



## Illegal Wildlife Trade (IWT) Challenge Fund Evidence Annual Report

To be completed with reference to the “Project Reporting Information Note”:  
(<https://iwt.challengefund.org.uk/resources/information-notes/>)

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

**Submission Deadline: 30<sup>th</sup> April 2024**

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### IWT Challenge Fund (IWTCF) Project Information

Project reference	IWTEV012
Project title	Understanding the drivers of illegal exotic pet ownership in India
Country/ies	India
Lead Partner	Wildlife Conservation Society-India
Project partner(s)	Wildlife Conservation Society
IWTCF grant value	£ 99,946
Start/end dates of project	01 April 2023 – 31 March 2025
Reporting period (e.g. April 2023-Mar 2024) and number (e.g. Annual Report 1, 2, 3)	April 2023 - March 2024 (Annual Report 1)
Project Leader name	Kritika Balaji
Project website/blog/social media	N/A
Report author(s) and date	Kritika Balaji, Dr Vidya Athreya (WCS-India), Dr Naomi Doak (WCS), 30/04/2024

### 1. Project summary

Illegal Wildlife Trade (IWT), driven by demand for wildlife as pets, is a serious threat to many species across the globe. In India, trade in exotic pets, defined for this project as species without a history of domestication and often sourced from the wild, is seemingly increasing. Psittaciformes like African grey parrots, Testudines like Indian star tortoises, and Squamates like rhinoceros iguanas are in high demand.

Despite national legislation (Wild Life (Protection) Act, 1972 (WLPA)) banning trade in native species and international frameworks like the Convention on International Trade in Endangered Species (CITES) regulating trade in many species, Indian species are poached from the wild and non-native animals are smuggled through international ports and porous borders. Between 2019 and 2022, WCS-India recorded media reports of 292 seizures of popular pet species. Some sellers advertise their stock as captive-bred, but the legality and veracity of these claims are often dubious. Breeders smuggle wild-caught specimens into facilities to diversify the genetic stock or to meet the demand for species with low reproductive success.

With the rise of internet access in India, online platforms including social media, have emerged as formidable new marketplaces. Online sales provide a larger potential audience easy access to exotic pets and provides a platform to novice groups of collectors and sellers who engage in this illegal activity.

Current approaches to tackle exotic pet trade rely mainly on enforcement to reduce supply and deter purchasing but are not addressing demand. While there have been attempts to raise public awareness of the issue, they have had little success given the limited understanding of specific consumer groups. Preliminary data indicates urban consumers are driving demand, with young urban dwellers with disposable income as key actors, motivated to buy exotic pets as status symbols, and many purchasing through social media. Demand for wildlife as pets is a known factor behind local population declines of species like alexandrine parakeets, African grey parrots, scarlet macaws, and radiated tortoises. Unmitigated introduction of new species into an ecosystem also increases the risk of species becoming invasive, as is seen with red-eared sliders.

In India, local collectors are often impoverished or marginalized. In the absence of a diversity of responses to IWT, enforcement action has emerged as the major response, with collectors tending to be the most vulnerable to apprehension. Poaching exacerbates their social and economic conditions and threatens their health and safety through the transmission of zoonotic diseases. It also undermines efforts to protect ecosystems on which communities often rely.

With India emerging as a growing market for exotic pets, this project will gather the necessary evidence to develop a targeted approach to reducing demand. We will provide trade baselines, identify species and consumer groups involved, and develop effective messaging to change consumer behaviour. Results will inform an evidence-based gender-sensitive behaviour change strategy for key consumers of target species.

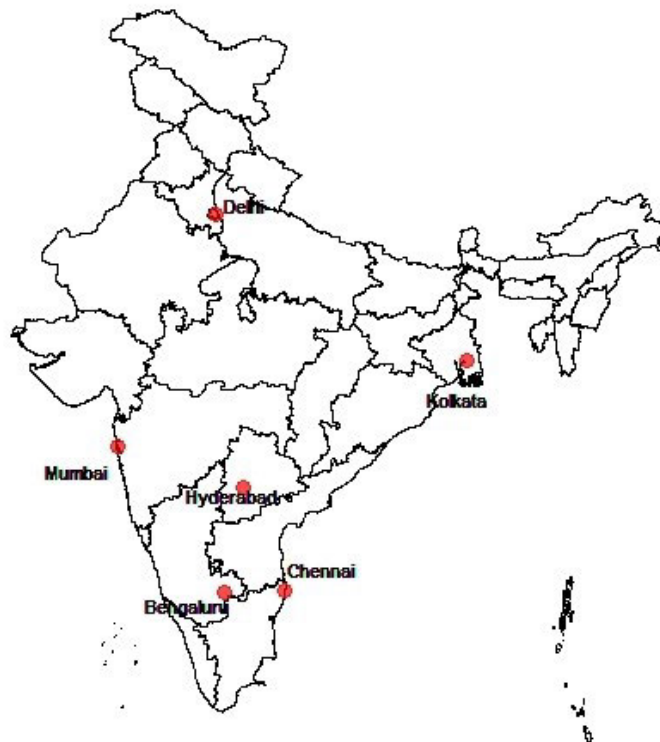


Figure 1: Map of project sites in India, primarily urban cities, which are centres for exotic pet trade and ownership.

## **2. Project stakeholders/partners**

WCS and WCS-India are formal partners in this project, with WCS-India's Counter Wildlife Trafficking (CWT) Programme responsible for project implementation and WCS providing technical support. In the first year (Y1) of the project, WCS's CWT Regional Coordinator provided valuable inputs and feedback in research development and activity implementation led by WCS-India's project members. Market Surveys (Activity 1.5) were conducted according to WCS CWT Safety & Security Guidelines, with Operational Plan feedback and approval from WCS's Global Safety & Security Director, CWT Regional Coordinator, and WCS-India Country Director.

