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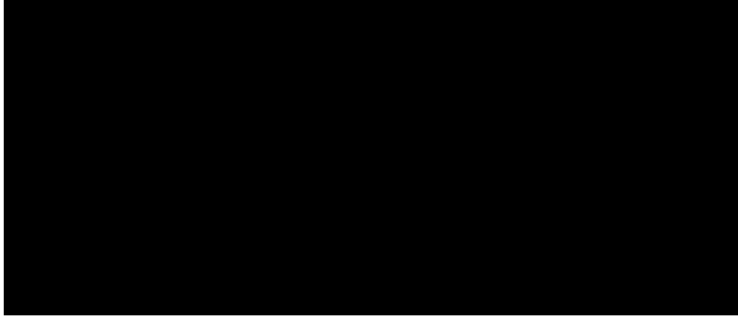
Sound Of Safety: Testing Pingers for River Dolphins and Fishers

In India and Pakistan, hundreds of endangered river dolphins die annually as bycatch, which also causes damaged nets and lost catch for fishers. This project tests an innovative acoustic exclusion device, a 'pinger', that potentially eliminates river dolphin bycatch, while improving local fishers' income and reducing their costs. The project will also strengthen community engagement models, integrating results on the socio-economic and biodiversity effectiveness of pingers and community engagement into holistic policy recommendations for fisheries management and river dolphin conservation.

Section 1 - Contact Details

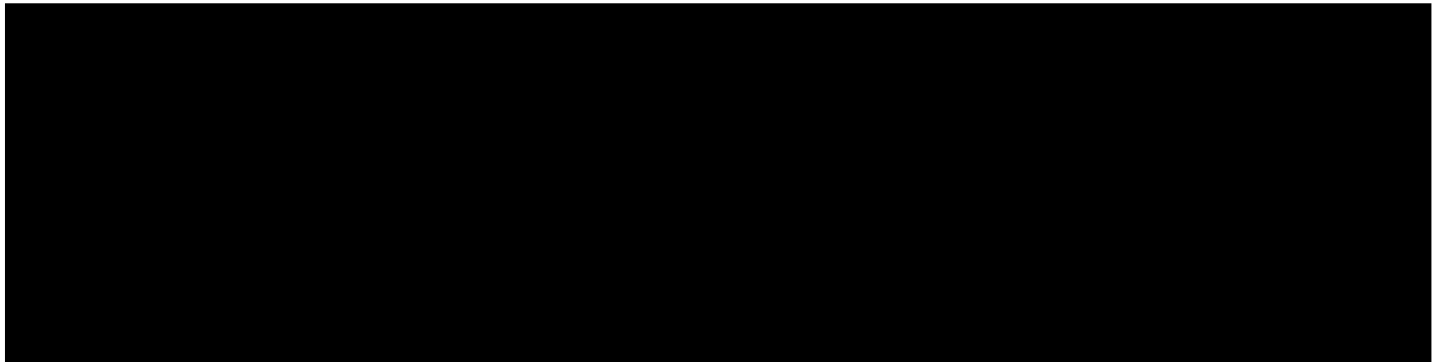
PRIMARY APPLICANT DETAILS

Title	Mrs
Name	Kate
Surname	Lanchbury



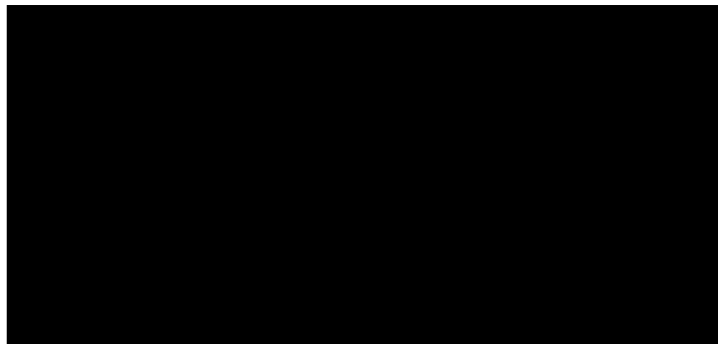
OTHER DETAILS

Title	Ms	Title	Dr
Name	Leanne	Name	Uzma
Surname	Quille	Surname	Khan



GMS ORGANISATION

Type	Charity/ trusts
Name	WWF-UK



Section 2 - Project Summary, Ecosystems, Approaches and Threats

Q3. Project Title

Sound Of Safety: Testing Pingers for River Dolphins and Fishers

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

Freshwater (streams, rivers and lakes)

Biome 2

No Response

Biome 3

No Response

Conservation Action 1

Species management (harvest, recovery, re-introduction, ex-situ)

Conservation Action 2

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

Conservation Action 3

External Capacity Building

Threat 1

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

Threat 2

No Response

Threat 3

No Response

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.

In India and Pakistan, hundreds of endangered river dolphins die annually as bycatch, which also causes damaged nets and lost catch for fishers. This project tests an innovative acoustic exclusion device, a 'pinger', that potentially eliminates river dolphin bycatch, while improving local fishers' income and reducing their costs. The project will also strengthen community engagement models, integrating results on the socio-economic and biodiversity effectiveness of pingers and community engagement into holistic policy recommendations for fisheries management and river dolphin conservation.

Section 3 - Dates & Budget Summary

Q6. Project Country(ies)

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

Country 1 India

Country 2 Pakistan

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

Q8. Budget Summary

Darwin Funding Request	2022/23	2023/24	Total request
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(Apr - Mar) £

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?

- Re-use of 10 loud pingers, purchased for a previous project financed by WWF International, the Freshwater Innovation fund: [REDACTED]
- Chelonia, the UK-based manufacturer, has provided us with two F-PODS for free ([REDACTED]) + [REDACTED] discount on the two F-PODS we will acquire: [REDACTED]
- Chelonia/University of Exeter provides (virtual) training and technical support in-kind
- WWF-India staff part costs for technical support, community engagement, policy advocacy and M&E are covered by the WWF-Reckitt partnership [REDACTED]
- WWF-UK Project Lead is funded by the WWF-Reckitt partnership: [REDACTED]
- River Dolphin Rivers Initiative Technical Expert, funded by WWF-UK (Adopt program): [REDACTED]
- Total confirmed match: [REDACTED]
- WWF-Pakistan field coordinators covered by private Engro Foundation (unconfirmed) / otherwise matched by WWF [REDACTED]
- If demonstrated to be effective, additional pingers can be funded with an internal fundraising campaign to ensure equity for control group fishers. Amount tbd.

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?

Starting 2022, there is likely to be funding for a 5-year project in Pakistan by the Engro Foundation. This private fund is looking into supporting Indus river dolphin conservation through awareness raising, providing alternative livelihoods to fishing, and improving habitat protection with community participation. The Engro project will support WWF-Pakistan staff costs and community engagement to benefit both projects (Engro and Darwin), equalling a match fund of ██████████. If this fund does not come through, we will cover this with our own resources.

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).

Problem and driver:

Indus and Ganges river dolphins are classified as 'Endangered'[1]. Fisheries are their main mortality cause[2]. Net entanglements are common, causing an estimated 5-10% of the dolphin populations to die yearly [12]. This is a problem for both the dolphin and the fisher: while the dolphin gets injured or drowns, the fisher is likely to lose his catch and find his net damaged.

