pay water rates. Watershared has been able to access limited amounts of municipal funds for conservation, but this has always been as co-financing, meaning that Natura has been required to seek donor support for more than 15 years. Natura has worked with TNC and various other PES implementers to develop best practices and the basic Watershared model has spread to Colombia, Ecuador, and Peru. Natura's major challenge remains though – how to get municipalities to finance 100% of project costs and so obviate the need for philanthropy.

## **Q27. Capital items**

**If you plan to purchase capital items with Darwin funding, please indicate what you anticipate will happen to the items following project end. If you are requesting more than 10% capital costs, please provide your justification here.**

No capital items will be purchased with Darwin funding, all capital items will be purchased with match funding.

## **Q28. Value for Money**

**Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money.**

To maximize value for money, the project will build on and take advantage of decades worth of intellectual property of Natura and our partners in developing watershed management programs. We have significant experience in the project



area, the Santa Cruz valleys, and thus know how to maximize cost/efficiency. In terms of activities, we will ensure value for money in four ways:

**Economy:** the project will be undertaken in Bolivia, one of the cheapest countries in South America, with great potential for our learning to be relevant across Bolivian and in other countries

**Efficiency:** Partners will provide ████████ of match funding, meaning that we are requesting that Darwin cover only 53% of project costs.

**Effectiveness:** we expect to have significant leverage and replication potential. Most importantly, if our innovation succeeds, the model we develop will unlock millions of pounds of Bolivian government funding for watershed conservation.

**Equity:** Our project is focused on improving water access for some of the poorest members of Bolivian society. Many of the families we serve have never had piped water in their houses until our intervention. At least 50% of the beneficiaries of the three pilot projects will be female. As the family members usually responsible for collecting and carrying water, women will gain the most with improved access to water.

## Section 12 - Outputs, Open Access, Ethics & Safeguarding

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### Q29. Safeguarding

**Projects funded through the Darwin Initiative must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, projects are required to have appropriate safeguarding policies in place.**

**Please confirm the Lead Partner has the following policies in place and that these can be available on request:**

<b>We have a safeguarding policy, which includes a statement of our commitment to safeguarding and a zero tolerance statement on bullying, harassment and sexual exploitation and abuse</b>	Checked
<b>We have attached a copy of our safeguarding policy to this application</b>	Checked
<b>We keep a detailed register of safeguarding issues raised and how they were dealt with</b>	Checked
<b>We have clear investigation and disciplinary procedures to use when allegations and complaints are made, and have clear processes in place for when a disclosure is made</b>	Checked
<b>We share our safeguarding policy with downstream partners</b>	Checked
<b>We have a whistle-blowing policy which protects whistle blowers from reprisals and includes clear processes for dealing with concerns raised</b>	Checked
<b>We have a Code of Conduct in place for staff and volunteers that sets out clear expectations of behaviours -- inside and outside the work place - and make clear what will happen in the event of non-compliance or breach of these standards</b>	Checked

**Please outline how you will implement your policies in practice and ensure that downstream partners apply the same standards as the Lead Partner.**

Our safeguards policy applies to our staff and partners and beneficiaries. Just as all new Natura staff are required to read, be trained in, and agree to the safeguard policy, all potential partners are required to be bound by safeguard policy before they are accepted as partners. Acceptance requires a commitment to enforce the agreement with next level partners, meaning that there is a cascade effect of all partners and sub-partners agreeing to be bound by the principles. Our main implementation tool is continual retraining and reminding of staff/partners of their commitment to safeguard and other best practices.

## Q30. Ethics

### Outline your approach to meeting the key ethical principles, as outlined in the guidance.

We have not identified any potential human rights and/or international humanitarian law risks in relation to our project. We commit to meeting all legal and ethical obligations of both the UK and Bolivia and will ensure compliance by working with national state and local governments, and community governance structures, to ensure a transparent, deliberative, decision-making process.