Through Activity 1.1, we identified key project stakeholders to be exotic animal veterinarians, wildlife rescuers and rescue centre staff, law enforcement officials, and biologists/trade experts from conservation organizations. We conducted 23 interviews with these stakeholders, during which we also consulted them on the impacts of unregulated exotic pet trade and possible solutions for this IWT problem.

The Behaviour Insights Team (BIT), whom we have been engaging with since the time of project conceptualization, provided valuable inputs and advice on the development of the behaviour change strategy (Output 4). In November 2023 and January 2024, we had two online meetings with BIT to update them on the insights gained from Activity 1.1 and discuss areas for future support. In February 2024 we held a two-day workshop in Bangalore with BIT, through which WCS-India CWT staff refined research questions and methodology for existing behaviour change projects and built internal capacity for future strategies. The workshop, conducted with co-financing from a project supported by the German Government through BMUV, included strategic guidance from BIT on the exotic pet owner interview and survey questionnaires (Activity 2.1 & 2.3).

The project involves exotic pet owners and keepers as the target consumers for behaviour change interventions. During Y1, we had preliminary interactions with some exotic animal keepers and breeders, which helped tailor our questionnaires for these groups and improved our understanding on key species impacted by this trade.

We have been engaging with the British High Commission in Bangalore and New Delhi by sharing quarterly updates of the project and program activities.

In the second year (Y2) of the project, we will continue to engage with exotic animal veterinarians, as preliminary results from Activity 1.1 indicate they can potentially act as messengers to influence behaviour change of exotic pet owners. We will also continue to consult with BIT through targeted guidance sessions and engage with the British High Commission. We will further engage with exotic pet owners and keepers through Activities 2.1 & 2.3.

## **3. Project progress**

### **3.1 Progress in carrying out project Activities**

**Output 1: Detailed baseline of online and physical trade in target species in pet trade in India.**

*Activity 1.1: Conduct consultation meetings with expert veterinarians, biologists, and wildlife rescue centre staff, etc. to develop nuanced understanding of the species in trade, consumers, and challenges.*

After an extensive literature review, we developed a questionnaire (Annex 4.1) to understand native and non-native species in the exotic pet trade in India, motivation for their purchase or ownership over conventional pets, and benefits and impacts of exotic pet keeping. With

approval from WCS-India's Human Research Ethics Committee (HREC) (Annex 4.2), and following the principles of Free, Prior, Informed Consent, we conducted semi-structured interviews with 23 experts (8F, 15M) between September 2023 and November 2023. These include exotic animal veterinarians (10), biologists with experience in wildlife trade (6), wildlife rescuers (4), and law-enforcement officials (3).

Data collected from the interviews has been coded, transcribed, and stored in a secure access-restricted internal folder. Preliminary results indicate that small parrots, macaws, cockatoos, turtles, and tortoises are most preferred as exotic pets. Among pet owners, native rose-ringed parakeets (*Alexandrinus krameri*; WLP Schedule I) and non-native grey parrots (*Psittacus erithacus*; CITES Appendix I) are popular due to their interactive nature. Native Indian star tortoises (*Geochelone elegans*; WLP Schedule I; CITES Appendix I) are observed to be commonly kept, with feng shui and 'good luck charm', found to be a key driver behind the keeping of turtles and tortoises. Red-eared sliders (*Trachemys scripta elegans*) are sought after, with experts voicing concerns over their invasive nature. Preliminary results also indicate that a large proportion of popular non-native parrots and tortoises are likely captive-bred within the country (legally and illegally) or smuggled in from captive-breeding facilities in other parts of the world. It is not yet clear which species are likely captive-bred or wild-caught, and we aim to further develop understanding of this issue through Y2 of the project.

Socio-economic class, family structure (single or family unit), experience in exotic pet keeping (novice, owner, enthusiast, hobbyist), and size of house/farm emerged as primary consumer considerations for keeping different species. Preliminary results also indicate that exotic pet owners can be categorized into different groups, such as novice and hobbyist, depending on their knowledge and experience in exotic pet keeping.

A main challenge to exotic pet keeping that emerged was some pet owners' lack of knowledge on proper maintenance and husbandry practices led to respiratory infections and metabolic diseases in pets. Another challenge was consideration of space, resulting in the release of invasive pets such as red-eared sliders in local water bodies.

*Activity 1.2: Conduct preliminary online searches to finalise a list of keywords for social media/e-commerce websites for further data compilation.*

Media-reported seizures: English keywords from media-reported seizure records were identified by tallying common words from article titles and conducting preliminary online searches to check words that yielded the most accurate results. 162 unique searches were performed using different combinations of search terms and time frames. Important English action keywords were identified as 'seize/seized', 'rescues/rescued', 'exotic', 'illegal/illegally', 'smuggled/smuggling/smugglers'. Important English species keywords identified included 'bird', 'parrot', 'parakeet', 'macaw', 'turtle', 'tortoise', and 'exotic'. Keywords of local names of commonly traded native species in seven regional languages were also identified.

Social media: We conducted preliminary searches on YouTube to identify key search terms that yielded relevant results. All searches were done in an Incognito Google Chrome window, wherein no YouTube login was required. Searches were conducted in English, which also yielded regional language results. We started with general search terms (e.g., exotic pet sale India), and progressively got more specific (e.g., exotic bird sale Chennai). Species-specific searches did not provide any new/unique results not already captured in the high-level group, and location searches.

E-commerce: We also tried to identify keywords to conduct searches for e-commerce websites, including 'exotic pet store India' and 'online exotic bird sale India'.