The dolphins' preferred habitat coincides with primary fishing grounds, especially during low water periods [3];[4];[5]. The dolphins prefer areas with counter-current pools below confluences and meanders; the areas where gillnets are most densely deployed [6];[7].

Evidence on dolphin deaths:

For the Ganges river dolphin, bycatch is known to be a severe issue [8];[9];[10];[11], estimated to cause ca. 200 dolphin deaths a year [1][12], and the problem is increasing as gillnet intensity within the dolphin ranges increases [11]. For the Indus river dolphin, there is less literature but the problem seems substantial. Based on research for this project, the stakeholders in the selected experimental sites reported 3-6 dolphin gillnet deaths/ year in the selected 15 km river stretch, and even within the Sindh Ramsar Indus dolphin reserve (190 km) ca. 6 deaths/ year. This might be an understatement; fishers have been reported to hide dead dolphins out of fear of the legal consequences of killing a protected animal (Dr Uzma Khan, personal communication, Nov. 2021).

Evidence on economic loss:

Based on studies in the marine environment and in the Amazon river system, it is likely that loss of fish catch and damage to fishing nets caused by dolphins, represent significant economical losses to the fishers.

There is no literature published on the economic loss of fishers caused by Indus and Ganges river dolphins' net entanglements. Nevertheless, there is anecdotal evidence that this is a material loss that can incentivize fishers to engage with attempts to reduce bycatch (Dr Uzma Khan, interviews with fishermen - personal communication, Nov. 2021).

To illustrate: in Pakistan, a 150-200m fishing net costs ██████████; net damage caused by dolphin entanglement can cost ██████████ besides the loss of value fish catch. Knowing that a Pakistan fisherman earns ca. ██████████ per month, this is a huge expense.

Gathering missing evidence will be part of the project: a questionnaire-based study will document the extent of the bycatch in the project sites and the economic impact of entanglement in fishing gear by Indus and Ganges river dolphins.

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)
- Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- Ramsar Convention on Wetlands (Ramsar)
- 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.

CBD and NBSAP

The Indus river dolphin is a priority species to the Government of Pakistan, recognized in the National Biodiversity Strategy and Action Plan (NBSAP) 2017-2030, Ministry of Climate Change. The NBSAP is a tool for implementing CBD commitments; actions supporting the conservation of the Indus river dolphin contribute to the NBSAP implementation, thus to Pakistan's CBD commitments.

The Ganges river dolphin is India's National Aquatic Animal; the Indian NBSAP recognizes the bycatch threat, and includes the strategy of "upgrading Traditional Fishing Gear with Appropriate Technology" to Ensure Sustainability of Aquatic Biological Resource Use, to which this project contributes.

Ramsar

Three of the six project locations are (partly) designated as Ramsar sites (see maps). In Pakistan, included Ramsar sites are the Indus dolphin reserve in Sindh and Taunsa barrage in Punjab; in India, the project overlaps with the Upper Ganga Ramsar site. Fisheries data and results from this innovation project will inform and support the Ramsar and PA Management Plans (under development) related to these sites.

CMS

In 2019, the government of India developed a Concerted Action (CA) for the South Asian river dolphin (Ganges and Indus dolphins), endorsed by the Convention on Migratory Species (CMS)[13]. With this CA, India pledged to adopt fishing practices to avoid accidental mortality of dolphins, and to organize capacity building and empowerment of fishing communities; both supported by this project. In addition, the project sites coincide with the CA focus: Bijnor and Narora Barrages in the Ganges River, and Yamuna River. This is also a stretch covered under the Namami Gange -an integrated programme for Ganga rejuvenation.

The related national Project Dolphin (<https://riverdolphin.in>) includes a scientific counting survey run by the Government of India and WII (with partners including WWF-India) and stakeholder empowerment in dolphin conservation, as agreed under the CA.

Section 5 - Method, Innovation, Capability & Capacity

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.

The regional Project Implementation Lead will oversee work in both countries, supporting the design of the experiments and training, analyze the data, and bring in international experts. The country teams lead the engagement of communities and fishers, reviewing results monthly. There will be cross-learnings between teams quarterly and reviews for adaptive management, value for money, risk mitigation and donor reporting.

Community engagement

Fishing communities will be engaged at six sites, three per country (see map). The project builds on Mitras, “Friends of the River” from India[16]: a diverse group of intrinsically motivated volunteers, involved in sustainable agriculture practices, citizen science and awareness raising. This approach is new to Pakistan.

In the Upper Ganga, India, WWF already has good community relationships. Fifty-five Mitras are active, change agents that will help grow the community engagement, including among fishers, and adapt to the project focus. In two other sites with estimated high levels of bycatch (high dolphin and fisher density), the team will start engagement using their experience to build trust and participation.

In Sindh, Pakistan, WWF has good community relationships in the two project sites. In Punjab, the team will receive support from the Fisheries Department to engage fishing contract holders and fishers (see endorsement letter). The team will adapt the Mitras approach for their cultural context, and bring on fisher and community participants of different ages and genders as Dost (Friends)/Saheli (Female Friends).

WWF’s field teams will train participants in citizen science methods developed together with them, train fishers to apply pingers and log data (see Q15), and raise wider community awareness.

Technology

This project builds on a solid literature review[14] and research on pinger use for South Asian river dolphin populations.[15]; [2]

The trials will happen in two low water seasons in Year 1 and 2 (Sept - Feb each year). In each village, we will guide fishers in the experiment groups to deploy pingers and others to participate as the control group. We will test pinger effectiveness in two fishing techniques, using different frequencies / pinger types: 1) pingers attached to fixed nets and 2) loud pingers that temporarily push dolphins out of a 1-2 km stretch during drag/fixed net use. Experiment and control group fishers will keep logs with river dolphin observations, daily fish catch type/size mix, and net damage. Trials over two seasons will provide time to learn and optimize the methods.

The team will test dolphin habituation to long-term use of pingers, placing cycling pingers with F-PODS (recording dolphin acoustics) underwater year-round to register how close dolphins come over time.

Scale-up

The teams will engage regularly with fisheries and wildlife departments, creating ownership over the project results and proposed recommendations and connecting us with fishing contract holders that employ the fishers, to raise their awareness and buy-in on pinger integration into fishing practices.

Recommendations and learnings will be developed with key stakeholders and shared with governments to influence future uptake, if successful. The team will also hold a virtual learning session with regional river dolphin stakeholders.

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?

Successful innovation is 50% technology and 50% social acceptance.

With this project, hundreds of riverine community members become citizen scientists. In India, experience exists with River Mitras, but not with Female Dolphin Mitras, engaged community groups monitoring dolphins consisting mainly of women,

while women are closest connected to healthy rivers and related ecosystem services. For Pakistan, this concept is entirely new.

Fishers do record their catch (weight), but not species composition, fish size, or net damage caused by dolphins; these structured records will be extremely valuable to base sustainable fisheries regulations on.

Pingers have been used to steer away marine cetaceans since 1996 [17]. However, they have not yet been applied to address river dolphin bycatch beyond small pilot projects.

