Darwin Initiative Innovation Annual Report

To be completed with reference to the "Project Reporting Information Note":
(https://www.darwininitiative.org.uk/resources/information-notes/)

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

Submission Deadline: 30th April 2025

Submit to: BCF-Reports@niras.com including your project ref in the subject line

Darwin Initiative Project Information

Project reference	DARNV027
Project title	Addressing wildlife entanglement in discarded fishing nets through community-based approaches
Country/ies	India
Lead Organisation	Zoological Society of London
Project partner(s)	Wildlife Institute of India
Darwin Initiative grant value	£199,970
Start/end dates of project	01st April 2024 to 31st March 2027
Reporting period (e.g. Apr 2024 – Mar 2025) and number (e.g. Annual Report 1, 2, 3)	1st April 2024 to 31st March 2025 (Annual Report 1)
Project Leader name	Rebecca Austin
Project website/blog/social media	https://x.com/zslmarine
Report author(s) and date	Harish Guleria, Suman Mallick, Matthew Gollock, Rebecca Austin, Surshti Patel, Emily Rowntree and Sameena Nawaz. 30/4/25

1. Project summary

The Ganga River is the fifth largest in the world. The region is globally important for biodiversity, hosting multiple endemic aquatic species of conservation importance. The river holds high cultural, heritage and religious values, whilst also providing key income and sustenance to over 25,000 fisherfolks. India is the third leading producer of fish in the world; however, the Ganga is also considered to be the second largest plastic pollution-contributing river catchment in the world, with 120,000 tons discharged annually.

Abandoned, Lost, or Otherwise Discarded Fishing Gear (ALDFG) poses a significant threat to biodiversity due to the entanglement of various aquatic species, including the Ganga River dolphin, three-striped roofed turtle, black-spotted turtle, northern river terrapin, and smooth-coated otter, which are particularly vulnerable. Additionally, the project focuses on reducing discarded nets and managing plastic waste in the Ganga River through recycling initiatives. The removal of ALDFG will also contribute to the restoration of habitats, thereby supporting the recovery of species diversity.

ALDFG has imposed an alarming impact on aquatic species resulting in loss of biodiversity. A risk matrix model will be prepared to enable conservation of threatened aquatic animals being

prone to entanglements especially in potential fishing zones like River Ganga where freshwater dolphins exist. Currently, managing plastic waste and derelict nets has gained urgent attention since it is associated with ecological and socio-economic impacts. The project aims to strengthen the livelihood of fisherman folks by recycling the discarded nets and plastic waste associated with fishing activities.
The project aims to enhance the livelihoods of the fishing community by actively involving them in the collection of fishing nets and various net recycling activities. Women will be involved in the entire process of end-of-life net recycling, including collection, cleaning, bailing, sorting, and storing of the nets. Skill development training was conducted in the Bhagalpur area with the help of National Mission for Clean Ganga (NCMG) and Jalaj project team such as stitching training, organic soap making training, handicraft training and incense stick making training.
The study area was thoroughly surveyed to identify the types of fishing net used by the local fishing community and to explore recycling schemes for damaged nets. Information was gathered from Fisheries and Forest departments, as well as from local people. Discarded nets will be collected from the Ganga River as part of a cleanup program and awareness campaign involving community participation. Additionally, an extensive literature review of research papers and reports on ALDFG, along with real-time data collection on aquatic species entanglement in the Ganga was conducted.
The study is conducted in the Bhagalpur district of Bihar, particularly in three areas - Bihpur, Kahalgaon, and Gopalpur. Bhagalpur has been identified as a district that generates the most waste from fishing activities (Annex 4 and 5).

2. Project stakeholders/partners

The current project is in collaboration with Wildlife Institute of India, Fisheries and Forest department and local fisheries community of Bhagalpur, Bihar. The project involves local fisherfolk to gather information about discarded nets and its profitable recycling with the help of circular economy. The project also includes the Fishery and Forest department for enabling the buyback schemes to fisherman community of old nets and microfinance schemes as well. The project is willing to collaborate with active recyclers.

The pilot survey of fisherman folk has collected information on usage of different types of nets, livelihood status, gender division and status of storing the damaged fishing nets. The project was on hold from January 2025 to March 2025, due to delayed recruitment of staff which led to delayed implementation.

Through workshops, posters and documentaries as part of the NCMG, stakeholders have been introduced to the impacts of discarded nets in aquatic habitats as well as the threatened species. Business models will be put forward to the stakeholders in order to strengthen the livelihood of the fisherman community through a circular economy where the discarded nets will be recycled which will benefit both the fisherman community and environment.

3. Project progress

3.1 Progress in carrying out project Activities

Due the delays in project implementation described in the cover letter to this report and a previous Change Request, we have not made significant progress in initiating activities in their entirety. However, we have outline where initial steps have been taken up to 31/12/24, when the project was paused, and the associated output and activity.

Output 1:

Activities 1.1/1.2 - A tentative list of villages (study area) from three selected blocks (Bihpur, Kahalgaon and Gopalpur) of Bhagalpur district of Bihar along with GIS map is under preparation which will be finalised after a field visit (Annexes 4 and 5).

Activities 1.1/1.2/1.6 - A field work plan has been made with a set of questionnaires required for the purpose of survey related to their livelihood, nets used for fishing, strategies for reusing abandoned, damaged and old nets (Annexes 7 and 8).

Activities 1.3/1.5 - A proposed supply chain model has been prepared as part of the literature review (Annex 9). This will be tested in the field in Y2.

Activity 1.4 - A list of government approved recyclers of plastic waste from Bihar and nearby states of study area has been created to inform the transportation cost (Annex 6).

Output 2:

Activity 2.1 - A list of government approved recyclers of plastic waste from Bihar and nearby states of study area has been created (Annex 6).

Activity 2.2 - A review article has been prepared regarding international and national status of ALDFG, various business models that have focused on recycling of plastic wastes and net material, environmental consequences of ALDFG on aquatic biodiversity with special emphasis to Indian freshwater ecosystems (Annex 9).

Output 3:

Activity 3.4 - A questionnaire was prepared to gain information from Fisheries and Forest department regarding the wildlife entanglement of threatened species, areas affected due to ALDFG accumulation and its impact on aquatic species as well as habitat and scheme-based incentive to fisherman in order to enable reuse of such abandoned, damaged and old fishing nets (Annex 8).