All project staff and participants are Bolivian citizens, with most living in the project area. We are therefore confident that the perspectives, interests, and wellbeing of those directly affected by the project will be properly addressed

We will respect the rights, privacy, and safety of people who are the subject of project activities or other intended beneficiaries by ensuring that all responses are kept anonymous, and only summary data are presented and analyzed. We will uphold the credibility of any research and other findings by committing to the independent publication of lessons learned and a project impact evaluation.

We will ensure that transactions are based on FPIC, by having local officials lead, manage, and guide the project, and will stop activities if we suspect FPIC is not being upheld. In general, we will rely on community governance structures to guide us.

## Section 13 - FCDO Notifications

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### Q31. FCDO notifications

Please whether there are sensitivities that the Foreign, Commonwealth and Development Office will need to be aware of should they want to publicise the project's success in the Darwin competition in the host country.

No

Please indicate whether you have contacted your Foreign Ministry or the local embassy or High Commission (or equivalent) directly to discuss security issues (see Guidance Notes) and attach details of any advice you have received from them. If you have not, please say why not.

Yes (no written advice)

## Section 14 - Project Staff

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### Q32. Project staff

Please identify the core staff on this project, their role and what % of their time they will be working on the project.

Please provide 1-page CVs or a 1 page job description, further information on who should be classified as core staff can be found in the Finance Guidance.

Name (First name, surname)	Role	% time on project	1 Page CV or job description attached?
Nigel Asquith	Project Leader	33	Unchecked

Faviola Porcel	Legal design	50	Checked
Claudia Fernández	Private Sector Engagement and Communication	10	Checked
Maximo Garcia	Field team Leader	33	Checked

**Do you require more fields?**

Yes

Name (First name, surname)	Role	% time on project	1 Page CV or job description attached?
Lisette Menacho	Municipal Engagement	100	Checked
Basilio Perez	Field Technician	100	Checked
Oswaldo Sanchez	Project Administration and Civil Engineering Management	25	Checked
Maria Teresa Vargas	Policy Engagement and M&E	10	Checked
<i>No Response</i>	<i>No Response</i>	0	Unchecked
<i>No Response</i>	<i>No Response</i>	0	Unchecked
<i>No Response</i>	<i>No Response</i>	0	Unchecked
<i>No Response</i>	<i>No Response</i>	0	Unchecked

**Please provide 1 page CVs (or job description if yet to be recruited) for the project staff listed above as a combined PDF.**

**Ensure the file is named clearly, consistent with the named individual and role above.**



**Have you attached all project staff CVs?**

Yes

## Section 15 - Project Partners

### Q33. Project partners

**Please list all the Project Partners (including the Lead Partner), clearly setting out their roles and responsibilities in the project including the extent of their engagement so far and planned.**

**This section should demonstrate the capability and capacity of the Project Partners to successfully deliver the project. Please provide Letters of Support for all project partners or explain why this has not been included.**

**The partners listed here should correspond to the Delivery Chain Risk Map (within the Risk Register template) which you will be asked to submit if your project is recommended for funding.**

**Lead Partner name:** Fundación Natura Bolivia

**Website address:** [www.naturabolivia.org](http://www.naturabolivia.org)

**Why is this organisation the Lead Partner, and what value to they bring to the project?**  
**(including roles, responsibilities and capabilities and capacity):**

For almost twenty years, Natura has pioneered the use of incentive-based conservation. Our watershed agreement model has been replicated in Colombia, Ecuador, Peru, and Mexico, and has been discussed, revised, improved upon, and piloted in countries as far apart as Argentina, Kenya and India. In addition to directly training staff from more than 100 local governments, Natura and our academic colleagues have published the results of our experiences in more than 15 peer-reviewed articles in international journals. Our institutional focus is on a tight circle of implementation, with learning, publication and training then leading to improved implementation and replication. This is the spirit in which we will undertake this project. Natura's role in the project will comprise project leadership and management.