Very recent, yet unpublished work in the Mahakam River (Indonesia) suggests pingers can work: they steered Irrawaddy river dolphins 10-20 meters away from gillnets, while fish catch increased by 40%, including bigger and more popular species[18]. However:

- This study has an incomparable (small) scale compared to the proposed project;
- Habituation has not been investigated; dolphins might start to ignore sounds over time;
- We do not know if pingers work for Indus and Ganges river dolphins who are functionally blind, with specialised echolocation and hearing abilities;
- Circumstances in the Indus and Ganges River systems are peculiar, e.g. rivers are silt-laden, which might affect sound-transmission;
- Fishing techniques differ: besides gillnets, we will test pingers to 'clear' an area of dolphins before deploying river wide nets.

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.

1. Fishers and Mitras/ Dost/ Saheli capable of using monitoring app/ record sheets:

The project team will adapt engaging and training methods to the needs and interests of the communities and fishers, leading to a mix of group and individual training.

- Short term impact: the participants will be capable of monitoring river dolphins' presence; adult/ young; group size, and sighting circumstances (weather, time).
- Longer term: the country/ governmental institutions' capacity to utilise citizen science information on river dolphin distribution and abundance, protecting their species and fishers.

2. Fishers capable of using pingers effectively:

Supporting fishers to use pingers, by the project team. This support happens village wise, in groups of ca. 20-35 fishers. Regular follow-up meetings with the fishers include maintenance and adaptations to pinger-settings to make them (more) effective.

- Short term impact: fishers capable of applying pingers correctly during the project, so the tool can be tested and adapted properly.
- Longer term, if pingers have shown to be effective, trained fishers have enhanced economic capacity through increase in their catch/income, knowing how to correctly apply pingers. As early adopters, they will be ambassadors of change, sharing their experiences (if successful) with other communities.

3. Project team trained in innovative techniques:

Chelonia/University of Exeter and the lead scientist of pinger manufacturer Fishtek marine train the project team in the use of pingers and F-PODS, including software and data analyses. This train-the-trainer program will consist of a virtual training + follow-up guidance, including maintenance: while pingers are robust, F-PODS require technical understanding, software and interpretation support.

- Short-term impact: team is capable of executing the project properly and passing knowledge to the fishers.
- Longer term, if pingers are effective, team members support governmental organizations in training their staff, passing on the knowledge gained by the project.

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

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.

The communities collaborating in this project are traditionally organized. Fishing is largely restricted to men, learnt by boys through the elders; the men go to the fish markets. If this innovation project proves pingers increase fish catch, this will benefit male income generation.

Women and girls are home-makers, part of other economies (groceries, patchwork), and involved in fishing related activities, making (fish)baskets and repairing nets. If this project proves pingers reduce net damage/ repairs, this will potentially free time for other (economic) activities; we will monitor this.

Fishing for a (young) woman would be perceived as inappropriate, but in Pakistan, there is one fishing community 'Bakhshan Shah' where older women fish alongside men. These women will be trained in pinger use and monitoring, and engaged to become Dolphin 'Saheli'. By publicly recognizing them, they will inspire women in other communities.

Existing Mitras in India mobilize fellow community members, increasing engagement and citizen science [16]. Mitras feel empowered by this role outside of the traditional roles, e.g. by being recognized and applauded in public occasions.

Through the created women-led citizen networks (Female Mitras & Saheli), women play a key role in the project, adding the female voice to dolphin and river conservation and related ecosystem services that especially women are closely connected to (washing, bathing, cooking/ drinking water collection), at their turn engaging their children and families. We will recognize the women as champions, volunteering their time and energy for the greater good of all – creating inspiring opportunities and profile enhancement.

To engage both genders equally, we adapt the place and time of community meetings, and position female project members. To actively mobilize more women, we also reach out to women and girls outside of the fishing communities. In the engagement surveys, we strive for a 50% gender balance.

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?

Awareness raising is a significant element of this project. Important stakeholders, activities and impact measurements include:

Fishers and riverine community members, who share their home with the dolphins and are directly affected by animal encounters. Awareness raising activities to increase their engagement in monitoring and conservation:

- Mitras/ Dost/ Saheli open discussion meetings - using information sheets, manuals, videos and inspiring presentations to raise awareness of river dolphins and the bycatch problem; aiming to create true ambassadors, raising interest in dolphin protection
- Focus group meetings - raising awareness on dolphins and the economic aspects of entanglements while training on citizen science to monitor dolphin presence
- Personal and group discussions with fishers, raising awareness while guiding them in pinger use

Engagement and awareness are measured via semi-structured surveys and interviews at project start and end.

Governmental fisheries and wildlife department representatives, legally responsible for regulating fisheries and dolphin protection. Awareness raising activities, to make them more responsive to management suggestions:

- Quarterly meetings, discussing the problem for fishers and dolphins, project design, adaptation and progress, fishing contract requirements and scaling-up opportunities (if pingers work).

The project team measures and monitors governmental awareness based on meeting minutes.

Fishing contract holders, the middlemen, contractually allowed to fish.

Contacted and steered by the fisheries departments, we inform them on the project, create awareness on the bycatch problem for fishers and dolphins, raising interest in pinger use by their fishers, to increase their engagement.

Awareness will be measured via a semi-structured interview at project start and end.

National and international institutions and experts; Activities to increase their engagement and knowledge, and to mobilize them to support scaling-up activities:

- Knowledge sharing via workshop(s).

Uptake is measured by the number of global pinger projects (if shown effective).

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 will create outcomes/impacts on Evidence/ best practices in pinger use and Capability/ capacity of national and local stakeholders.

Evidence/ best practices

We will have the first robust understanding of whether pingers can provide win-win solutions for river dolphins and fisherfolk in the large rivers of South Asia:

- pinger effectiveness for Ganges and Indus river dolphins, with details on:
- best practices in the loudness and sound frequency to steer away the dolphins from gillnets
- best practices on the distance between consecutive pingers on gillnets
- evidence on the distance dolphins stay away from the gillnets, given the above characteristics (loudness, frequency, appropriate distance between consecutive pingers)
- effect of pinger use for the users, the fishers, showing evidence on poverty reduction:
- evidence on change in fish catch (kg/ day of fishing activity)
- evidence on change fish size (average catch size in cm's)
- evidence on change in catch composition (focus on economically interesting fish species)
- evidence on reduced net damage/ repair costs / time invested in repairs
- proof if pingers can be used to clear a river stretch (usually 1-2 km) of dolphins, before applying (legal) bank to bank fixed net with a drag net making entanglements inevitable;
- best practices how to apply pingers (moment of pinger deployment// # minutes before installing the nets/ duration of pinger activation/ inter-pinger distance).
- habituation: evidence if Ganges and Indus river dolphins get used to the pinger sounds, starting to ignore them over time, despite sound intervals being randomized.

Capability & capacity

Assuming that the tests are positive, NGOs, communities & governments will have new capability and expertise in using

pingers appropriately/adaptively for biodiversity-poverty reduction co-benefits; and governments will have the confidence to invest in scaling-up implementation. This capacity building of local and national stakeholders will support both the project and the long-term goals:

On the local level, the project will engage, train and support 775 potential beneficiaries:

- 300 fishers (200 Pakistani and 100 Indian fishers), enabled to apply pingers and record a logbook to measure if/ how pingers benefit their income:
- reduced net damage
- more premium types of fish caught
- reduced risk of being fined for killing a protected animal;
- 475 empowered community members (200, including 50 women in Pakistan, and 275, including 60 women, 100 fishers and 55 existing Mitras in India), all enhanced to monitor dolphins with smartphones and/or paper registers, being change agents, supporting the project and their governments with river dolphin monitoring data via citizen science.