3.2 Progress towards project Outputs

As implementation of activities has been significantly delayed, progress towards the Outputs has been limited. We have revised the budget and workplan via Change Request such that we expect to be able to deliver the Outputs on a revised timeline between 1/7/25 and 31/3/27. Below we briefly progress made to date.

1. Community-led savings scheme is established and underpins creation of a net collection gender inclusive supply chain within 24 villages in Bihar living alongside the VGDS.

We have provisionally identified the 24 villages in the region (Annexes 4 and 5) that we aim to engage the communities of to develop the savings scheme and supply chain with (Output Indicator 1.1). In addition to this, we have developed a draft community questionnaire (Annex 7) that will aim to gather relevant information such that the scheme and supply chain meet community needs as well as reduce negative impacts on biodiversity (OI 1.1). We have identified 14 plastic recycling companies in the region (Annex 6) which will be a starting point to assess which provide the most ethical and sustainable services for the supply chain (OI 1.4).

2. A sustainable net recycling business model is established and underpins a solution that rediverts ADLFGs from entering the VGDS and prevent key Gangetic species entanglement.

As above, the identification of the plastic recyclers (Annex 6) (OI 2.1) is a key step in the creation of the supply chain and associated business model – these actors will be assessed in Y2 to determine who are the most suited to be part of the project. The review article (Annex 9) has proposed a draft business model (OI 2.2) which will be amended and socialised with relevant actors in Y2.

3. Pro-wildlife conservation behaviours and actions are fostered in 24 villages across three blocks to strengthen the effectiveness of the VGDS.

The review article (Annex 9) has gathered information on ALDFG that will inform the development of a social marketing campaign in collaboration with the Ganga Prahari during Y2 (OI 3.1). This will inform the identification of volunteers in Y3 (OI 3.2 / 3.3).

4. Scaling/replication opportunities for net recycling are identified with national/regional partners.

Activities and progress related to this Output will be initiated in Y3 as per the updated Logframe and Workplan, but we continue to work closely with WII as a key partner in the project (OI 4.3).

3.3 Progress towards the project Outcome

Due to the described delays we have not made significant progress towards the Outcome, however we have briefly described what steps have been taken towards achieving it. We believe the Outcome is achievable based on the new logframe, workplan and budget.

Outcome: An inclusive, innovative, community-led, net recycling pilot for India is established, reducing negative impacts of ALDFGs on biodiversity in the VGDS and benefiting people through better waste management.

The identification of the provisional 24 villages (Annexes 4 and 5) for inclusion in the project is the first step towards the project Outcome as Indicators 1-3 are based on community engagement. A draft business model (Outcome Indicator 0.1) has been developed as part of the review article (Annex 9), and the questionnaire developed to gather information from fishers will inform both this (OI 0.1) and the removal of nets by co-operatives (OI 0.2). The identification of the plastic recycling companies will also feed into the net removal (OI 0.2). The review article (Annex 9) collates background information that will inform addressing the impacts of ALDFGs through riverbank cleans (OI 0.3) such that they have both a reduced presence (OI 0.4) and impact on key species (OI 0.5).

3.4 Monitoring of assumptions

Due to the pause in activities, a number of the assumptions have yet to be tested – we comment on those that have been relevant to date.

Outcome

Assumption 1: Focal communities, organisations and government are supportive of interventions throughout the project delivery and beyond.

Comments: Based on the focus group discussions (Phase I of project) with fishing communities and key informant interviews (KII) with the Forest and Fisheries Department, we received their strong support for implementing interventions throughout the project's execution and beyond, aimed at mitigating the impact of ADLFG on the aquatic ecosystem.

Assumption 2: Supply chain and business model is robust and meets environmental and socio-economic standards.

Comments: A comprehensive review of various supply chains and business models was conducted, culminating in the creation of our own supply chain model (outlined in Annex 9). This model, however, has not yet been implemented in the field and will be tested to ensure it meets both environmental and socio-economic standards.

Assumption 3: Communities adopt behaviours to ensure end of life nets are recycled and not discarded.

Comments: The initial survey on discarded fishing nets has led to a change in behaviour, with communities now choosing to store their old and damaged nets for recycling instead of discarding them.

Output 1

Assumption 1: Pre-identified community members/organisations are still supportive and continue to be interested in the scheme and participate in the long-term.

Comments: The initial survey (Phase I) on discarded fishing nets has positively influenced the previously identified community members and organizations, who remain supportive, engaged, and committed to long-term participation in the initiative. Information regarding the storage of discarded nets by the fishing community in Bhagalpur was received through other WII project personnel who maintain direct contact with the community. The fishermen are eagerly awaiting the project's resumption and the arrival of recyclers to collect their stored nets.

Assumption 5: Robust reporting mechanism is effectively upheld overtime and transparency maintained beyond timeline of this project.

Comments: A robust reporting mechanism has been consistently maintained over time, ensuring that data collection, monitoring, and communication processes remain reliable and accurate. This system not only supports effective project management during the project's active phase but also continues to uphold transparency and accountability even after the official project timeline has ended. By doing so, it fosters trust among stakeholders and sustains the credibility and impact of the initiative in the long term.

Outcome 2

Assumption 1: Environmentally friendly national/regional recyclers exist and are available and willing to partner on this scheme.

Comments: Following a telephonic conversation with active recyclers from neighbouring states of Bihar, we came to know about their strong interest in recycling abandoned nets and plastic materials related to fishing activities, particularly as a means to reduce transportation costs.

Outcome 3

Assumption 2: Fisheries & Forestry Department is willing to sustain on-going monitoring of species entanglement in the River Ganga.

Comments: The River Ganga, is abundant in fishery resources, making it a crucial hub for fishing activities particularly in Bhagalpur, Bihar. However, the heavy reliance of the local fishing community has led to increased pollution, negatively impacting the river's aquatic biodiversity. In response, the Fisheries and Forestry Department has committed to continued monitoring of species entanglement in the river. As part of the Clean Ganga Mission, they have launched several initiatives aimed at reducing pollution and safeguarding key endemic species such as river dolphins, turtles, and otters from entanglement and habitat threats.