**Allocated budget:** ██████████

**International/In-country Partner**  In-country

**Represented on the Project Board**  Yes

**Have you included a Letter of Support from the organisation?**  Yes

**Have you provided a cover letter?**  Yes

**Do you have partners involved in the project?**  
 Yes

**1. Partner Name:** Coca Cola Bolivia

**Website address:** <https://www.coca-coladebolivia.com.bo/novedades/comunidad-asi-funcionan-los-acuerdos-reciproc-os-por-agua-que-salvan-bosques>

**What value does this Partner bring to the project?**  
 (including roles, responsibilities and capabilities and capacity):

Coca Cola has been working with Natura since 2017, ensuring the replenishment of the company's water footprint in Bolivia. Our alliance has been very successful, having replenished the Santa Cruz and La Paz aquifers with more than 2.5 million m3 of water through the conservation of 35,278 hectares of important forests for the provision of Water. The program has benefited 1,993 families from 10 municipalities of Santa Cruz and La Paz with productive development project and access to clean water.

The role of Coca Cola in the project will be to synthesize and discuss lessons from these previous experiences, and to help convince local governments to invest in green/grey infrastructure. Coca Cola will also provide their legal and marketing support to the other partners in order to spread awareness and acceptance of the new model.

**Allocated budget:** 0

**International/In-country Partner**  In-country

**Represented on the Project Board**  Yes

**Have you included a Letter of Support from this partner?**  Yes

**2. Partner Name:** (CEJIS) Center for Legal Studies and Social Research

**Website address:** <https://www.cejis.org>

**What value does this Partner bring to the project?**  
 (including roles, responsibilities and capabilities and capacity):

CEJIS is a non-profit Bolivian association that works in the field of Human Rights from a legal-social perspective, accompanying sectors of society whose situation of defenselessness and vulnerability requires a professional accompaniment and commitment in claiming the recognition of their individual and collective rights.

CEJIS and Natura Bolivia previously piloted a green/grey infrastructure model with the municipality of Lomerio in the community of La Asunta (<https://youtu.be/qTI-0CraT8A>). This partnership was very successful – the pilot project provided tanks, pipes, and an entire water access system for 33 indigenous families and put almost 1500 hectares of Chiquitano forest under conservation – at a total cost of less than ██████████

In this new project, CEJIS will lead the design of the legal model to implement green/grey infrastructure projects for water access and sustainable watershed management. Specifically, CEJIS will work with municipal lawyers to assess the legal feasibility of different ways of accessing municipal support.

**Allocated budget:** ██████████

**International/In-country Partner**  In-country

**Represented on the Project Board**  Yes

**Have you included a Letter of Support from this partner?**  Yes

**If no, please provide details** *No Response*

**3. Partner Name:** Cuencas Sustentables Ltd.

**Website address:** n/a

**What value does this Partner bring to the project?** Cuencas Sustentables Ltd. is private consulting company and sister company to Natura. Cuencas specializes in water provision and is currently working with Natura and GRID-Arendal (Norway) on a Nordic Development Fund supported project providing green/grey water infrastructure to four communities in the Chiquitania ([https://www.youtube.com/watch?v=PgsrEeneLE&list=PL9cHoVZNgHxJMoJMcARfwqksm08VCmlA\\_](https://www.youtube.com/watch?v=PgsrEeneLE&list=PL9cHoVZNgHxJMoJMcARfwqksm08VCmlA_)).

**(including roles, responsibilities and capabilities and capacity):**

The role of Cuencas Sustentables will be to finalize the design and then build the green/grey infrastructure. Cuencas will hire consultants and purchase material to undertake the construction.

It is important to note that as for-profit corporation, Cuencas Sustentables Ltd. will receive no funds from Darwin. Indeed, Cuencas will provide ██████████ match to support project learning.

Our objective is to figure out the legal, technical, and financial mechanisms by which municipal governments can provide public funding to construct grey infrastructure and simultaneously conserve and maintain green infrastructure. Our innovation is that this has never been done before, and we are not sure that it can be done! Thus the ██████████ match from municipal governments is not confirmed.

Cuencas Sustenables has committed to guarantee this amount of counterpart funding, meaning that if it is not received from the governments, Cuencas will cover it – hence the total amount of ██████████ match can be counted as confirmed.