On the regional and national level, government representatives will be enhanced in the pinger functionality and the potential to mainstream/ upscale pingers when proven effective. They will be provided with citizen science data for national river dolphin monitoring activities and to improve their sustainable fisheries regulations.

Finally, the (inter)national participants of the knowledge-sharing gathering will have learned from the set of best practices and recommendations from this project, developed to use and scale-up the results.

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.

If we provide selected fishers in India and Pakistan with pingers and train them how to use them, and the pingers are proven effective, then we will prevent Ganges and Indus river dolphins from stealing fish from the nets, getting entangled and dying. We will also test if deterring river dolphins from the nets and the pinger sounds contribute positively towards the fishers' daily fish catch and reduce fishers' costs (net damage, lost catch, fines). These activities will be complemented with community engagement to involve and empower men and women from the riverine communities to support dolphin monitoring, as well as engagement of river fisheries departments and contract holders to increase the long-term sustainability and scaling potential for pinger use.

If the project shows that pingers are effective for Ganges and Indus river dolphins, the resulting recommendations will guide the responsible government departments on how pingers can be scaled further and combined with relevant fishing policies and regulations in the Ganges and Indus river systems.

If the project shows that pingers are effective, the open access event (and draft scientific article) at the close of the project will mobilize other stakeholders to further test and adopt the method.

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?

This is not an Exit strategy - it is a continuation and scaling strategy. If this innovation project proves that pingers can be effective for the species and rivers of India and Pakistan, we are ready for the next step.

Sustaining benefits, capability and capacity

The pinger device can be used for a long time; only batteries need to be changed. Once provided and explained to the fishers, no intensive after-care is required. If fishers see added value (through reduced net damage, improved fish catch and/or less chances of unintended mortality of a protected species/ payment of penalties) they will continue to use it.

Mainstreaming and scaling up, including overcoming barriers to scaling

If pingers are successful, governments, fishers and fishing contract holders engaged and trained in this project are expected to mainstream pingers into 'business as usual', making them broadly available and adapting fisheries regulations and legislations to include pinger use.

The private Engro Foundation has shown interest to fund scaling up: if the Darwin Innovation project shows pingers to be effective in Pakistan, this approach will be incorporated in the second half of the 5-year Foundation project (2022-2026). The same goes for the Wildlife Institute of India (WII), mentioning great interest in large-scale implementation, possibly funded by the Indian Project Dolphin.

This Innovation project ends with an open access learning meeting with regional and global partners, sharing the final recommendations. This will lay the basis for scaling up discussions with the governments of India and Pakistan; interest has been shown by the Punjab Fisheries Department, Pakistan and WII, see their endorsement letters), and partners in Nepal and Bangladesh, who share the same species and threat. In this way, this project can scale regionally and support decision making globally, strengthened by the scientific article we plan to publish.

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
Fiduciary a) Funds are mishandled, e.g. through corruption. b) unexpected expenses occur, e.g. to replace stolen field equipment (F-PODS/ pingers), which then cannot be accounted for.	Moderate	Unlikely	Moderate	The partners handling funds are three WWF offices - WWF accountability processes of contracting, financial transfers and controls will be applied. For pingers, there will be individual accountability and ownership with the fishers. Unexpected expenses (eg theft of F-PODS) cannot be mitigated, and will be covered by WWF.	Minor

<p>Safeguarding</p> <p>The Public recognition of women affects private relations (husband/ wife); e.g. increased domestic violence has been shown in other projects.</p>	Severe	Rare	Major	<p>The project is building on WWF-India's rich Mitras experience.</p> <p>Female project members talk to women alone, and local social women mobilizers, speaking the local language, will easily monitor and support issues.</p> <p>Participation of women is voluntary; this will be communicated strongly, to help manage this risk on a personal level.</p>	Minor
<p>Delivery Chain</p> <p>The project design requires 2 testing periods. If we/ fishers cannot go to the field in (one of) those periods due to Corona restrictions, devastating flooding events (as in 2010 in Pk), or an extended monsoon period, we will not get sufficient data to adequately assess pinger effectiveness.</p>	Major	Possible	Major	<p>Test duration is 4 months within the 6-8 month dry-period, creating flexibility in field work planning.</p> <p>We will apply adaptive management with experts and local communities: e.g. changing project sites, adapting to Corona-rules, etc.</p> <p>A shortened testing season can be compensated by a prolonged second season, avoiding data shortage.</p>	Moderate
<p>Risk 4</p> <p>Fishers participating in the project in the control group (without pingers), entangle a dolphin as a bycatch, that dies; putting the fisher, who is part of the project, in a criminal position, breaking the law while killing a protected animal. Media attention can grow this story significantly, blaming the project.</p>	Moderate	Unlikely	Moderate	<p>This risk is hard to avoid; it is the reason the project is urgently needed. When it occurs, proactive, open and transparent communication reduces reputational risk. The teams in India and Pakistan have good communication teams and warm relationships with journalists, to put the (unsensational) story forward in the media.</p>	Minor
<p>Risk 5</p> <p>Fishers we work with, use mixed fishing methods, combining legal fishing methods with illegal practices; the project inadvertently supports illegal activities when pingers are used on illegal nets.</p>	Insignificant	Likely	Moderate	<p>Working on a weekly basis with the fishers, we raise their awareness of why not to use illegal nets/ inform them on alternatives; together with Mitras/ Dost/ Saheli.</p> <p>We will inform and position the Fisheries Departments that regulate/ control gear on illegal practices.</p>	Minor

Risk 6	Major	Unlikely	Major	Within the project, we monitor fish catch and calculate sustainable yield, closely collaborating with the catch regulating governmental Fisheries Departments. The limited number of fishers involved in the project will not likely cause food chain collapse; this element will be analyzed and included in the final recommendations for scaling up.	Minor
Pingers work well and increase the fish catch as has been shown in Indonesia (40% increase), causing overfishing and an unsustainable resource exploitation level.					

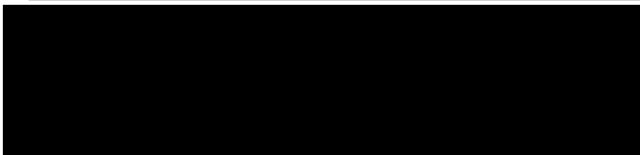
Section 8 - Implementation Timetable

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](#)).

The Theory of Change and logframe were developed with all members of the team, including our M&E expert. During the inception phase, we will revisit them and further detail the baseline data and endline targets. We will develop a clear monitoring plan from the logframe, assigning responsibility for indicator measurement and timelines for deliverables. We will collate the data monthly and analyze it per country, as well as share results between countries quarterly, to inform project decision-making and regular adaptive management. As an innovation project, data will be critical to any re-designs

on the application of the pinger technology needed and for improving community engagement and government buy-in at the midpoint of the project. Data analysis will underlie any lessons on successes and failures and recommendations for future roll-out, should pingers prove to be effective.