Assumption 3: Project activities motivate communities to adopt pro-wildlife conservation behaviours

Comments: The project is expected to encourage the fishing community to manage abandoned and discarded nets more responsibly, offering both environmental benefits and improvements to their socio-economic well-being. By promoting an incentive-based system for proper net management, these nets are less likely to end up in waterbodies. This reduction in abandoned nets will help protect fishery resources, leading to better harvests and, in turn, enhancing the economic stability of the fishing community.

Output 4

Assumption 3: Government of India remain committed to reduction of plastic waste

Comments: The Government of India remains firmly committed to reducing plastic waste through a range of policies, regulations, and national initiatives. Key among these is the *Plastic Waste Management Rules*, which have been progressively strengthened since 2016 to promote extended producer responsibility (EPR), ban single-use plastics, and improve waste segregation and recycling. Additionally, campaigns like *Swachh Bharat Abhiyan* and *Clean Ganga Mission* integrate plastic waste reduction as a core component. These efforts reflect the government's broader aim to transition toward a circular economy and protect both the environment and development of fisherman community.

3.5 Impact: achievement of positive impact on biodiversity and multidimensional poverty reduction

The project Impact is: *Plastic net entanglements of key Ganga species are substantially reduced, improving the effectiveness of the Vikramshila Gangetic Dolphin Sanctuary (VGDS) and providing a scalable, innovative model for national adoption.* As such, the project seeks to reduce the impact of ALDFG on aquatic ecosystems, particularly by preventing riverbed clogging and protecting the associated biota. Ghost gear poses a threat to endangered and threatened species, particularly Ganges river dolphins and other key species in the Ganga River, through entanglement.

The project will establish an innovative recycling model in Bihar in order to safeguard the pristine and most productive river ecosystem of Ganges so that a significant reduction of ALDFG entangled species can be accomplished whilst benefiting communities through incentivised waste management. The project also fulfils sustainable development of fisheries resources by limiting entry of ghost nets in the productive Ganges ecosystem.

The project aims to strengthen the livelihood of the fisherman community by incentive-based management of discarded and abandoned nets that enter the aquatic ecosystem due to lack of recycling and improper management of such nets. The project also aims at involving 50% of women’s participation in the recycling supply chain model, specifically targeting women fishing community in 24 villages across Bhagalpur district. Women were engaged in end-of-life net recycling model across collecting, cleaning, bailing, sorting and storing of nets.

4. Project support to the Conventions, Treaties or Agreements

Progress of the project is not sufficient to evidence active support of national or international policies and agreements. However, we expect work in the coming year to be in line with both national (Environmental Protection Act 1986, Wildlife Protection Act 1972, and Plastic Waste Management Amendment Rules 2021) and international (UN Global Plastics Treaty, CBD Global Biodiversity Framework (GBF), RAMSAR and a number of Sustainable Development Goal targets.

5. Project support for multidimensional poverty reduction

The project values the economic growth of the fisherman community of Bhagalpur district of Bihar by involving them in an incentive-based management of discarded nets and associated plastic waste with fishing which otherwise have ended up in aquatic ecosystem impacting the ecosystem services. The project aims at strengthening the livelihood of fisherman community with special emphasis to the gender equality. It aims at involving 50% of the fisherwomen of the study area

in engaging them in various activities related to collection of discarded fishing nets and converting them into secondary commercial products which can be a potential source of income. The women were provided training for manufacture of bags, masks, organic soaps (which are leather free and eco-friendly) and incense stick (from waste flowers collected from rivers). In long term, the project focus to build a strong supply chain among fisherman, recyclers and various small and medium enterprises to channelise the end-of-life fishing nets recycling model in real practice.

6. Gender Equality and Social Inclusion (GESI)

GESI Scale	Description	Put X where you think your project is on the scale
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	X
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities.	
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal access to assets, resources and capabilities for women and marginalised groups	
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

ZSL recognises the importance of gender mainstreaming to achieve fair societal outcomes, and acknowledges the objectives set out by the UK International Development (Gender Equality) Act and the UN's Sustainable Development Goal 5. ZSL is committed to ensuring that Gender Equity and Social Inclusion (GESI) principles are integrated into all stages of project design, planning, implementation and M+E. ZSL uses a range of tools, including gender sensitive analyses, consultations and engagement plans to ensure women's and marginalised voices, opinions and needs are foregrounded. We will monitor gender equity by analysing gender disaggregated data at baseline and subsequent evaluation points.

Women engaged during the feasibility study have shown enthusiasm for participating in an end-of-life net recycling model, across collecting, cleaning, baling, sorting, and storing of nets. Social factors such as dependency on husbands, restrictions from the elders, and responsibilities of children are barriers to their involvement in working sectors. On the other hand, with poor economic conditions and family needs, women are often required to work. Existing women-led self-help groups (SHGs) and cooperatives will be leveraged to gain access to female networks and drive engagement. The recycling model will be financed by a community savings scheme, which will be managed by a female majority. Appropriate training will upskill women as required to manage the fund and collection model. Through this approach, women will be meaningfully incorporated into the governance of the supply chain and can influence the development of the model. We will ensure participating females take on decision-making roles that would otherwise typically be male dominated. We also will take an intersectional approach to working with women and recognise that women are not a homogenous group.

Socioeconomic conditions of fishing communities in India are very low, with people struggling to meet basic needs. This model presents an opportunity for all community members, including the informal recycling sector workers, to diversify livelihoods through net sales.

We have included two examples of materials ZSL have developed that will guide implementation of the project (Annex 10 and Annex 11).

7. Monitoring and evaluation

ZSL is well-established in managing global conservation projects rooted in science, with a focus on sustainable, community-based management. We've developed advanced monitoring and evaluation (M&E) techniques to support community-led initiatives, ensuring effective project management, shared learning, and impact assessment. Annual M&E and work plans will guide project execution, with the UK-based Senior Project Manager and Environmental & Social Safeguarding Specialist visiting India for planning, evaluations, and training. Regular communication via email, Teams, and WhatsApp will support adaptive management. Progress will be tracked through monthly reports, with half-yearly and annual updates for partners and donors. Project outcomes will be monitored using indicators, surveys, and focus groups to assess social, economic, and behavioural impacts. Data will be collected by experienced staff, with community involvement, and centrally stored. This approach helps bridge data gaps in remote areas, supporting evidence-based policy decisions at all levels.