*Activity 1.3: Conduct web-scraping to compile data from media reports, CITES database, e-commerce, and social media websites, etc.*

Media-reported seizures: With support from the WCS CWT Regional team, we developed an updated database format to store information collected from online media-reported seizures. The database captures a range of information (65 data headers) important to developing a nuanced baseline, including species seized, taxonomic data, volume of seizures, life stage and gender of the animals, spatial data collected on the location of seizure, and role in the supply chain. Using previously collected opportunistic data and targeted keyword searches, to date, we have recorded 393 native and non-native exotic pet trade incidents between 2020 and 2023. We are trialling the use of an R code to automate data extraction from online articles, including article title, summary, and images. We are also trialling the use of a ChatGPT Bot developed by WCS Lao PDR team member for automated data extraction.

Social media: YouTube searches were filtered to show channels, as channels consisted of relevant videos and provided more comprehensive information on exotic pets in trade than individual videos. For each search term, the top 15-20 channels with over 100 subscribers and with videos less than a year old were selected. Overall, through these broad searches 120 unique channels were identified. Channels selling mostly cats, dogs, pigeons, and unlisted species such as love birds and budgerigars were excluded. 29 channels advertising or selling CITES Appendix I and II species were marked for further analysis.

E-commerce: Targeted keyword searches for/on e-commerce websites did not yield sufficient results. As such we switched to opportunistic data collection of e-commerce websites, through snowballing data collection methods. Through this, we developed a list of independent e-commerce websites selling exotic pet species.

*Activity 1.4: Clean and analyse data from 1.3 to establish a detailed record of the exotic pet species found in online markets, with a focus on Psittaciformes, Squamates, and Testudines.*

Cleaning of data is ongoing, alongside data-collection.

Media-reported seizures: Preliminary analysis shows a high volume of trade of Indian star tortoise and red sand boa (*Eryx johnii*; WLP Schedule I; CITES Appendix II), although it is often difficult to distinguish the purpose of trade for red sand boa between pet keeping and superstitious practices. Other popular native species included rose-ringed parakeet and alexandrine parakeet (*Palaeornis eupatria*; WLP Schedule I; CITES Appendix II), and several species of freshwater turtles. Unique incidents detected in the native exotic pet trade included two separate seizure incidents of marsh crocodiles (*Crocodylus palustris*; WLP Schedule I; CITES Appendix I). Amongst the non-native species, reptiles and primates were the two most prevalent taxonomic groups seized. Ball pythons (*Python regius*; CITES Appendix II) appear to be the most frequently traded non-native reptile species. Amongst the primates, a diverse range of endangered species from South America and Southeast Asia were reported.

Social media: We developed a database to organise data collected from relevant channels on YouTube. Headers were broadly categorized to capture post metadata, species information, spatial information, and seller information and claims. Preliminary analysis indicates that advertising/sale on YouTube was primarily in non-native species, with very few videos observed of native species being sold in pet markets or stores. Birds were more prevalent on YouTube channels than reptiles, with a majority of identified channels selling parrot and macaw species. Of the channels selling reptiles, species observed included Aldabra giant tortoise (*Aldabrachelys gigantea*; CITES Appendix II), black-spotted ridged-tailed monitor (*Varanus baritji*; CITES Appendix II), blood python (Pythonidae family), and rhinoceros iguana (*Cyclura* species).

E-commerce: Websites selling exotic pet species primarily included non-CITES listed species, although some sites were advertising CITES Appendix II macaw species for sale. Species sold through e-commerce websites were similar if not the same as those observed on social media, with some YouTube channels having their own e-commerce sites for purchasing.

*Activity 1.5: Conduct annual market surveys in target pet markets in two cities in India.*

Based on previous records of exotic species sales, we identified two markets, Crawford Market in Mumbai and Galiff Street in Kolkata, to conduct observational surveys. Between October 2023 and March 2024, WCS-India CWT staff conducted three surveys in each market. The surveys were conducted in accordance with WCS CWT Safety and Security guidelines.

The surveys aimed to identify native and non-native species sold in the markets, including any trends in life stage (such as fledglings or juveniles), get a rough estimate of volumes of sales in target species groups, and assess the layouts of the markets including shops, genders of sellers, and any concealment methods used. Information collected from the surveys is being kept strictly confidential.

Both Crawford Market and Galiff Street are popular tourist destinations, with Crawford Market selling homeware goods, clothes, and food, along with domestic and exotic pet species. In Crawford Market, we observed bird species for sale, with some observation of reptiles such as turtles, tortoises, and iguanid species. Indian star tortoises, whose sale and ownership are prohibited under Indian law, were observed available for sale in the market or through market sellers (Annex 4.3). In Galiff Street, we primarily observed bird and fish species for sale, many of which were not listed in CITES. Sun parakeets (*Aratinga solstitialis*) and green-cheeked parakeets (*Pyrrhura molinae*) were the only CITES listed (Appendix II) species observed in the market. Persistent presence of enforcement officials in Galiff Street has likely deterred open sale of protected species in this market, with anecdotal evidence suggesting that sale has been displaced to other locations or private applications and groups.

We also conducted a preliminary scoping survey of four market areas in Delhi.

## **Output 2: Consumer profiles for target species including their motivations for purchase and triggers for behaviour change.**

*Activity 2.1: Develop the questionnaire (based on existing consumer survey literature) for interviews with owners/collectors and get human studies ethics committee clearance for the same.*

Based on a literature review and results of Activity 1.1, we developed a questionnaire for interviews with exotic pet owners and collectors. The questionnaire aims to understand the owner demographics, psychographics, preference of exotic pets, motivation for the same, and messaging that may change behaviour of exotic pet ownership. In February 2024, during the workshop guidance session, we discussed the interview questionnaire and methodology with BIT (Annex 4.4) and have since incorporated their feedback on the framing of questions and additional questions.