The Project Implementation Lead will oversee M&E activities in both countries, led by M&E managers from India and Pakistan, as well as support both teams' analysis of the results and development of lessons and recommendations. The Project Implementation Lead will be supported by WWF-UK, the Global River Dolphin Rivers Initiative Lead, and external experts on evaluating the results as needed.

Some of the methods we intend to employ in terms of M&E are:

- Visual observation methods recorded using a customized Smartphone App and/or paper-based tools. Mitras/Dost, including fishers, will be trained to report river dolphin sightings over the two trial periods. WWF's observers will collect this weekly from fishers, monthly from other Mitras/Dost, and also do their own independent observations daily. Observations will be done using range finders for accurate distance estimation to establish if dolphins stay clear from the nets/ how far they remain from active pingers.

- Interviews/Surveys will take place with three main stakeholder groups:

- Communities: WWF's observers will conduct semi-structured interviews/household surveys/village focus groups with the local communities, inclusive of fishers, before and after the intervention to understand their knowledge and perceptions of river dolphins .

- Fishers in the Experiment: WWF's observers will conduct semi-structured interviews/surveys with fishers in the experiment and control groups to enhance the logs collected, particularly to collect data on dolphin entanglements.

- Policy Stakeholders: The teams will also use interviews and questionnaires on awareness of fishing contract holders on pingers technology and gauge whether stakeholders, like the communities, feel engaged in developing policy recommendations.

- Fishers logbooks WWF observers will collect weekly data on fishers' river dolphin sightings and income and expenses changes over the project period (fish catch size and type, net damage/catch loss from river dolphins, etc.); the Logbook methods will be developed with the fishers, accommodating their capacities (e.g. working with pictures when illiterate).

- Net income analysis: using evidence from fishers interviews and logbooks we will conduct a net income analysis to determine if pingers possibly support fishers catching higher-value fish and/or extra fish and reduce their costs by removing unexpected expenses caused by net damage when dolphins are entangled.

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

5

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:

Pingers are supporting the long-term coexistence of healthy river dolphin populations and thriving riverine communities in the Ganges and Indus River systems

Outcome:

The socio-economic and biodiversity effects of pinger use is tested in the Ganges and Indus River systems, providing recommendations for future fisheries practices

Project Outputs

Output 1:

Successful model of community engagement for river dolphin stewardship developed and applied

Output 2:

Effectiveness of pingers as a technology tested with fishers in Pakistan and India

Output 3:

Recommendations for decision makers on whether pingers can be scaled up in the Ganges and Indus River systems developed

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 Field teams raise awareness on the project with communities in India/Pakistan, building trust and confirming fisher and community Mitras/Dost/Saheli ("Friends of the River Dolphins") participants.
- 1.2 Field teams collect data on river dolphin bycatch numbers, dolphin-related costs incurred by fishers, fish catch mix, and community knowledge on dolphins/sustainable fishing practices.
- 1.3 Field teams hold design workshops with participants on monitoring tools for river dolphin sightings, possibly including a Smartphone App, and fisher logs for pinger trials.
- 1.4 Field teams develop citizen science/engagement tools by adapting Mitras tools (India) and developing new tools for Dost/Saheli (Pakistan) where the citizen science approach is new.
- 1.5 Field teams train Mitras/Dost/Saheli/fishers on the App-based and paper-based reporting tools. Refresher training in Y2.

- 1.6 Mitras/Dost/Saheli/fishers report river dolphin sightings over the two trial periods. Field teams collect real-time App data and monthly paper-based data.
- 1.7 Field teams collect feedback and provide supportive supervision to Mitras/Dost/Saheli/fishers monthly, review the approach and adapt from their feedback at the start of Y2.
- 2.1 Country teams obtain government permits, order equipment. Pinger types decided based on fishing methods, dolphin behaviour, background noise level, and might be adapted in Y2.
- 2.2 Regional Lead and country teams develop detailed experimental designs for 4-month trials in two dry seasons, with external experts and fishers from experiment/control groups.
- 2.3 External experts train field teams on F-POD and pinger use, data collection and analysis. Internal trainings on observation tools, supportive supervision techniques for fishers/Mitras/Dost/Saheli.
- 2.4 Field teams train experiment/control group fishers on pinger application and additional monitoring, including fish catch composition and fishing net damage. Refresher training in Y2.
- 2.5 Fishers test pingers on fixed nets being used during 4-months of dry season. Control group will be at least 1000 meters away in same site.
- 2.6 Fishers test loud pingers on alternate days of drag/fixed net use during 4-months of dry season, observing if dolphins stay 1-2 kilometres away.
- 2.7 Field teams test cycling pingers over 8-12 months/year, monitored by F-PODS, to test river dolphin habituation.
- 2.8 Fishers from experiment and control groups report on river dolphin sightings and income-related data over the two trial periods.
- 2.9 Field teams collect data and discuss observations and logs with fishers weekly, including river dolphin mortality events.
- 2.10 Field teams conduct independent observations and collect F-POD data every two weeks.
- 2.11 Country teams collate and analyse data monthly, compares across sites in each country every two months during the trial periods.
- 2.12 Country teams gather feedback and facilitate knowledge exchange between fishers/Mitras/Dost/Saheli from different sites per country to reflect on challenges and make improvements.
- 2.13 After Y1 trial, project team assesses the data and feedback and adapt pinger methods/type of pingers and monitoring tools as needed.
- 2.14 After Y2 trial, project team assesses socio-economic and biodiversity effectiveness of pingers, incorporating community feedback. Develop lessons and insights that feed into country recommendations.
- 3.1 Country teams hold quarterly meetings with relevant government departments for awareness, buy-in, and ownership over the results and next steps.
- 3.2 Country and field teams engage fishers/Mitras/Dost/Saheli and wider community in sharing of results and development of their prioritized fisheries recommendations.
- 3.3 Country teams engage fishing contract holders that employ the fishers, raising awareness on pingers as part of contracting arrangements and receiving feedback on next steps.
- 3.4 Country teams develop final recommendations with relevant government departments, national experts, and international experts.
- 3.5 Country teams share with relevant ministries and institutions in each country, tailoring discussions to different department / ministry / institutional policies.
- 3.6 Regional Lead and country teams jointly begin developing a scientific article from the project results in the two countries.
- 3.7 Regional Lead organizes joint virtual learning session with colleagues and stakeholders from Pakistan, India, and other regional partners - such as in Bangladesh and Nepal.

Section 11 - Budget and Funding

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.

New Initiative

Please give details.

This is a new project.

It builds on separate, but much smaller/ shorter-term (and until today inconclusive) trial projects

- in Indonesia and the Amazon:

- [REDACTED]

- funded by WWF

- led by Yayasan Konservasi RASI (Indonesia), Mamirauá Institute (Brazil) and WWF-Peru (Peru)

- in Pakistan (for canals)

- [REDACTED]

- funded by WWF

- led by WWF-Pakistan

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:

There are similar projects (no duplications) we connect to, for mutual learning and experience exchange:

- Pinger application in a small pilot by WWF-Pakistan for a different purpose: trying to keep dolphins out of irrigation canals where they tend to strand and have to be rescued. A different pinger is used, during the dry season of 2021/2022 in another part of the Indus River. The Darwin project will benefit from the experience, translating (practical) do's and don'ts of pinger use.