8. Lessons learnt

The project has suffered significant delays due to administrative challenges and in the recruitment of a suitable team. This required a pause of the project from January to July 2025, and a Change Request was approved to adjust the Logframe, Workplan and Budget such that delivery was pushed back by 12 months. In hindsight, it would have been prudent to pause the project earlier than we did until these issues were addressed, but we are confident that we will move quickly into delivery once the project re-starts.

The initial project activities have helped to gain clarity about the real picture of the livelihood of fisherman folk and need for improvement through proper training and innovative ideas which will benefit them in empowering the women of the community and strengthening the income apart from fishing activities. Poor employment opportunities have been observed due to several reasons such as low education, unawareness and prone to seasonal floods. The recycling of the discarded nets which is either stored or released in aquatic ecosystem can be included in a recycle based model so that the ecosystem can be safeguarded as well as it brings incentives and employment opportunities to the fisherman by active participation. There is an urgent need for awareness of these discarded nets and its negative impacts on river biodiversity. A strong partnership with recyclers, small and medium enterprises and fisherman folk can ensure the persistence of the business models for long time.

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

N/A.

10. Risk Management

No new risks have been identified. The risk register has been attached along with Annual Report.

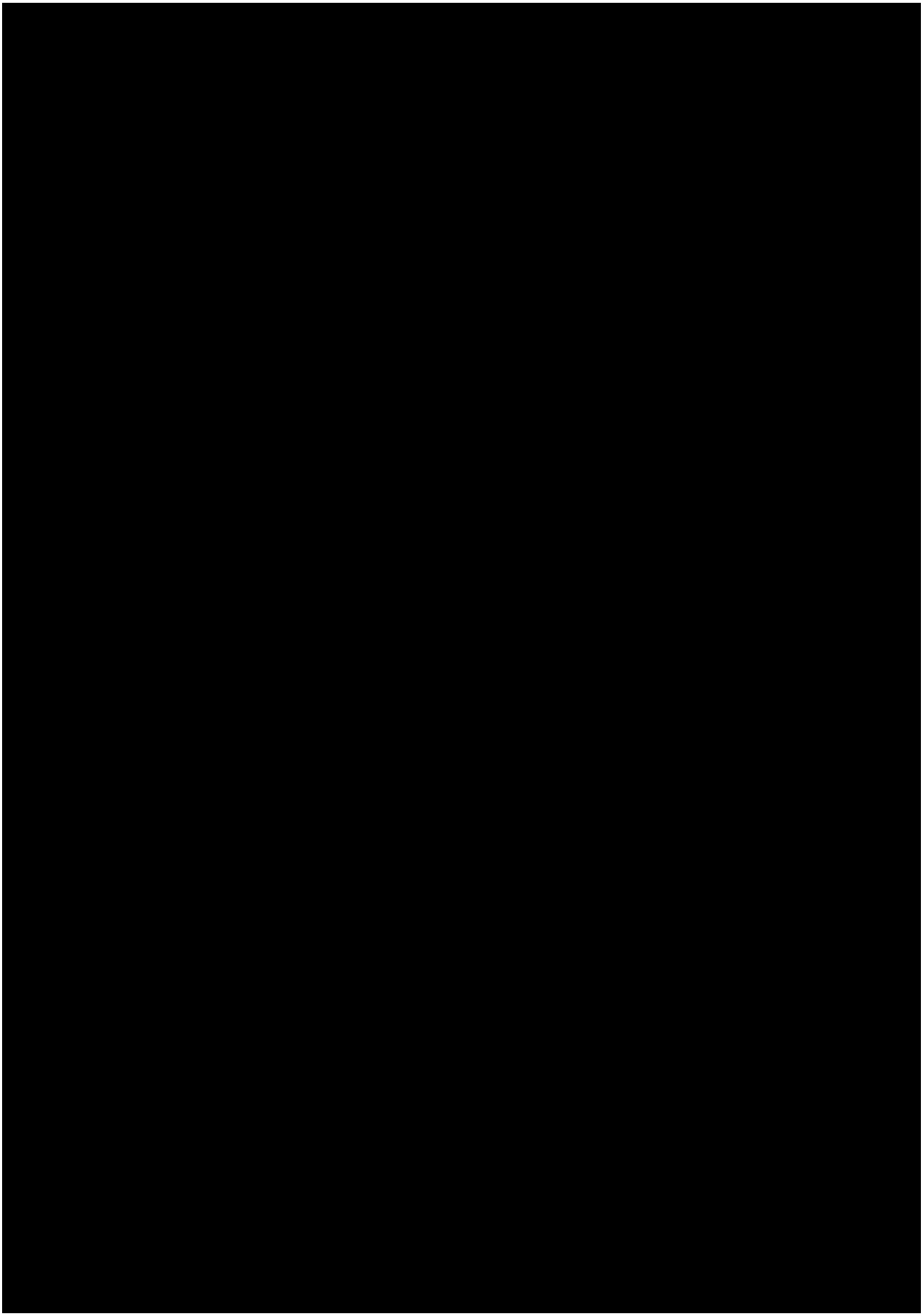
11. Scalability and durability

This project aims to create a self-sustaining supply chain for recycling ALDFGs by partnering with fishery and district cooperatives, leveraging existing governance structures. Local coordinators will manage the supply chain, ensuring continued leadership after the project ends. Community savings mechanisms will ensure sustainability, and training will empower locals to manage the model. Strong relationships with the Ganga Prahari will promote wildlife conservation and long-term benefits. Aligned with a need identified by the Indian government, the project will collaborate with the Panchayat to ensure lasting impact strengthening the socio-economic development of the fisherman community.

12. Darwin Initiative identity

This project will run in parallel with the NCMG, but we will work to ensure that it is distinctly promoted as one funded by the Darwin Initiative/UK Government. A dedicated team will oversee operations in Bihar State, supported remotely by UK-based technical experts and all activities and outputs delivered by the team will be appropriately branded and DI-funding acknowledged.