*Activity 2.2: Conduct interviews with owners/collectors of exotic pets to further develop questionnaire and refine messaging options to change behaviour.*

We are in the process of identifying owners and scheduling interviews. We aim to begin interviews in Y2Q1.

*Activity 2.3 Finalize questionnaire for online consumer survey including pre-tested messaging options.*

Alongside the development of Activity 2.1, we also developed a survey questionnaire to conduct an online survey to expand on interviews and understand the demographics of consumers and effective messaging that may change their purchasing behaviour. The questionnaire and survey methodology were discussed with BIT in February 2024 (Annex 4.4), and we have since incorporated their feedback on additional questions.

*Activity 2.4: Create and run consumer survey website, including promoting it on social media and search engines.*

We identified website development companies and marketing companies to assist with running the survey online. We have also been in conversation with the WCS-India Communications Program to develop graphics and visual content for this gamified survey. This activity will likely commence at the beginning of Y2Q2.

*Activity 2.5: Analyse consumer survey data to identify and develop at least 3 key consumer profiles in consultation with behaviour change experts.*

This activity is not due to commence until Y2Q2.

### **Output 3: Baseline of public sentiment toward exotic pets to inform strategy and assist with future demand reduction interventions.**

*Activity 3.1: Compile metadata on social media posts of exotic pets (along with Activity 1.3).*

Alongside Activity 1.3, we started compiling comments from popular YouTube videos related to species groups, from the 29 identified channels. We used web-scraping software to automate data collection of comments. To maintain anonymity, this was done on Google Incognito window. We explored similar software to compile comments from Meta, but since web-scraping on this platform is not allowed, we are considering other means of data collection, including manual collection, which will be conducted in Y2.

*Activity 3.2: Conduct analysis of meta data to establish an understanding of public sentiment toward exotic pets, against which future interventions can be measured.*

We conducted a literature review to understand best practices used by other researchers in conducting text and sentiment analysis on social media, including software/code used, taxa examined, and baseline data points collected.

Through preliminary examination across YouTube videos, we identified types of comments including those specifying interest in purchasing the species in the video and inquiries related to contact details, price, care, and delivery; questions about animal behaviour and tameness; shock at the handling of animals commonly considered dangerous; admonishments for the keeping of exotic wildlife as pets; and positive comments expressing pleasure at the contents of the video or seller in the videos. YouTube comments were in English and regional languages. Regional words and phrases either used the script of the language itself or were transliterated using the English alphabet.

We held preliminary discussions with over 10 companies, having functionalities of conducting sentiment and text analytics but these were rejected due to budgetary constraints. We will likely use Python lexicon or NVivo for conducting the final analysis.

### **Output 4: Behaviour change strategies for priority consumer profiles of target species.**

*Activity 4.1: Develop behaviour change strategies in consultation with behaviour change experts.*

This activity is not due to commence until Y2Q3 and on completion of data collection.

### **3.2 Progress towards project Outputs**

#### **Output 1: Detailed baseline of online and physical trade in target species in pet trade in India.**

Good progress has been made toward achieving this output. At the start of the project, while we had a good understanding of the scale of illegal exotic pet trade in India, we had limited knowledge on the extent of species impacted. The utilization of multiple data sources - interviews with experts, media-reported seizures, social media, and physical market surveys (Activities 1.1, 1.4, 1.5) - is significantly contributing to developing this in-depth understanding on popular and niche demand for exotic wildlife.

During the first eight months of the project, we interviewed 23 expert stakeholders, which increased our understanding of species impacted, types of consumers, and broader implications on public health and ecosystems (Indicator 1.1). We have been systematically observing advertisements and sales of exotic wildlife online on 29 relevant YouTube channels (Indicator 1.2) and through six surveys of two physical markets (Indicator 1.3). Observing this trade has helped identify popular species, their prices, and claims made by sellers to promote purchasing behaviour. Conducting these activities in parallel has also contributed to understanding trade dynamics between emerging (online platforms) and traditional markets (physical markets) and the resultant shift in modus operandi and consumer preferences. We have also documented 393 media-reported seizures to develop understanding of the range of species found in illegal exotic pet trade in India.

We will continue data collection, cleaning, and preliminary analysis toward this output through Y2 to develop a baseline report.

#### **Output 2: Consumer profiles for target species including their motivations for purchase and triggers for behaviour change.**

We are on track to achieve this output. At the start of the project, we had an indication that affluence and social status were some of the driving factors behind illegal exotic pet trade in India. Through Activity 1.1, we have gained deeper insight into the types and stages of exotic pet keepers, such as novice, enthusiast, and breeder. Results from Activity 1.1 indicate that lifestyle factors and superstitious beliefs are key drivers in the preference of exotic pet groups over conventional pet animals. Preliminary results also species dwelling space requirements and financial considerations may be triggers to change behaviour. In February 2024, we refined the questionnaire (Indicator 2.1) and survey (Indicator 2.2) for exotic pet consumers, with inputs provided by BIT consultants. Following data collection through interviews and surveys, we will hold consultation meetings with the BIT team to identify top consumer profiles (Indicator 2.3) to target through future behaviour change interventions.

#### **Output 3: Baseline of public sentiment toward exotic pets to inform strategy and assist with future demand reduction interventions.**

Good progress has been made toward achieving this output. Through Activity 1.2, we have identified 29 YouTube channels advertising or selling relevant exotic pet species having over 100 relevant videos that will be analysed through Y2Q1 (Indicator 3.1). We identified relevant tools and code to web-scraping and sentiment analysis and have been scraping comments



alongside Activity 1.3. Through Y1, we focused our data collection on YouTube, and in Y2 will aim to collect similar data for Meta (Facebook) groups (Indicator 3.2). There has been a delay in starting collection of data from Meta due to the company's policy on web scraping of comments, but we are currently exploring alternative options to collect this data. We will develop a report highlighting our results through sentiment analysis, which will also be incorporated into the behaviour change strategy in Y2Q4 (Indicator 3.3).