- Collaboration with the Wildlife Institute of India (WII): In 2018 WII ran a project on pingers/ river dolphins, and showed great interest in follow-up activities, but we are not aware of any project planned. We will actively involve WII in the project (see also their endorsement letter), to make sure any similar project results in mutual learning and data sharing.

- Collaboration with Mamirauá (Brazil) and WWF-Peru:

We will collaborate actively with the ongoing (small) pilots in the river sections in Peru and Brazil (for Amazon river dolphins), executed by WWF and partners.

- Collaboration YK-RASI, Indonesia:

We will continue to engage actively with the extended project in Indonesia, Mahakam River by our partner Yayasan Konservasi RASI.

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.

The pingers will be handed over to the fishers that are part of the project - if they decide these devices represent an added value for their fishing practices, they can continue to use them after the project ends.

Two F-PODS are provided to us by the British company Chelonia as a donation, and two F-PODS will be acquired for the WWF-India team, all supporting follow-up projects.

Other capital purchased, like GPS, rangefinders and laptop will stay with WWF and remain available for follow-up projects.

In Pakistan, the assets are expected to be used in the 5-year Engro funded project that supports and builds on the results of this Darwin Innovation project.

In India, we anticipate a related follow-up project with the Wildlife Institute of India, mainstreaming solutions to river dolphin bycatch; pingers and/or otherwise.

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.

If pingers work in India and Pakistan, this will change the game for dolphins and fishers. While pingers seem to be effective for other river dolphins elsewhere, this innovative approach has a good chance to succeed. In Indonesia, it took 2 years to adapt pinger-use to the specific circumstances, expecting this result to be achieved within the proposed project duration.

- To ensure equitability, participating fishers will be treated equally: year 1 control group (without pingers) will apply pingers in year 2, for all to have the same expected benefits. If pingers are proven effective, we are dedicated to providing all fishers with pingers at the closure of the project, financed via other means/ follow up projects.

- Project economy: almost 25% of the project costs is funded with matching-funds, increasing with one-quarter the amount invested by Darwin. Pingers are not expensive; F-PODS are, but are donated to the project by the British provider Chelonia for no cost/ with a huge discount for the ones we do need to purchase, while they believe in this project.

- Funds efficiency: We will apply WWF's procurement policy. Quarterly team meetings include budget management, discussing costs and changes/ adaptations to the budget plan, ensuring to keep costs low and achieve maximum value.

- Effective Fund use: the project includes no purchases that cannot be used after project closure by the stakeholders involved. The capital items will be distributed/ re-used by the project team; records will be kept and reported in the project documentation.

Section 12 - Outputs, Open Access, Ethics & Safeguarding

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:

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

Checked

We have attached a copy of our safeguarding policy to this application	Checked
We keep a detailed register of safeguarding issues raised and how they were dealt with	Checked
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	Checked
We share our safeguarding policy with downstream partners	Checked
We have a whistle-blowing policy which protects whistle blowers from reprisals and includes clear processes for dealing with concerns raised	Checked
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	Checked

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

Project implementation will be guided by WWF's Environmental and Social Safeguard Framework (ESSF). Both the Upper Ganges and Indus River Dolphin habitats are being screened for environmental and social risks and related mitigation planning; the findings from the screening process, relevant mitigation plans and grievance mechanisms are agreed through engagement with community members, partner organisations and in accordance with government norms.

WWF's reporting process requires specific articulation of progress on embedding safeguarding approaches into all projects and progress against mitigation actions. Validation of, or engagement in reporting of, safeguards is required by both local stakeholders and each offices' safeguarding team.

Q30. Ethics

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

WWF's Environmental and Social Safeguards Framework (ESSF) mandates the following, per Darwin's guidance:

Participation: WWF's India and Pakistan teams have met with stakeholder representatives from community to Government for initial planning; this will continue for project specific planning, with a particular emphasis on women, rights holders and on vulnerable groups. Locally appropriate grievance mechanisms will be in place.

Consent: The rights of community members to be consulted, photographed, quoted or to participate in monitoring are part of WWF's various guidance documents. FPIC is also one of our mandatory Standards, the principles of which underpin all our stakeholder engagement.

WWF Code of Ethics: Our staff, partners and consultants are contractually bound by this.

Human Rights: WWF is proud to be a founding member of the Conservation Initiative on Human Rights and is currently active in reviewing and updating the framework. Any potential human rights risks (e.g. unintentional discrimination, violating the participation/consultation rights of affected communities and contributing to abusive actions by enforcement personnel) are mitigated through a proper analysis with stake/rights-holders as above, and by ensuring that support to enforcement activities is subject to capacity assessments, appropriate training and explicit conditionalities on respect for human rights and dignity.

Section 13 - FCDO Notifications

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

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?
Leanne Quille	Project Leader	5	Checked
Deborah MacKay	Grant Manager	5	Checked
Uzma Khan	Project Implementation Lead	10	Checked
Mohd Shahnawaz Khan	India project team coordinator	25	Checked

Do you require more fields?

Yes

Name (First name, surname)	Role	% time on project	1 Page CV or job description attached?
Muhammad Imran Malik	Pakistan project team coordinator	50	Checked
Neera Chaudhary	Community engagement expert	25	Checked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked
No Response	No Response	0	Unchecked

No Response	No Response	0	Unchecked
No Response	No Response	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:	WWF-UK
Website address:	https://www.wwf.org.uk/
Why is this organisation the Lead Partner, and what value to they bring to the project? (including roles, responsibilities and capabilities and capacity):	In 2019, WWF-UK made a commitment to the UK Government that it will be the lead organisation for all grant proposals from the global WWF Network, taking on the responsibility for overall programme oversight, financial and quality assurance, monitoring and evaluation, and safeguarding. WWF-UK is working closely with our implementing offices -WWF-Pakistan and WWF-India- and are committed to supporting them to ensure an effective & sustainable impact. WWF has initiated a global Environmental and Social Safeguards Framework (ESSF) that ensures that all WWF interventions provide adequate safeguards against unintended outcomes, and that human rights, particularly for Indigenous Peoples, local communities and the marginalised are recognised and respected. WWF-UK are directly adding value in the provision of staff capacity, with a Financial Analyst, Design & Impact Advisor and Grants Specialist allocated to the project, along with a match-funded Project Lead to ensure project outcomes are delivered to standard, on time and in-budget. WWF-UK is committed to sharing best practices and aim to champion this project as a case-study for transboundary, community-driven conservation.
Allocated budget:	

International/In-country Partner International

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: WWF-India

Website address: <https://www.wwfindia.org/>

What value does this Partner bring to the project? WWF-India is a leading conservation organisation working in India for over 50 years, striving to stop the degradation of the natural environment and build a future in which humans live in harmony with nature. WWF-India, through 60 different offices across the country engages with multiple stakeholders comprising government, technical institutions, private sector and communities. Through its vast outreach, WWF works towards generating evidence and grounded solutions to some of the most challenging problems facing our time. At the core of the solutions lie WWF-India's focus on species, ecology and the community the organisation works with.