13. Safeguarding



14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2024 – 31 March 2025)

Project spend (indicative) since last Annual Report	2024/25 Grant (£)	2024/25 Total Darwin Initiative Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL	£23,398	£22,688.25		

[redacted]

Table 2: Project mobilised or matched funding during the reporting period (1 April 2024 – 31 March 2025)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)			
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)			

15. Other comments on progress not covered elsewhere

N/A.

16. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

N/A.

File Type (Image / Video / Graphic)	File Name or File Location	Caption including description, country and credit	Social media accounts and websites to be tagged (leave blank if none)	Consent of subjects received (delete as necessary)
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No

Annex 1: Report of progress and achievements against logframe for Financial Year 2024-2025

Project summary	Progress and Achievements April 2024 - March 2025	Actions required/planned for next period
Impact Plastic net entanglements of key Ganga species are substantially reduced, improving the effectiveness of the Vikramshila Gangetic Dolphin Sanctuary (VGDS) and providing a scalable, innovative model for national adoption.	Measurable progress towards this has not been achieved to date.	[redacted]
Outcome An inclusive, innovative, community-led, net recycling pilot for India is established, reducing negative impacts of ALDFGs on biodiversity in the VGDS and benefiting people through better waste management.		
Outcome indicator 0.1 A sustainable business model is established by end of Y2Q4, with a minimum of 50% women engaged in leading the supply chain model **(baseline = 0)**	Twenty-four villages have been identified for inclusion in the project (Annex 4 and 5).	On-going engagement with communities to co-develop the business model for recycling nets.
Outcome indicator 0.2, 7440 fishers from 3 existing fisher cooperatives across blocks Bihpur, Kahalgaon and Gopalpur sell 100,514kg of end-of-life nets into the model removing the risk of them entering the VGDS by end of Y3Q4 **(baseline = 0) [DI-B09]**	Fourteen net recyclers have been identified (Annex 6).	On-going engagement with communities and recyclers to develop a sustainable and ethical supply chain.
Outcome indicator 0.3 A minimum of 169 Ganga Prahari members plus an additional 100 community volunteers participate in three riverbank clean-ups per year across Bihpur, Kahalgaon and Gopalpur to collect all existing discarded nets along the river-bank removing the risk of them entering VGDS by end of Y3Q4 **(baseline = 169 existing Ganga Prahari members conducting 3 clean ups per year in each village) [DI-B09]**	A review article has been written to gather background information on the impact of ADLFG (Annex 9).	On-going engagement with communities and Ganga Prahari to establish a network of volunteers exhibiting pro-conservation behaviours.
Outcome indicator 0.4 Abundance of ALDFGs on riverbanks across Bihpur, Kahalgaon and Gopalpur is reduced 100% by end of Y3Q4 **(baseline = nets make up 99.7% of ALDFG riverbank surveys) [DI-D18]**	A review article has been written to gather background information on the impact of ADLFG including a draft business model for field testing (Annex 9).	On-going engagement with communities and relevant government departments to develop monitoring strategies for ALDFGs.
Outcome indicator 0.5	A review article has been written to gather background information on the impact of ADLFG (Annex 9).	On-going engagement with communities and relevant government departments to

Key species entanglements with ALDFGs is reduced by 50% by end of Y3Q4 **(baseline data to be provided by Fisheries & Forestry Department in Yr1Q1).[DI-D04]**		deliver training to reduce entanglement.
Output 1 Community-led savings scheme is established and underpins creation of a net collection gender inclusive supply chain within 24 villages in Bihar living alongside the VGDS.		
Output indicator 1.1 A community engagement strategy is co-developed and implemented by end of Y2Q3, promoting participation by women in model via VSLAs and net collection activities **(baseline = 23 women engaged). [DI-D02 Core]**	Twenty-four villages have been identified for inclusion in the project (Annex 4 and 5). A questionnaire to initiate community engagement has been developed (Annex 7)	Roll out the questionnaire to the identified communities. Co-design a community engagement plan to reach as many women as possible across all 24 villages.
Output indicator 1.2 A minimum of 480 community members engaged in community banking schemes with at least 50% female participants, and necessary training provided by end of Y2Q3. **(baseline = 10% women) [DI-A01 Core]**	Not initiated at present.	Establish community savings schemes in each of the 24 villages, ensuring a minimum of 50% women members. Identify training and support needs.
Output indicator 1.3 A cost analysis is conducted for at least one collection point in each of the 24 target villages, and 3 block-level processing centres in Bihpur, Kahalgaon and Gopalpur, with final quantities and locations determined by end of Y2Q4 **(baseline = 0).**	Not initiated at present.	Conduct a cost analysis for the supply chain and create site map for collection / processing / consolidation centres.
Output indicator 1.4 Net transportation agreements, local coordinator(s) and supply chain reporting mechanisms are in place by end of Y2Q4 **(Baseline = 0) [DI-B07]**	Fourteen net recyclers have been identified (Annex 6). A proposed supply chain model has been prepared as part of the literature review (Annex 9). This will be tested in the field in Y2.	Recruit local coordinator(s), identify transportation routes and finalise agreements and supply chain model reporting mechanism.
Output indicator 1.5 Procurement of equipment for collection point(s) and district-level processing centre(s), e.g. weighing scales and net balers, is completed by end of Y2Q4 **(baseline = 0)**	Not initiated at present.	Procure relevant equipment for supply chain.
Output indicator 1.6 Co-design and implement equitable and inclusive feedback mechanisms by end of Y3Q1 **(Baseline = 0)**	Not initiated at present.	Communities engaged to develop feedback mechanism.
Output 2. A sustainable net recycling business model is established and underpins a solution that rediverts ADLFGs from entering the VGDS and prevent key Gangetic species entanglement		