#### **Output 4: Behaviour change strategies for priority consumer profiles of target species.**

Activities under this output are not due to commence until after data collection and analysis under previous activities is complete. As such there is no progress to report on for this Output. We expect to commence these activities in Year 2.

### **3.3 Progress towards the project Outcome**

The project is making good progress toward increasing the evidence-base available for the development and implementation of a behaviour change campaign to reduce demand for target species as exotic pets (outcome). Data collection through the activities has been proceeding smoothly and is already adding to the knowledge on this topic.

When the project started there was limited and anecdotal evidence on species impacted by illegal exotic pet trade and no known understanding of the consumer groups involved to develop evidence-based behaviour change strategies and implement effective interventions. Through the vigorous evidence building enabled by this project, we have made significant progress towards achieving such a strategy to reduce demand for target exotic pet species.

We continue to collect and analyse various types of data to develop the baseline on the size of the market for target species (Indicator 0.1) and will meet this indicator by the target of Y2Q3. Substantial data has been collected through 23 expert stakeholder consultations, recording of 393 media-reported seizure incidents, social media listening of 29 YouTube channels, and six market surveys. Data collected through these sources is providing an extensive understanding of the scale of illegal exotic pet trade in India and is also identifying species most impacted by trade to focus behaviour change strategy development on.

We have developed the questionnaire and survey to understand consumers of exotic pets and develop profiles for those consumers of target species (Indicator 0.2). We have been in discussion with BIT to gain feedback on the same. This indicator is slightly behind schedule due to time requirements for identifying exotic pet owners for interviews, but we will aim to make up the time in Y2.

We are confident that we will achieve the outcome by the end of the project, and produce the finalised behaviour change strategy for key consumers of target species by Y2Q4 (Indicator 0.3).

### **3.4 Monitoring of assumptions**

*Assumption 1: Impacts from ongoing Covid-19 pandemic do not disrupt project activities.*

Comment: This assumption holds true. Covid-19 restrictions have been lifted in India and project implementation has not been impacted by the reintroduction of restrictions. While there have been resurgences of cases, with the possibility of resurgences in the future, it seems unlikely that these will lead to Government restrictions as were previously imposed, and as

such it is unlikely these will impact project delivery in any significant way.

*Assumption 2: Project species continue to be popular as pets.*

Comment: This assumption holds true. As indicated through media-reported seizures, social media listening, and interviews with experts, the project focus species of Psittaciformes, Testudines, and Squamates continue to be popular as exotic pets. Increasing seizures (or reporting of seizures) of the focus species provide further evidence that the trend of exotic pet keeping continues to gain popularity in India. Seizures in various species of primates also indicates there may be a niche demand or popularity of these animals, which may be examined as the project develops.

*Assumption 3: Sale of wildlife continues in markets and online platforms despite enforcement efforts.*

Comment: The validity of this assumption is subjective. While there have been some enforcement measures to curb cyber-assisted wildlife crimes on social media platforms, sale and advertisement of wildlife seems to continue online, though it may be too soon to determine any impact of enforcement efforts.

Through the physical market surveys, we have ascertained an overall reduction of species observed in some of the pet markets as compared to a few years ago. This reduction has been especially noticeable in Galiff Street in Kolkata, where the routine presence and plain-clothes patrolling of enforcement officials at the market has seemingly deterred sale in the market. This does not indicate that demand for exotic species has reduced, rather that the market has been displaced to more covert buyer-seller interactions and closed communication applications and platforms. Surveys also indicate that physical markets are dynamic, with different species observed during each survey visit. As such, we will continue to survey identified markets and will also aim to identify and observe additional markets when possible.

*Assumption 4: Proposed Amendment to current wildlife laws does not impact the nature of wildlife sales.*

Comment: In December 2022 an Amendment to WLPA was passed, coming into effect as law since April 2023. The Amendment brings into effect significant changes to the WLPA, importantly the inclusion of CITES regulations and CITES listed species through chapter VB. This aims to enable better government monitoring of breeding and trade in CITES listed species and brings CITES listed species under the jurisdiction of State Forest Departments, giving them the authority to seize and prosecute illegal trade incidents. Relevant Rules on breeding and trade of CITES listed species were notified in March 2024, providing guidelines for registration of captive specimens to the identified authority. The enactment of this law has seemingly not impacted the demand for exotic pet animals in India. Long-term impacts of this remain to be seen.

*Assumption 5: Seizures of non-charismatic wildlife like turtles and lizards are reported by media organizations.*

Comment: Media reporting of seizures of what are often viewed as non-charismatic wildlife continues, indicating that this assumption likely holds true.

*Assumption 6: Consumers answer survey questions honestly and authentically so that consumer groups can be identified.*

Comment: The assessment of this assumption is pending completion of activities under Output 2.

### **3.5 Impact: achievement of positive impact on illegal wildlife trade and poverty reduction**

The expected impact of our project, as indicated in the application form, is an improved conservation outlook for target species through development of an evidence-based behaviour change strategy to reduce demand for exotic pets.

We are confident that the evidence collected on species and consumers of exotic pet trade and the preliminary testing of messaging options to change behaviour will enable us to develop a robust gender-sensitive strategy and contribute to improved species conservation.

Evidence on the range and volumes of native and non-native species in illegal exotic pet trade in India will improve global understanding on the threat posed to them by this demand. Understanding of wildlife health and welfare conditions, through interviews with experts and pet owners, may inform recommendations on compassionate, sanitary, and ethical standards for legal exotic pet ownership. Establishment of a documented baseline record, which does not currently exist, will also provide standards against which the effectiveness of future interventions can be measured.