**Allocated budget:** 0

**International/In-country Partner**  In-country

**Represented on the Project Board**  Yes

**Have you included a Letter of Support from this partner?**  Yes

**If no, please provide details** *No Response*

**4. Partner Name:** *No Response*

**Website address:** *No Response*

---

**What value does this Partner bring to the project?** *No Response*

**(including roles, responsibilities and capabilities and capacity):**

---

**Allocated budget:** 0

---

**International/In-country Partner**  International  
 In-country

---

**Represented on the Project Board**  Yes  
 No

---

**Have you included a Letter of Support from this partner?**  Yes  
 No

---

**If no, please provide details** *No Response*

---

**5. Partner Name:** *No Response*

---

**Website address:** *No Response*

---

**What value does this Partner bring to the project?** *No Response*

**(including roles, responsibilities and capabilities and capacity):**

---

**Allocated budget:** 0

---

**International/In-country Partner**  International  
 In-country

---

**Represented on the Project Board**  Yes  
 No

---

**Have you included a Letter of Support from this partner?**  Yes  
 No

---

If no, please provide details *No Response*

---

6. Partner Name: *No Response*

---

Website address: *No Response*

---

What value does this Partner bring to the project? *No Response*

(including roles, responsibilities and capabilities and capacity):

---

Allocated budget: 0

---

International/In-country Partner  International  
 In-country

---

Represented on the Project Board  Yes  
 No

---

Have you included a Letter of Support from this partner?  Yes  
 No

---

If no, please provide details *No Response*

---

If you require more space to enter details regarding Partners involved in the project, please use the text field below.

*No Response*

Please provide a cover letter responding to feedback received at Stage 1 if applicable and a combined PDF of all letters of support.

*No Response*

## Section 16 - Lead Partner Track Record

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### Q34. Lead Partner Capability and Capacity

Has your organisation been awarded Darwin Initiative funding before (for the purposes of this question, being a partner does not count)?

No

Please provide the below information on the lead organisation.



**What year was your organisation established/ incorporated/ registered?** 01 January 2001

---

**What is the legal status of your organisation?**  NGO

---

**Other explained** *No Response*

---

**How is your organisation currently funded?** Our 2020 budget was [REDACTED], with major donations from the Coca Cola Foundation, the InterAmerican Development Bank, IUCN, the World Land Trust.

---

**Describe briefly the aims, activities and achievements of your organisation. Large organisations please note that this should describe your unit or department.**

**Aims** Natura ([www.naturabolivia.org](http://www.naturabolivia.org)) identifies and develops novel mechanisms for the conservation of biodiversity and the sustainable use of natural resources. Our signature program, Watershared, is based on the logic that protecting upstream forests helps maintain water supplies, and that sustainable conservation requires the financial participation of water users.

---

**Activities** Watershared provides upstream landowners with economic alternatives, such as fruit trees and irrigation systems, in exchange for forest conservation. Upstream landowners thus move away from drought susceptible agriculture, and at the same time improve downstream hydrological functioning, thus helping all watershed communities develop and mitigate and adapt to climate change.

---

**Achievements** Watershared has been adopted by 63 Bolivian municipalities, protecting 500,000 hectares of forests, benefiting 16,000 indigenous and rural families through environmentally friendly water access and productive incentives. Natura has also helped local and state governments create 3.4 million hectares of new subnational protected areas in the last 15 years.

---

**Provide detail of 3 contracts/projects held by the Lead Partner that demonstrate your credibility as an organisation and provide track record relevant to the project proposed. These contracts/awards should have been held in the last 5 years and be of a similar size to the grant requested in your Darwin application.**

**Contract/Project 1 Title** Operationalizing Bolivia's joint mechanism for mitigation and adaptation to climate change: Climate compatible development in the Bolivian Chaco (BO-M1067) (InterAmerican Development Bank)

---

**Contract value/Project budget (include currency)** [REDACTED]

---

**Duration (e.g. 2 years, 3 months)** 4 years

---

**Role of organisation in project** Lead: Project design and implementation, coordination with partners, budget management, administration, reporting

---

**Brief summary of the aims, objectives and outcomes of the project**

This project tested Watershed, an integrated model for watershed conservation in the Chaco, a region with high water stress and indigenous (Guaraní) territories with communal governance systems. 3,000 vulnerable upstream indigenous families received in kind support to modify their land use practices. We improved productivity in: (i) climate-resilient agriculture and drip irrigation, (ii) organic honey production and commercialization, (iii) management of orchards, and (iv) cattle management. Conservation resulted in improved water supply for 15,000 users. The project set up water governance structures with municipal governments and water users to ensure resource sustainability and protected 30,000 ha of watershed forests.