Output indicator 2.1 National/regional plastic net recyclers are identified and practises are assessed by end of Y2Q2 **(baseline = 0).**	Fourteen net recyclers have been identified (Annex 6).	Criteria for assessing ethics and sustainability of recyclers are developed.
Output indicator 2.2 Profit and loss model calculated, informed by supply chain, and business model feasibility determined by end of Y2Q3 **(baseline = 0)**	A review article has been prepared which includes business models that have focused on recycling of plastic wastes and net material (Annex 9).	Financial model is developed and field tested.
Output indicator 2.3 A partnership model is determined and contract signed by end of Y2Q4 **(baseline = 0)**	Not initiated at present.	Partnership model is developed.
Output 3. Pro-wildlife conservation behaviours and actions are fostered in 24 villages across three blocks to strengthen the effectiveness of the VGDS.		
Output indicator 3.1 Social marketing campaign for River Ganga conservation is co-developed and delivered with the Ganga Prahari by end of Y3Q1 **(baseline = 0). [DIA03 Core]**	A review article has been written to gather background information on the impact of ADLFG (Annex 9).	Work with Ganga Prahari to develop social marketing campaign.
Output indicator 3.2 20 community volunteers are trained on safe release of entangled Ganga species with the Ganga Prahari by end of Y3Q2 (baseline = 30 Ganga Prahari members trained, 0 community volunteers are currently trained) [**DIA01 Core]**	Not initiated at present.	Community volunteers are identified.
Output indicator 3.3 A minimum of 269 volunteers participate in riverbank clean-ups with the Ganga Prahari across Bihpur, Kahalgaon and Gopalpur by end of Y3Q4 and receive training on conducting transect surveys using Marine Debris Tracker **(baseline = 169 existing Ganga Prahari volunteers). [DIA04 Core]**	Not initiated at present.	Community volunteers are identified.
Output indicator 3.4 A monitoring strategy is co-designed, endorsed, and on-going implementation conducted with the Fisheries & Forestry Departments for monitoring Ganga species entanglement by end of Y3Q4 (baseline = 0 monitoring system in use) [DI-C01 **Core]**	A questionnaire has been developed to gather information from the Fisheries & Forestry Departments (Annex 8).	The questionnaire is rolled out and data is used to inform development of the monitoring plan.
Output 4. Scaling/replication opportunities for net recycling are identified with national/regional partners		

Output indicator 4.1 Produce an online toolkit with a minimum of 2 supporting webinars and 1 in person events held with national stakeholders by end of Y3Q4 to share recommendations and drive replication/scaling across India, (baseline = 0 toolkits and 0 webinars) **[DIC01 Core]**	Work towards this indicator will begin in Y3 of the project.	
Output indicator 4.2 A mapping exercise is conducted by end of Y3Q4 to identify key criteria (community population, existing fisheries etc) and determine sites suitable for future replication and scaling of the approach in India (baseline = 0 sites)	Work towards this indicator will begin in Y3 of the project.	
Output indicator 4.3 4.3 Produce a government briefing/case study by end of Y3Q4, spotlighting this pilot as a solution for fulfilling national targets developed in line with the UN Global Plastics Treaty (baseline = 0 briefings/case studies)	Work towards this indicator will begin in Y3 of the project.	

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Logframe as approved by Change Request January 2025.

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
Impact: Plastic net entanglements of key Ganga species are substantially reduced, improving the effectiveness of the Vikramshila Gangetic Dolphin Sanctuary (VGDS) and providing a scalable, innovative model for national adoption.			
Outcome: An inclusive, innovative, community-led, net recycling pilot for India is established, reducing negative impacts of ALDFGs on biodiversity in the VGDS and benefiting people through better waste management.	1. A sustainable business model is established by end of Y2Q4, with a minimum of 50% women engaged in leading the supply chain model **(baseline = 0) [ZSL[1]].** 2. 7440 fishers from 3 existing fisher cooperatives across blocks Bihpur, Kahalgaon and Gopalpur sell 100,514kg of end-of-life nets into the model removing the risk of them entering the VGDS by end of Y3Q4 **(baseline = 0) [DI-B09]** 3. A minimum of 169 Ganga Prahari members plus an additional 100 community volunteers participate in three riverbank clean-ups per year across Bihpur, Kahalgaon and Gopalpur to collect all existing discarded nets along the river-bank removing the risk of them entering VGDS by end of Y3Q4 **(baseline = 169 existing Ganga Prahari members conducting 3 clean ups per year in each village) [DI-B09]**	1. Contract in place with national/regional net recycler. 24 community banking schemes are active across 24 villages, with net collection point(s), transport arrangements, and district level processing centre(s) established. Data collected to inform gender distribution statistics; disaggregated by gender, age group, type of livelihood practice. 2. Net transaction records maintained by the collection points (e.g. community banks) including attendance register and net weight in kg; disaggregated by gender; age group; typology of unsustainable practice (discarding ALDFGs). 3. Data recorded for river-bank clean up events, including volume of discarded fishing nets collected by community attendance and number of participants disaggregated by gender, age group, typology of unsustainable practice (discarding ALDFGs). 4. Data recorded during riverbank monitoring on the abundance of	Focal communities, organisations and government are supportive of interventions throughout the project delivery and beyond. Supply chain and business model is robust and meets environmental and socio-economic standards. Communities adopt behaviours to ensure end of life nets are recycled and not discarded. 50% reduction was included as a provisional target % reduction for net entanglement rate, on the assumption this supply chain would have a substantial positive effect on target species but will be revised in Y1Q1 if appropriate once