Lessons learned through this project are already informing another project on illegal exotic pet trade funded by the US Government, which examines trade across Bangladesh, Bhutan, India, Maldives, Nepal, and Sri Lanka. Targeted behaviour change approaches are relatively new in India, which has conventionally relied on general awareness building to reduce demand. Lessons learned from this work, which we intend to share widely, may increase interest and adoption of this preventive approach in the country.

In the long-term, by developing effective strategies to reduce demand for exotic pet species, that are intended to be implemented through a Main Project, this project will also contribute to dismantling collection and trade networks that often exploit and embroil impoverished communities. Other NGOs are implementing livelihood support projects for such communities, and strategies developed through this project will complement ongoing efforts by reducing opportunities for entrapment in illicit activities.

## **4. Thematic focus**

The project supports the focus of **reducing demand for IWT products**. This Evidence Project will develop data-driven baselines and nuanced consumer profiles, including motivations and communication strategies to change behaviour. This information will be used to inform future fundraising efforts, including a proposal for a DEFRA IWT Challenge Fund Main Project, to implement demand reduction campaigns for exotic pet species in India that will ultimately benefit the conservation of target species. Given the dynamic nature of this trade, clear and deep understanding of this issue is critical for countering the demand. Public sentiment captured through text analysis of open access social media comments will provide important baselines against which impact of future demand reduction campaigns can be measured. The baseline report and consumer profiles report produced at the end of the project will improve the knowledge base for other projects that aim to reduce demand for IWT products.

## **5. Impact on species in focus**

This Evidence Project will generate a strong base to inform behaviour change strategies that will benefit project target species groups (Psittaciformes, Testudines, and Squamates) through enhanced conservation focus and efforts.

Through Y1, we have been collecting baseline data to develop a comprehensive understanding of the extent of species impacted by exotic pet trade in India (Indicator 0.1). Information gathered through expert consultations (Indicator 2.1) is already providing some information on which of these species are likely captive-bred or wild-caught to meet demand as exotic pets in India. In Y2, through triangulation of data-sources in this project, we will identify species most impacted by trade (i.e. wildlife whose populations in wild habitats are being depleted by illegal exotic pet trade). Continued assessment through Y2 will develop behaviour change strategies that will lead to a positive impact for the conservation of identified key species (Indicator 4.3). Preliminary results indicate that Indian star tortoises and grey parrots are among the species most impacted by trade, but this will be confirmed when data collection is complete.

**6. Project support for multidimensional poverty reduction**

Evidence built through this project will inform interventions to reduce demand for the target species, which in turn is expected to reduce their level of trafficking and correlated impacts. This will indirectly benefit local communities, who are often the most affected by wildlife trafficking through depletion of natural resources and bear greater vulnerability to exploitation and prosecution in trafficking cases.

Reduced risk of transmission of zoonotic diseases and risk of localised outbreaks will also alleviate the financial burden on resident communities, which can also exacerbate impoverished economic conditions. Increased protection of species that are culturally important to local communities in their respective native ranges may preserve their sense of cultural identity and help increase their acceptance towards future conservation projects.

**7. Gender Equality and Social Inclusion**

Please quantify the proportion of women on the Project Board <sup>1</sup> .	Informal project board (which consists of project specific staff and CWT programme staff who contribute to the project in implementation and advisory capacities) includes 6 individuals who identify as female.  Project Leader (F), Project Coordinator (F), Technical Assistant (F), Intern (F), Senior Consultant (M), Finance Manager (M), Country Director (F), CWT Regional Coordinator GM-SA (F)
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women <sup>2</sup> .	WCS-India and WCS are formal partners on the project. WCS-India is led by a woman Country Director. WCS support is provided by CWT Regional Coordinator, also a woman. For this project, 100% of the partners are led by women.

GESI Scale	Description	Put X where you think your project is on the scale
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<sup>1</sup> A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

<sup>2</sup> Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

<b>Not yet sensitive</b>	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
<b>Sensitive</b>	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.	<b>X</b>
<b>Empowering</b>	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	
<b>Transformative</b>	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

This project also aims to document gender roles and differences in consumers and possibly sellers of exotic pets, to ensure that recommended demand reduction interventions are gender sensitive and mitigate gender-biased impacts. While a GESI context was not taken into consideration when designing our approach, through implementation of the project we are cognizant of gender-based inequalities and ensuring meaningful participation of all genders.

While conducting expert consultations (Activity 1.1), we have interviewed with male and female experts (7F, 15M) to ensure information collected is inclusive of gendered viewpoints. In recording of media-reported seizures, social media listening, and market surveys (Activities 1.4 & 1.5), we are also recording genders of traders/transporters/sellers wherever possible to document any gender-affiliated roles. Preliminary results indicate the majority of online and physical marketplace sellers are men. Most media-reported seizure incidents involve men, but some reported seizures of exotic pets have included women who were accused of aiding the transit of wildlife. As this project focuses primarily on demand, we are not able to collect information on the genders of collectors but hope to examine this in greater detail through future projects.

Although data collection through pet owner interviews and surveys (Activity 2.2 and 2.4) has not yet started, consultations with experts (Activity 1.1) indicates a predominant gender divide in consumers of target species, with reptile owners (barring novice turtle and tortoise owners) tending to be predominantly male. We will ensure to interview and survey various genders of exotic pet owners to ensure that strategies developed are gender attentive.

Care will be taken in developing behaviour change strategies (Activity 4.2) to ensure there is no reinforcement of gender stereotypes. Care will also be taken when recommending behaviour change interventions to mitigate any unintended consequences on prosecuted genders.

## 8. Monitoring and evaluation

We are conducting project Monitoring, Evaluation, and Learning (MEL) as indicated in the proposal with no major changes. As an Evidence Project, we are largely monitoring implementation through progress on indicators in the log frame.