(including roles, responsibilities and capabilities and capacity):

WWF-India has long engaged with multiple stakeholders on the conservation of the river Ganga and the river dolphins, contributing to the Dolphin Action Plan (2010 - 2020) with the Ministry of Environment, Forests and Climate Change. In Uttar Pradesh, site of the proposed project, WWF-India undertakes an annual 'My Ganga, My Dolphin' campaign with the Uttar Pradesh Forest Department, monitoring dolphin populations and enrolling local stakeholders (Ganga Mitras or 'friends of the Ganga River').

This project provides a vital source of innovation for dolphin conservation in the region, and will work closely with local fishers, riparian communities and Dolphin Mitras, particularly women in the community.

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

2. Partner Name: WWF-Pakistan

Website address: <https://www.wwfpak.org/>

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

WWF-Pakistan, formed in 1970, is the leading conservation organisation, working through 32 offices and with expertise relevant to this project; floodplain management, species conservation, with river dolphins experts that are also part of the IUCN Cetacean Specialist Group and led the development of the global river dolphin strategy. WWF - Pakistan has long standing relationship with riverine communities, implemented two large programmes in the central Indus River; Pakistan Wetlands Programme (GEF/UNDP), Global Poverty Action Fund (GPAF) for the conservation of biodiversity, wetlands and empowerment of local communities, reducing their dependence on natural resources. WWF also mobilised and organised communities as registered Community based organisations. Working from grassroot communities to building high level political influence is a key asset of WWF - Pakistan.

WWF-Pakistan has been working on the Indus River Dolphin for over 25 years. This dedicated effort resulted in an increase in the population from 1200 (2001) to 1987 (2018). WWF - Pakistan will be the lead implementer in Pakistan will work closely with fisher and government functionaries for testing pingers building on existing partnerships and relationships. WWF will liaise with communities to form a network of community leaders as 'friends' for fisheries management and dolphin conservation.

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: *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*

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

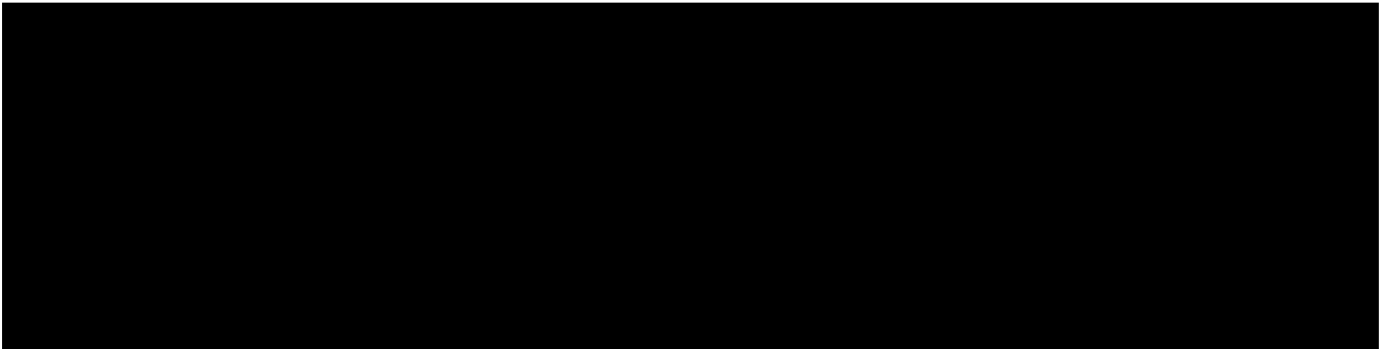
Have you included a Letter of Support from this partner? Yes No

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.



Section 16 - Lead Partner Track Record

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)?

Yes

Please provide details of the most recent awards (up to 6 examples) and go to Q10.

Reference No	Project Leader	Title
Darwin -14013	WWF-UK	Community Management of NTFPs in Kangchenjunga Conservation Area, Nepal
Darwin - 14020	WWF-UK	Network of Locally Managed Marine Protected Areas in Solomon Islands
Darwin - 13012	WWF-UK	Integrated River Basin Management (IRBM) in the Sepik River
Darwin - 13020	WWF-UK	Conservation of Eastern European medicinal plants: Arnica montana in Romania
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>

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

WWF-UK

I apply for a grant of

£187,981.00

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

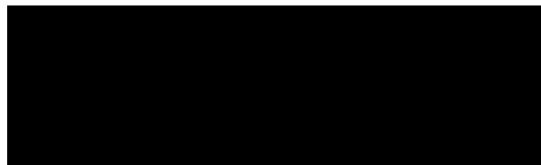
Name

Tricia Croasdell

Position in the organisation

Director of Public Sector Partnerships, WWF-UK

Signature (please upload e-signature)



Date

06 December 2021

Please attach the requested signed audited/independently examined accounts.

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

Section 18 - Submission Checklist

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".

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

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

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

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.

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

I have attached the below documents to my application:

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

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: Pingers are supporting the long-term coexistence of healthy river dolphin populations and thriving riverine communities in the Ganges and Indus River systems			
Outcome: The socio-economic and biodiversity effects of pinger use is tested in the Ganges and Indus River systems, providing recommendations for future fisheries practices	0.1 Dolphin mortality numbers due to bycatch decrease to zero in Year 2 from the baseline (to be set) in pinger trial sites, determining if pingers have a positive biodiversity effect 0.2 The average monthly household net income increases 10% in Year 2 from the baseline (to be set) for fishers using pingers, determining if pingers have a positive socio-economic effect 0.3 Key government decision makers are aware of the lessons learned and recommendations on the socio-economic and biodiversity effectiveness of integrating pingers in fisheries management by March 2024	0.1 Recommendations Reports, including reported mortality numbers from project monitoring records 0.2 Recommendations Reports, including net income analysis based on project monitoring records and household surveys 0.3 Acknowledgement of the Recommendations Reports by respective Government Departments/Ministries of the Government of India and Government of Pakistan during country-specific learning exchanges	-Fishers and communities in the experiment sites trust the programme team, are willing and able to participate in their respective roles -Dolphins do not permanently leave the river stretch during the project period -Dolphins do not get habituated to the pingers over time -There is no major disruption to conducting two trial periods, such as COVID-19 restrictions, devastating flooding events, or an extended monsoon period -Fishers provide truthful reporting on lost nets due to dolphins, dolphin mortality numbers due to bycatch, and lost/gained income -The rates paid for fish catch are stable and/or easily reportable to compare changes in income between fishers using pingers and fishers not using pingers in the same area
Outputs: 1. Successful model of community engagement for river dolphin stewardship developed and applied	1.1 475 <i>Mitras/Dost/Saheli</i> are reporting monthly on river dolphin sightings using citizen-designed, standardized methods in Year 2 from a baseline of 55 people (disaggregated by country, gender, smartphone/paper reporting tool)	1.1.1 Monthly analysis reports of App records from participants, collected directly by WWF's database and/or downloaded monthly by field teams 1.1.2 Monthly analysis reports of paper-based records from participants, collected monthly by field teams	- Community members, especially women and fishers, are willing and able to participate in the app design phase and monitoring over the life of the project period using the app or paper-based tools - Community members surveyed and participating in citizen