**Client/independent reference contact details (Name, e-mail)**

[REDACTED]

**Contract/Project 2 Title**

Creation of the Ivi Marei, Héroes del Chaco, Cuenca Alta Rio Parapaeti, Iguembe, Incahuasi and Guajukaka Protected Areas (920,000 hectares) in southeast Bolivia (World Land Trust/Nature and Culture International)

**Contract value/Project budget (include currency)**

[REDACTED]

**Duration (e.g. 2 years, 3 months)**

3 years

**Role of organisation in project**

Lead: Project design and implementation, coordination with partners, budget management, administration, reporting

**Brief summary of the aims, objectives and outcomes of the project**

The project successfully worked with communities and local and indigenous governments to create five new protected areas covering 880,000 hectares in four municipalities in south east Bolivia (Ivi Marei, Héroes del Chaco, Cuenca Alta Rio Parapaeti, Iguembe and Guajukaka Protected Areas). We developed a series of biological and socio-economic studies to justify the creation of each area, worked with local communities to ensure FPIC and helped local authorities to develop and approve the required creation laws

**Client/independent reference contact details (Name, e-mail)**

[REDACTED]

**Contract/Project 3 Title**

Shared Resources Joint Solution in Bolivia (International Union for Conservation of Nature-IUCN)

**Contract value/Project budget (include currency)**

[REDACTED]

**Duration (e.g. 2 years, 3 months)**

4 years

**Role of organisation in project**

Lead: Project design and implementation, coordination with partners, budget management, administration, reporting

**Brief summary of the aims, objectives and outcomes of the project**

Through the Project we accomplished the following major results: a) Irenda protected area was created and consolidated in the Charagua Indigenous Territory, protecting a surface area of 142,973.37 hectares of important forests for water provision for 40 communities in the area, contributing to the management of the biological and water corridor of the Bolivian Chaco, b) Four communities in the Municipality of Robore and three communities in Charagua Indigenous Territory implemented Watershed Agreements protecting 4,700 hectares of forests and benefiting over 500 families with productive and water access incentives.

**Client/independent reference contact details (Name, e-mail)**



**Have you provided the requested signed audited/independently examined accounts?**

**If yes, please upload these on the certification page. Note that this is not required from Government Agencies.**

Yes

## Section 17 - Certification

### Q35. Certification

**On behalf of the**

Trustees

**of**

Fundacion Natura Bolivia

**I apply for a grant of**

£185,209.00

**I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.**

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- I have enclosed CVs for project key project personnel, letters of support, budget, logframe, theory of change, safeguarding policy and project implementation timetable (uploaded at appropriate points in application)
- Our last two sets of signed audited/independently verified accounts and annual report (or other financial evidence - see Financial Guidance) are also enclosed.

Checked

**Name**

Nigel Asquith

**Position in the organisation**

Director of Policy

Signature (please upload e-signature)



---

Date

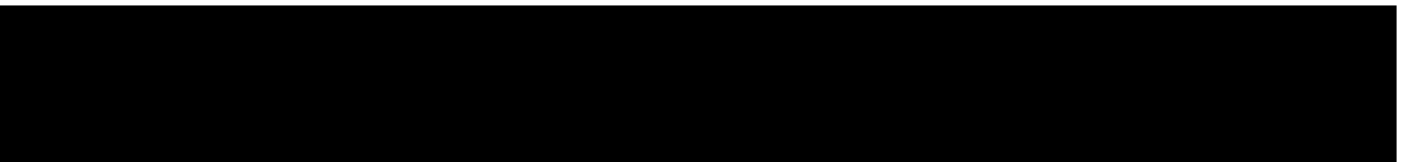
06 December 2021

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Please attach the requested signed audited/independently examined accounts.