We have made some qualitative anecdotal observations that can be considered as successes

for the project. During expert consultations (Activity 1.1), the majority of participants indicated reducing demand for illegal exotic pet species as a key approach to tackle this problem. Their suggestions on the means to achieve this have been included in the data collected from the interviews. Some participants also indicated a scope for sustained engagement and collaboration to do so, which may be considered during the development of the Main Project. With support from a project funded by the Bureau of International Narcotics and Law Enforcement (INL), we recently had a meeting with the Additional Director of the Wildlife Crime Control Bureau (who are the nodal government agency mandated to counter IWT in India). He expressed a keen interest and overall support in the development of consumer profiles and the behaviour change approach taken by this project.

We maintain a workplan to ensure realistic planning and implementation of the activities according to the project timeline. Weekly meetings are held between project staff to discuss progress and any challenges. The Project Leader also regularly reports on activities and any challenges with the WCS-India Country Director and WCS CWT Regional Coordinator. The Project Leader and WCS-India Finance Head also hold routine meetings and bi-annual health checks to track and adjust expenditure as required. We also track implementation challenges and learnings to adapt the project as required and have communicated these to BCF in the half-year report and through formal change requests.

## **9. Lessons learnt**

The past year of implementing this project has been enlightening on multiple aspects including knowledge on exotic pet trade and behaviour change, project management, fiscal prudence, staff skilling, and mitigating short delays. We have learned the following vital lessons:

Lesson 1: Evidence collection is an iterative process that takes time and requires adaptive management in the research and work plan, especially when working with other stakeholders.

Comment: It has taken longer than anticipated to approach exotic pet owners for interviews (Activity 2.2), due to a delay in identifying owners. Data collection through Meta was also slightly delayed due to company policies on web scraping. The team has demonstrated a good ability to adapt to such work plan changes, while continuing to ensure project implementation goes smoothly. Any changes in timeline will be communicated to BCF through a Change Request. We are confident to meet the intended outcome of the project on track.

Lesson 2: In future project planning, adequate time should be allocated to ensure team members can read and receive training to implement new approaches.

Comment: Behaviour change is a new approach for the team, so it is taking time to fully understand methodologies and techniques. With additional training on social science research methods and support from BIT, the team is making good progress in being well-versed in this approach.

Lesson 3: The sensitive nature of the project limits our ability to safely engage with some exotic pet owners, restricting our understanding of trade in rare or highly valued species.

Comment: This challenge is difficult to overcome, as the associated risks may be too high to merit approaching individuals involved in illegal activities. This should also be recognized as a limitation of the study.

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

Majority of feedback, including on the log frame, received on project approval has been incorporated and the same intimated to BCF (email dated 22-03-2023). Feedback provided on avoiding bias in online survey design and methodology (Activity 2.3 and 2.4) was also addressed through communication to BCF (email dated 31-10-2023). The following response was submitted:

The aim of the online consumer survey is to capture current/potential exotic pet owners demographics, psychographics, and pet preferences; and to determine an effective messaging strategy to change their behaviour of purchasing. The survey questionnaire is based on a design developed by Moorhouse et al., 2017<sup>3</sup>, and will be adapted to the Indian context. In Y2, to avoid bias in our sampling design, we will:

- Follow an experimental design, similar to Moorhouse et al., 2017, with control and treatment statements, and use probabilistic models in analysing results.
- Promote participation across genders by using gender neutral terminology in the survey questions.
- Promote participation across various language speakers and cultural groups by having regional language options for the survey.
- Ensure relevance of the survey questions to various types of owners by incorporating findings from interviews with experts.
- Promote and increase participation by using gamification techniques in survey design, such as visually appealing graphics.
- Ensure that participants know they are free from risk of persecution through their responses by anonymising the survey and maintaining data confidentiality.
- Ensure wider accessibility to the survey, beyond online platforms, by sharing the survey with interviewed experts and exotic pet owners, who may in turn circulate it among known exotic pet owners (likely on WhatsApp).
- Ensure wide accessibility to the survey by promoting the survey through search engine optimization on Google and marketing on relevant YouTube channels in India.
- Ensure comprehensive consideration of all types of owners when designing behaviour change strategies by triangulating survey results with exotic pet owners and expert interview results.
- Seek advice from WCS-India's Human Research Ethics Committee to ensure there are no other inherent biases.

## 11. Risk Management

We have not observed any new risk in Y1, that were previously unaccounted for.

## 12. Sustainability and legacy

We are already seeing internal benefits from this project through increased knowledge in CWT program staff on trade in exotic pets and behaviour change approaches. WCS-India staff recently conducted an organization wide exercise to reflect and revise program strategic approaches, during which CWT program members (who are also staff on this project) identified behaviour change and demand reduction as a key strategic approach to meet the future goal of reducing IWT in India. This project and support from BIT have been instrumental in developing

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<sup>3</sup> Moorhouse, T.P., Balaskas, M., D'Cruze, N.C. and Macdonald, D.W. (2017), Information Could Reduce Consumer Demand for Exotic Pets. *Conservation Letters*, 10: 337-345. <https://doi.org/10.1111/conl.12270>

capacity of team members in behaviour change methods and tools to implement our long-term strategic vision. Research and results from this project are also helping inform other projects on illegal exotic pet trade including that funded by the USG, which aims to document trade in South Asia through collaboration and partnerships with other NGOs and government stakeholders.

The intended benefits post this project are still valid. The baseline developed by this project, which does not currently exist, will be disseminated so that the wider community of stakeholders may also benefit. Sentiment analysis to capture public perception will also benefit future projects, by acting as a reasonable measure against which future intervention impact can be measured. The evidence and experience gained on messaging testing with consumers will provide valuable information that may allow scaling or replication of this project methodology to other landscapes or IWT problem areas that require a behaviour change approach.