	4. Abundance of ALDFGs on riverbanks across Bihpur, Kahalgaon and Gopalpur is reduced 100% by end of Y3Q4 **(baseline = nets make up 99.7% of ALDFG riverbank surveys) [DI-D18]** 5. Key species entanglements with ALDFGs is reduced by 50% by end of Y3Q4 **(baseline data to be provided by Fisheries & Forestry Department in Yr1Q1).[DI-D04]**	ALDFGs in Bihpur, Kahalgaon and Gopalpur; disaggregated by plastic pollution type. 5. Data made available through partnership with Fisheries & Forestry Departments who will conduct on-going monitoring of species entanglement; disaggregated by fauna % change.	baseline data from FD/WII are available. Quantities of waste net generation are comparable to those documented in a pilot survey in 2021.
Outputs 1.Community-led savings scheme is established and underpins creation of a net collection gender inclusive supply chain within 24 villages in Bihar living alongside the VGDS.	1.1 A community engagement strategy is co-developed and implemented by end of Y2Q3, promoting participation by women in model via VSLAs and net collection activities **(baseline = 23 women engaged). [DI-D02 Core]** 1.2 A minimum of 480 community members engaged in community banking schemes with at least 50% female participants, and necessary training provided by end of Y2Q3. **(baseline = 10% women) [DI-A01 Core]** 1.3 A cost analysis is conducted for at least one collection point in each of the 24 target villages, and 3 block-level processing centres in Bihpur, Kahalgaon and Gopalpur, with final quantities and locations determined by end of Y2Q4 **(baseline = 0). [ZSL^2]** 1.4 Net transportation agreements, local coordinator(s) and supply chain reporting mechanisms are in place by end of Y2Q4 **(Baseline = 0) [DI-B07]** 1.5 Procurement of equipment for collection point(s) and district-level processing	1.1 Focus group facilitation guides and comms outputs produced, participation recorded; data disaggregated by Income, disaster/climate resilience, water and food security, health, gender, biome / ecosystem / habitat. 1.2 Training modules are designed and provided to all community members engaged in VSLAs, with attendance / participation recorded and feedback data gathered. Gender data is recorded within VSLAs; disaggregated by gender; age group; stakeholder group; training typology; proportion of trained people employed by their host organisation at the end of the project. 1.3 A completed cost analysis is available for all collection centres and processing centres, and a map produced with final quantities and locations marked out across the 24 villages. 1.4 Agreements in place with transportation partners. Employment contracts in place with coordinator(s). All operational and sales data are readily available through transparent reporting at local net collection points and district-level; disaggregated by gender; age group; scheme type. 1.5 Multiple and diverse feedback mechanisms in place to meet needs of different user groups.	Pre-identified community members/organisations are still supportive and continue to be interested in the scheme and participate in the long-term. Newly engaged female community members remain interested and available to support this work in the long-term. Old and new barriers to female participation can be overcome through this project. Collection points and processing centre can fulfil the storage / baling / transportation requirements of business model, and also meet accessibility requirements of community members collecting ALDFGs. Robust reporting mechanism

	centre(s), e.g. weighing scales and net balers, is completed by end of Y2Q4 **(baseline = 0) [ZSL[3]]** 1.6 Co-design and implement equitable and inclusive feedback mechanisms by end of Y3Q1 **(Baseline = 0) [ZSL[4]].**	Disaggregated by gender, age group, a mechanism type.	is effectively upheld overtime and transparency maintained beyond timeline of this project.
2. A sustainable net recycling business model is established and underpins a solution that rediverts ADLFGs from entering the VGDS and prevent key Gangetic species entanglement	2.1 National/regional plastic net recyclers are identified and practises are assessed by end of Y2Q2 **(baseline = 0). [ZSL[5]]** 2.2 Profit and loss model calculated, informed by supply chain, and business model feasibility determined by end of Y2Q3 **(baseline = 0) [ZSL[6]]** 2.3 A partnership model is determined and contract signed by end of Y2Q4 **(baseline = 0) [ZSL[7]]**	2.1 Desk-based research to identify potential recycling partner and gather data on environmental and ethical recycling practises. Excel spreadsheet with all potential recyclers identified. 2.2 Short assessment summary document. Net sales are sufficient to cover costs of community-led supply chain. Net volumes required by recycler are aligned with known quantities of end-of-life nets produced by fishing community in Bihpur, Kahalgaon and Gopalpur. 2.3 Signed contract in place.	Environmentally friendly national/regional recyclers exist and are available and willing to partner on this scheme. Net collection and recycling meet an identified and on-going need/market, and business model is resilient to relevant market changes over time. Recycler rates are sufficient to account for costs of running local supply chain model, as well as providing a financial incentive for community members to collect/drop off nets at collection points. Volume of end-of-life nets will remain sufficient to fulfil business model needs.
3. Pro-wildlife conservation behaviours and actions are fostered in 24 villages across	3.1 Social marketing campaign for River Ganga conservation is co-developed and	3.1 Campaign and comms materials produced, community reach and engagement recorded; type is local wildlife conversation organisation.	Data relating to key species entanglement in ALDFGs are accessible.

three blocks to strengthen the effectiveness of the VGDS.	delivered with the Ganga Prahari by end of Y3Q1 **(baseline = 0). [DIA03 Core]** 3.2 20 community volunteers are trained on safe release of entangled Ganga species with the Ganga Prahari by end of Y3Q2 **(baseline = 30 Ganga Prahari members trained, 0 community volunteers are currently trained) [DIA01 Core]** 3.3 A minimum of 269 volunteers participate in riverbank clean-ups with the Ganga Prahari across Bihpur, Kahalgaon and Gopalpur by end of Y3Q4 and receive training on conducting transect surveys using Marine Debris Tracker **(baseline = 169 existing Ganga Prahari volunteers). [DIA04 Core]** 3.4 A monitoring strategy is co-designed, endorsed, and on-going implementation conducted with the Fisheries & Forestry Departments for monitoring Ganga species entanglement by end of Y3Q4 **(baseline = 0 monitoring system in use) [DI-C01 Core]**	3.2 Data on of released species documented by Ganga Prahari. Data on attendance / participation in training are recorded, and feedback data gathered, gender data are also recorded. disaggregated by gender; age group; stakeholder group; training typology; proportion of trained people employed by their host organisation at the end of the project. 3.3 Data on attendance / participation in river bank clean-up events are recorded, and feedback data gathered. Weight of nets collected is recorded, as well as gender data for participants. Open access data from project sites recorded on Marine Debris Tracker using existing WII Ganga litter list in Hindi. Data disaggregated by gender; age group; stakeholder group. 3.4 Data on key species entanglement in ALDFGs are accessed via the Fisheries & Forestry Department; disaggregated by knowledge/practice area, product typology.	Fisheries & Forestry Department is willing to sustain on-going monitoring of species entanglement in the River Ganga. Project activities motivate communities to adopt pro-wildlife conservation behaviours
4. Scaling/replication opportunities for net recycling are identified with national/regional partners	4.1 Produce an online toolkit with a minimum of 2 supporting webinars and 1 in person events held with national stakeholders by end of Y3Q4 to share recommendations and drive replication/scaling across India, **(baseline = 0 toolkits and 0 webinars) [DIC01 Core]** 4.2 A mapping exercise is conducted by end of Y3Q4 to identify key criteria (community population, existing fisheries etc) and determine sites suitable for future replication	4.1 PDF toolkit is available for sharing. Webinar attendance records maintained, recordings available where appropriate, written summary on record, and follow up conversations conducted. All materials hosted on ZSL and WII websites. Disaggregated by knowledge/practice area, product typology. 4.2 Future sites have been assessed and a summary report is available with implementation site recommendations.	National partners have the capacity and/or resources to engage in scaling this program Additional sites identified during scoping work remain suitable for future implementation