Please upload the Lead Partner's Safeguarding Policy as a PDF



## Section 18 - Submission Checklist

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### Checklist for submission

I have read the Guidance, including the "Guidance Notes for Applicants", "Supplementary Guidance for Darwin Initiative Innovation", "Monitoring, Evaluation and Learning Guidance", "Theory of Change Guidance", "Risk Guidance" and "Financial Guidance". Checked

---

I have read, and can meet, the current Terms and Conditions for this fund. Checked

---

I have provided actual start and end dates for my project. Checked

---

I have provided my budget based on UK government financial years i.e. 1 April - 31 March and in GBP. Checked

---

I have checked that the budget is complete, correctly adds up and I have included the correct final total at the start of the application. Checked

---

The application has been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable). Checked

---

I have attached the below documents to my application: Checked

- my completed **logframe** as a PDF using the template provided
-

• my 1 page <b>Theory of Change</b> as a PDF which includes the key elements listed in the guidance	Checked
• my <b>budget</b> (which meets the requirements above)	Checked
• my completed <b>implementation timetable</b> as a PDF using the template provided	Checked
• <b>1 page CV or job description for all the Project Staff</b> identified at Question 32, including the Project Leader, or provided an explanation of why not.	Checked
• a <b>letter of support</b> from the Lead Partner and partner(s) identified at Question 33, or an explanation of why not.	Checked
• a <b>cover letter from the Lead Partner</b> , outlining how any feedback received at Stage 1 has been addressed where relevant.	Checked
• a copy of the <b>Lead Partner's safeguarding policy</b> , which covers the criteria listed in Question 29.	Checked
• a signed <b>copy of the last 2 annual report and accounts</b> for the Lead Partner, or provided an explanation if not.	Checked
<b>(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.</b>	Checked
<b>I have been in contact with the FCDO in the project country(ies) and have included any evidence of this. If not, I have provided an explanation of why not.</b>	Checked
<b>I have checked the Darwin website immediately prior to submission to ensure there are no late updates.</b>	Checked
<b>I have read and understood the Privacy Notice on the Darwin Initiative website.</b>	Checked

### We would like to keep in touch!

**Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.**

Checked

### Data protection and use of personal data

Information supplied in this application form, including personal data, will be used by Defra as set out in the latest copy of the Privacy Notice for Darwin, Darwin Plus and the Illegal Wildlife Trade Challenge Fund available [here](#). This Privacy Notice must be provided to all individuals whose personal data is supplied in the application form. Some information may be used when publicising the Darwin Initiative including project details (usually title, lead organisation, location, and total grant value) on the GOV.UK and other websites.

Information relating to the project or its results may also be released on request, including under the 2004 Environmental Information Regulations and the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the General Data Protection Regulation (Regulation (EU) 2016/679).

Project Title: Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
<b>Impact:</b> Bolivian water users achieve water neutrality (100% replenish) through upstream forest conservation			
<p><b>Outcome:</b> An innovative, self-financing water access model, integrating grey and green infrastructure, is piloted by local municipalities, conserving 4000 hectares of forest and replenishing 2 million m3 of water annually</p>	<p>0.1. Three integrated grey/green infrastructure water access/watershed conservation model is designed, built, financed, and maintained by municipal governments and private sector water users (KPI 1: Extent to which intervention is likely to lead to Transformational Change (1 potentially transformational change by March 2024, baseline 0))</p> <p>0.2. 4000 hectares of forest are conserved, 2 million m3 of water are restored to the ecosystem, and 300 families have access to clean water (KPI 1: Number of people whose resilience has been improved (1200 people by March 2024, baseline 0); KPI 2 net change in greenhouse gas emissions (tCO2e) (3.6 million tCO2e stored by March 2024, baseline 0), KPI 3 Number of hectares where deforestation has been avoided (4000 hectares by March 2024, baseline 0))</p>	<p>0.1. Design documents, photos of three working systems, financing contracts signed by municipal governments and private water users</p> <p>0.2. Satellite imagery pre/post project, municipal records of land under signed conservation agreements, hydrological modelling results, fecal coliform load in community water supplies, standard carbon calculations based on existing forest plots</p>	<p>We assume that municipal governments and private sector water users have sufficient financing to develop grey/green infrastructure projects. We base this assumption on Bolivia's decentralization laws, that guarantee municipal funds for communities, linked with the high demand for community water projects caused by the increasing frequency of drought in Bolivia. We also assume that communities are willing and able to conserve their forests, and that there is a link between forest conservation and water quality, these assumptions being based on our previous successes protecting 500,000 hectares of forests through community watershed conservation agreements.</p>