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	<p>1.2 70% of enrolled <i>Mitras/Dost/Saheli</i> interested in continuing their citizen science activities at the end of Year 2 (disaggregated by country, gender)</p> <p>1.3 Knowledge and awareness on river dolphins and harmful fishing practices in the project communities increases by 90% by March 2024 from the baseline (to be set) (disaggregated by country, gender)</p>	<p>1.2 Annual Questionnaire/Interview Feedback</p> <p>1.3 Household survey/village focus groups on knowledge and awareness</p>	<p>science have a varied range of knowledge on river dolphins and fishing practices at the start of the project</p> <ul style="list-style-type: none"> - Communities feel safe to express their negative and positive feelings about the project
<p>2. Effectiveness of pingers as a technology tested with fishers in Pakistan and India</p>	<p>2.1: Dolphins are staying at least 20 meters away from fixed fishing nets with active pingers during the Year 2 trial period (disaggregated by country, experiment and control groups)</p> <p>2.2 Dolphins are leaving the area (approximately 2 kilometres) when loud pingers are active during drag-fixed fishing net activities during the Year 2 trial period compared to the control group (disaggregated by country, experiment and control groups)</p> <p>2.3 Dolphins are staying 20 meters away from cycling pingers during the Year 2 trial period (disaggregated by country)</p> <p>2.4 Fish catch type and/or size mix changes to more premium fish by 10% for fishers in the pinger sites by the end of Year 2 compared to the control group (disaggregated by country, experiment and control groups)</p>	<p>2.1 Monthly analysis reports from field team daily observation logs, and daily logs / weekly interviews with fishers</p> <p>2.2 Monthly analysis reports from field team daily observation logs, and daily logs / weekly interviews with fishers</p> <p>2.3 Monthly analysis reports from F-POD data</p> <p>2.4 Monthly analysis reports from daily logs and weekly interviews with fishers</p>	<ul style="list-style-type: none"> - See Outcome Assumptions and: - Buoys are at the right distance from the pingers and are not damaged, destroyed or stolen - Fishers are correctly applying and using pingers - Fishers without pingers are willing to participate and stay at least 1000 meters away from fishers with pingers - F-PODS and cycling pingers are not stolen or damaged - Fishers follow legal regulations (e.g. not fishing during the night/ not using illegal gear)

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	2.5 Fishing net damage due to river dolphins in the pinger sites is reduced to zero by the end of Year 2 (disaggregated by country, experiment and control groups)	2.5 Monthly analysis reports from daily logs and weekly interviews with fishers	
<p>3. Recommendations for decision makers on whether pingers can be scaled up in the Ganges and Indus River systems developed</p>	<p>3.1 100% of participating villages say they feel engaged in the development of pinger/fisheries recommendations for their respective governments by March 2024 (disaggregated by country)</p> <p>3.2 Awareness of pinger technology among relevant fishing contract holders increases to 90% by the end of Year 2 from an expected baseline of 0% (disaggregated by country)</p> <p>3.3 At least 2 recommendations reports developed with relevant Government Departments that take into account citizen and fishing contract holder input by March 2024 (disaggregated by country)</p>	<p>3.1 Anonymous feedback questionnaire form participants</p> <p>3.2 Survey on knowledge and awareness at baseline and end line</p> <p>3.3 Recommendation Reports</p>	<p>- Government departments participate in the project and are willing to discuss the results and next steps</p> <p>- Fishing contract holders from the project sites are willing to participate</p>
<p>Activities</p> <p>1.1 Field teams raise awareness on the project with communities in India/Pakistan, building trust and confirming fisher and community <i>Mitras/Dost/Saheli</i> (“Friends of the River Dolphins”) participants.</p> <p>1.2 Field teams collect data on river dolphin bycatch numbers, dolphin-related costs incurred by fishers, fish catch mix, and community knowledge on dolphins/sustainable fishing practices.</p> <p>1.3 Field teams hold design workshops with participants on monitoring tools for river dolphin sightings, possibly including a Smartphone App, and fisher logs for pinger trials.</p>			

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- 1.4 Field teams develop citizen science/engagement tools by adapting *Mitras* tools (India) and developing new tools for *Dost/Saheli* (Pakistan) where the citizen science approach is new.
- 1.5 Field teams train *Mitras/Dost/Saheli*/fishers on the App-based and paper-based reporting tools. Refresher training in Y2.
- 1.6 *Mitras/Dost/Saheli*/fishers report river dolphin sightings over the two trial periods. Field teams collect real-time App data and monthly paper-based data.
- 1.7 Field teams collect feedback and provide supportive supervision to *Mitras/Dost/Saheli*/fishers monthly, review the approach and adapt from their feedback at the start of Y2.
- 2.1 Country teams obtain government permits, order equipment. Pinger types decided based on fishing methods, dolphin behaviour, background noise level, and might be adapted in Y2.
- 2.2 Regional Lead and country teams develop detailed experimental designs for 4-month trials in two dry seasons, with external experts and fishers from experiment/control groups.
- 2.3 External experts train field teams on F-POD and pinger use, data collection and analysis. Internal trainings on observation tools, supportive supervision techniques for fishers/*Mitras/Dost/Saheli*.
- 2.4 Field teams train experiment/control group fishers on pinger application and additional monitoring, including fish catch composition and fishing net damage. Refresher training in Y2.
- 2.5 Fishers test pingers on fixed nets being used during 4-months of dry season. Control group will be at least 1000 meters away in same site.
- 2.6 Fishers test loud pingers on alternate days of drag/fixed net use during 4-months of dry season, observing if dolphins stay 1-2 kilometres away.
- 2.7 Field teams test cycling pingers over 8-12 months/year, monitored by F-PODS, to test river dolphin habituation.
- 2.8 Fishers from experiment and control groups report on river dolphin sightings and income-related data over the two trial periods.
- 2.9 Field teams collect data and discuss observations and logs with fishers weekly, including river dolphin mortality events.
- 2.10 Field teams conduct independent observations and collect F-POD data every two weeks.
- 2.11 Country teams collate and analyse data monthly, compares across sites in each country every two months during the trial periods.
- 2.12 Country teams gather feedback and facilitate knowledge exchange between fishers/*Mitras/Dost/Saheli* from different sites per country to reflect on challenges and make improvements.

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2.13 After Y1 trial, project team assesses the data and feedback and adapt pinger methods/type of pingers and monitoring tools as needed.

2.14 After Y2 trial, project team assesses socio-economic and biodiversity effectiveness of pingers, incorporating community feedback. Develop lessons and insights that feed into country recommendations.

3.1 Country teams hold quarterly meetings with relevant government departments for awareness, buy-in, and ownership over the results and next steps.

3.2 Country and field teams engage fishers/*Mitras/Dost/Saheli* and wider community in sharing of results and development of their prioritized fisheries recommendations.

3.3 Country teams engage fishing contract holders that employ the fishers, raising awareness on pingers as part of contracting arrangements and receiving feedback on next steps.

3.4 Country teams develop final recommendations with relevant government departments, national experts, and international experts.

3.5 Country teams share with relevant ministries and institutions in each country, tailoring discussions to different department / ministry / institutional policies.

3.6 Regional Lead and country teams jointly begin developing a scientific article from the project results in the two countries.

3.7 Regional Lead organizes joint virtual learning session with colleagues and stakeholders from Pakistan, India, and other regional partners - such as in Bangladesh and Nepal.