	and scaling of the approach in India **(baseline = 0 sites) [ZSL[8]]** 4.3 Produce a government briefing/case study by end of Y3Q4, spotlighting this pilot as a solution for fulfilling national targets developed in line with the UN Global Plastics Treaty **(baseline = 0 briefings/case studies) [DI-C05 Core]**	4.3 Case study / briefing doc has been created, aligning UN Global Plastics Treaty commitments, responses recorded and follow up conversations conducted, indicator disaggregated by MEA, information typology (data, insights, case studies).	Government of India remain committed to reduction of plastic waste

Footnotes:

ZSL 1: This indicator will reflect the percentage of women who are engaged in managing the local net collection supply chain.

ZSL 2: This will be a simple indicator for the completion of a cost analysis and supporting site map.

ZSL 3: This will be a simple indicator for the purchase of balers and weighing scales within the community supply chain.

ZSL 4: This indicator will detail the number of different inclusive feedback mechanisms in place and the number of times they are utilised by community members.

ZSL 5: This indicator will be determined by the assessment criteria design to understand ethical and environmental recycling processes.

ZSL 6: This indicator will be informed through discussions with a business model consultant, but is likely to be the number and type of outputs produced during the business model feasibility assessment.

ZSL 7: This will be a simple indicator for the having a signed partnership agreement in place with a recycler.

ZSL 8: This indicator will be the number of future sites identified as suitable for replication and scaling of the model across the wider Ganges basin in India.

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. Each activity should start on a new line and be no more than approximately 25 words.)

Output 1: Community-led savings scheme is established and underpins creation of a net collection gender inclusive supply chain within 24 villages in Bihar living alongside the VGDS.

1. Co-design a community engagement plan to reach as many women as possible across all 24 villages to encourage participation in the supply chain model by end of Y2Q4.
2. Establish community savings schemes in each of the 24 villages, ensuring a minimum of 50% women members. Identify training and support needs, and work with a consultant to build capacity by end of Y2Q4.
3. Conduct a cost analysis for the supply chain and create site map for collection / processing / consolidation centres by end of Y3Q1.
4. Identify transportation routes and finalise agreements. Recruit local coordinator(s) and finalise supply chain model reporting mechanism by end of Y2Q4.

5. Create equipment lists for supply chain and place orders as required by end of Y3Q2.
6. Co-design and implement equitable and inclusive feedback mechanisms by end of Y3Q1.

Output 2: A sustainable net recycling business model is established and underpins a solution that rediverts ADLFGs from entering the VGDS and prevent key Gangetic species entanglement

1. Identify existing national/regional plastic recyclers. Establish criteria for assessing ethics / environmental impacts of their practices by end of Y2Q3.
2. Calculate a profit and loss model with consultant and test business model feasibility by end of Y2Q4.
3. Agree a partnership model with chosen recycler and draft / sign contract by end of Y3Q1.

Output 3: Pro-wildlife conservation behaviours and actions are fostered in 24 villages across three blocks to strengthen the effectiveness of the VGDS

3.1 Co-design and deliver community engagement campaign with Ganga Prahari by end of Y3Q1.

3.2 Support Ganga Prahari to deliver training on safe release of entangled species by end of Y3Q2.

3.3 Support Ganga Prahari to deliver riverbank clean-up events and train volunteers in robust monitoring of ALDFG abundance by end of Y3Q4.

3.4 Co-design and implement species entanglement monitoring strategy with the Fisheries and Forestry Departments by end of Y3Q4.

Output 4: Scaling/replication opportunities for net recycling are identified with national/regional partners

4.1 Produce toolkit and deliver online webinars and in-person event to share approach and drive replication/scaling along the Ganga by end of Y3Q4.

4.2 Identify key criteria for future implementation sites, and collaborate to conduct a mapping exercise for future replication zones by end of Y3Q4.

4.3 Produce government briefing of pilot case study, create engagement opportunities by end of Y3Q4.

Annex 3: Standard Indicators

Table 1 Project Standard Indicators

Please see the Standard Indicator guidance for more information on how to report in this section, including appropriate disaggregation.

DI Indicator number	Name of indicator	If this links directly to a project indicator(s), please note the indicator number here	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-B09	Number of individuals / households reporting a decrease in unsustainable practices as a result of project activities.	0.2	People	Gender; Age	0				
DI-B09	Number of individuals / households reporting a decrease in unsustainable practices as a result of project activities.	0.3	People	Gender; Age	0				
DI-D18	Drivers of biodiversity loss assessed to have been reduced or removed.	0.4	Number	Assessments	0				
DI-D04	Stabilised/ improved species population (relative abundance/ distribution) within the project area.	0.5	%	Stabilised/improved	0				
DI-D02	Number of people whose disaster/climate resilience has been improved	1.1	People	Gender; Age	0				
DI-A01	Number of people from key national and local stakeholders completing structured and relevant training.	1.2	People	Gender; Age	0				
DI-B07	Number of people participating in community-based management groups and/or Payment for Ecosystem Service schemes.	1.4	People	Gender; Age	0				
DI-A03	Number of local/national organisations with improved capability and capacity as a result of project.	3.1	Organisations.	Improved	0				
DI-A01	Number of people from key national and local stakeholders completing structured and relevant training.	3.2	People	Gender; Age	0				

DI Indicator number	Name of indicator	If this links directly to a project indicator(s), please note the indicator number here	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-A04	Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.	3.3	People	Gender; Age	0				
DI-C03	New assessments of habitat conservation action needs published.	3.4	Assessments	Habitat type	0				
DI-C01	Number of best practice guides and knowledge products published and endorsed.	4.1	Number	Knowledge area	0				
DI-C05	Number of projects contributing data, insights, and case studies to national Multilateral Environmental Agreements (MEAs) related reporting processes and calls for evidence.	4.3	Number	MEA	0				