Project Title: Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships

<p><b>Outputs:</b></p> <p>1. The technical, legal, and financial pathway to implement a green/grey infrastructure public-private partnership model for water access and sustainable watershed management is designed</p>	<p>1.1. The financial and technical model is designed, and its logic and implementation feasibility confirmed by municipal technicians (by September 2022, baseline, 0 approved models)</p> <p>1.2. The legal pathway for municipal investment in watershed conservation is designed and verified (by September 2022, baseline, 0 approved legal pathways)</p> <p>1.3. Three municipalities commit to investing in pilot green/grey infrastructure projects (by March 2023, baseline, 0 municipal investments)</p> <p>1.4. Project lessons are learned, published, disseminated, and discussed with at least 100 municipal leaders and 500 community members from around Bolivia (by March 2024, baseline, 0 meetings to discuss lessons)</p>	<p>1.1. Detailed financial and technical document describing model, with signed approval of municipal technicians</p> <p>1.2. Legal document describing governmental financing options, with signed approval of municipal lawyer</p> <p>1.3. Letters of approval or municipal decrees approving investment</p> <p>1.4. Lessons learned document, list of meeting attendees</p>	<p>The fundamental assumptions underlying this proposal are that 1) we can integrate grey and green infrastructure into one single project 2) an integrated project will be only marginally more expensive than a standard grey infrastructure project, and 3) we can convince municipal governments to pay for such integration. The innovation of our proposal will be in rigorously testing these assumptions. Bolivian communities and municipal governments have historically spent (and wasted) hundreds of millions of pounds on water access projects that have ignored upstream landuse. This is especially ironic given that Natura's experiences show that watershed conservation can be remarkably inexpensive (less than £1 /ha/year). Significant municipal investments in integrated water access - watershed conservation projects thus seem financially possible (and indeed logical). What we don't yet know are the precise mechanisms by which we can such make integrated green/grey projects technically, legally and politically possible (and then widespread)</p>
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Project Title: Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships

<p><b>2.</b> A green/grey infrastructure public-private partnership model for water access and sustainable watershed management is financed by municipal governments and tested by local stakeholders.</p>	<p>2.1. Three water access systems (the grey infrastructure of tanks, dams, pipes etc.) are built (by December 2023, baseline, 0 systems)</p> <p>2.2. Three communities implement a new user tariff to cover maintenance costs of the water distribution system and watershed conservation (by July 2024, baseline, 0 tariffs)</p> <p>2.3. Water systems are managed sustainably by three newly created community-based water management institutions (3 institutions created by March 2024, baseline, 0 systems managed, 0 institutions trained)</p>	<p>2.1. Receipts and contracts, photos, signed acceptance of delivery of water access system by community and municipal authorities</p> <p>2.2. Statutes of new tariff rules, bank statements or receipts showing fee payments</p> <p>2.3. Articles of incorporation of new community-based institutions, signed training attendance reports, levels of free chlorine levels in system</p>	<p>We assume that Municipal governments will be able and willing to pay for the green/grey projects. We also assume that even once the projects have been approved, government bureaucratic processes will take significant time to actually access the finance. We will therefore use £of our own funds (from Cuencas Sustentables, not counterpart funds) to pre-finance the construction and conservation -- i.e., build the infrastructure and demarcate the conservation areas. Municipal governments will only pay for each of the water access and watershed conservation systems upon completion (i.e. only at the end of the project will they re-pay our pre-financing). We will use Darwin funds ONLY for the design and development of the model concept, and lesson learning. If all of our assumptions are correct, and the project succeeds, then the municipal governments will pay us back our £ by March 2024. If our assumptions were wrong, and Output 2 fails, we will have lost our own money, not Darwin funds.</p>
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Project Title: Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships

<p>3. Local communities manage their water supplies sustainability and conserve their forests</p>	<p>3.1. 4000 hectares of watershed forests are protected from agriculture and cattle through fencing and/or compensation payments to owners (by December 2023, baseline, 0 hectares)</p> <p>3.2. Protected forests are patrolled monthly to ensure compliance and, if necessary, in compliance is sanctioned and restorative measures applied (2 patrols per month, 100 beneficiary families of which 200 beneficiaries are female, by March 2024, baseline, 0 patrols, 0 families with clean water)</p>	<p>3.1. Signed conservation agreements (including maps)</p> <p>3.2. Patrolling reports, levels of fecal coliform in household water supplies, village surveys, records of any required restoration measures</p>	<p>We assume that communities will agree to conserve their forests in order to safeguard their water supplies and that they are able to do so. To minimize risk we will select communities with full legal title to the land, and with no clear and apparent risk of outsiders entering illegally.</p>
<p><b>Activities</b></p> <p>1.1.1. Analyse literature to evaluate previous similar experiences in other fields</p> <p>1.1.2. Meet with 20 municipal authorities and technicians to discuss concept and analyse options</p> <p>1.1.3 Design draft model, share with partners and refine based on feedback</p> <p>1.1.4 Finalize model and present to municipal collaborators for approval.</p> <p>1.2.1. Analyse legal precedents to identify options</p> <p>1.2.2. Meet with 10 municipal lawyers to discuss concepts and analyse options</p> <p>1.2.3. Design draft of proposed legal pathways, share with partner lawyers and refine based on feedback</p> <p>1.2.4 Finalize model and present to municipal lawyers for approval.</p> <p>1.3.1. Analyse municipal documents and landuse maps to identify potential communities.</p> <p>1.3.2. Discuss potential sites with municipal leaders and community members</p> <p>1.3.3. Develop concept proposals for green/grey infrastructure in 10 communities and discuss with stakeholders</p> <p>1.3.4. Select sites with greatest potential and finalize project design,</p> <p>1.3.5. Submit proposals into annual municipal budgeting process</p>			

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- 1.3.6. Work with municipal technicians to ensure acceptance of proposals into municipal budgets
- 1.4.1. Publish and distribute lessons-learned document
- 1.4.2. Organize meetings and workshops to present findings to 100 municipal leaders across Bolivia
- 2.1.1. Build grey infrastructure systems (pipes, dams, tanks, chlorinators/purifiers etc.),
- 2.1.2. Deliver functioning water access system to community members and municipal officials,
- 2.1.3. Municipal governments reimburse project for funds expended in construction
- 2.2.1. Hold meetings to discuss new community-based maintenance tariffs,
- 2.2.2. Community members organize implement new tariff system
- 2.3.1. Identify community members and train them in system management and monitoring,
- 2.3.2. Community members manage chlorination systems to maintain free chlorine at a concentration of 0.3-0.5 mg/l in community water supplies
- 2.3.3. Chlorine tablets are replaced on schedule and system is maintained
- 3.1.1. Present and discuss watershed conservation agreement model with landowners and community members.
- 3.1.2. Negotiate compensation packages, and draft contracts that define responsibilities and rights.
- 3.1.3. Sign conservation agreements and deliver compensation packages such as fruit tree seedlings, honey production equipment etc.
- 3.2.1. Community members walk transects within the conservation area and report incursions or other threats to local and municipal authorities.
- 3.2.2. Define penalties for infractions, notify and sanction infractors, and repair damages to watershed, such as replanting