Our exit strategy has not changed. This project will result in an evidence-based gender-sensitive behaviour change strategy to reduce ownership and purchasing behaviour of key consumers of target pet species. We anticipate the implementation of this strategy through development of a Main Project.

### **13. IWT Challenge Fund identity**

We have not yet produced any output with the scope of promoting the IWT Challenge Fund. Given that our research is still ongoing, there has not yet been an opportunity for promotion of the IWT Challenge Fund. Once the baseline report is generated, we will publicise it and also aim to publish findings in other forms (popular articles, academic literature, case studies on behaviour change community practitioner forums).

We will also take available opportunities to share the findings and learnings with a wider audience, including other NGOs, researchers, subject experts, journalists, government partners, and other stakeholders. This may also include through events and presentations to the wider community in India and other to WCS country programs through our community of practice. We will ensure that the contribution of the UK Government is recognized and that the IWT Challenge Fund is identified by relevant stakeholders.



## 14. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been reported in the past 12 months	No
Does your project have a Safeguarding focal point?	Yes (Project Leader, Kritika Balaji, [REDACTED]) Other Safeguarding focal points - <ul style="list-style-type: none"> <li>- WCS-India Human Research Ethics Committee (for studies with human subjects)</li> <li>- WCS Safety &amp; Security Director, CWT Regional Coordinator, WCS-India Country Director (for low-risk observational market surveys)</li> <li>- WCS-India HR, Admin, Infra and IT Head (for compliance on WCS-India policies and guidelines).</li> </ul>
Has the focal point attended any formal training in the last 12 months?	Yes <ol style="list-style-type: none"> <li>1. CWT Safety &amp; Security Training: Training on threat assessment and risk mitigation during CWT operations, Feb 2024</li> <li>2. WCS Minimum Standards Ethics Training: Training on ethical practices during qualitative data collection, including principals of free, prior, informed consent on studies with human subjects, Feb 2024.</li> </ol>
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: 100% [4] Planned: 0% [0]
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.	
There has not been any challenge related to safeguarding. Project staff are briefed on WCS-India policies when they join the organization. Relevant staff have also completed training on conducting research with human subjects and have been consistently implementing the principles and good practices learnt in our work.	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify.	
All the safeguarding training for required activities have been completed in Y1 of the project, and we do not anticipate any additional safeguarding training in Y2.	
Please describe any community sensitisation that has taken place over the past 12 months; include topics covered and number of participants.	
Not Applicable	
Have there been any concerns around Health, Safety and Security of your project over the past year? If yes, please outline how this was resolved.	
There have been no concerns about Health, Safety and Security in our project over the last year.	

## 15. Project expenditure

Please expand and complete Table 1. If all receipts have not yet been received, please provide indicative figures and clearly mark them as Draft. The Actual claim form will be taken as the final accounting for funds.

**Table 1: Project expenditure during the reporting period (April 2023-March 2024)**

Project spend (indicative) since last Annual Report	2023/24 Grant (£)	2023/24 Total actual IWTCF Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
<b>TOTAL</b>				

Highlight any agreed changes to the budget and **fully** explain any variation in expenditure where this is +/- 10% of the budget. Have these changes been discussed with and approved by IWT Challenge Fund?

**Table 2: Project mobilised or matched funding during the reporting period (1 April 2023 – 31 March 2024)**

	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 (£)			

**16. Other comments on progress not covered elsewhere**

Not applicable

**17. 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).

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

## Annex 1: Report of progress and achievements against logframe for Financial Year 2023-2024

Project summary	Progress and Achievements April 2023 - March 2024	Actions required/planned for next period
<i><b>Impact:</b> Improved conservation outlook for target species through development of an evidence-based behaviour change strategy to reduce demand for exotic pets</i>	<p>Collected evidence on species impacted by illegal exotic pet trade from various data sources.</p> <p>Collected evidence on demographics and motivations of consumers whose behaviour of exotic pet ownership is driving demand.</p>	
<i><b>Outcome:</b> Increased evidence-base available for the development and implementation of a behaviour change campaign to reduce demand for target species as exotic pets.</i>		
<i>Outcome indicator 0.1 Baseline data on the size of the market for target species is collected by Y2Q3.</i>	0.1 Collected baseline data on native and non-native species impacted by trade through six physical market surveys, 23 expert consultations, and identification of 29 relevant YouTube channels and 393 media-reported seizures.	0.1 Continue data collection and conduct analysis to develop baseline report to document the range of species in illegal exotic pet trade, including those most impacted by trade.
<i>Outcome indicator 0.2 Consumer groups for target species are identified and profiles developed by Y2Q3.</i>	0.2 Collected preliminary information on types of consumers for different species groups through 23 expert consultations. Developed questionnaires for interviews and surveys with exotic pet owners.	0.2 Conduct at least 30 exotic pet owner interviews and gather 500 survey to identify key consumer groups and develop profiles.
<i>Outcome indicator 0.3 Finalized behaviour change strategy for key consumers of target species is developed by Y2Q4.</i>	0.3 Project staff attended in-person training from BIT which enhanced staff understanding on behaviour change theories and methodologies.	0.3 Develop gender sensitive behaviour change strategies for key consumers of target species with support from BIT through consultation meetings.
<b>Output 1. Detailed baseline of online and physical trade in target species in pet trade in India</b>		
Output indicator 1.1 At least 20 experts (including veterinarians, rescuers, and biologists) are interviewed by the end of Y1Q2.	1.1 Interviewed 23 experts (8F, 15M; 10 exotic animal veterinarians, 6 biologists with experience in wildlife trade, 4 wildlife rescuers, and 3 law-enforcement officials). Evidence provided in section 3.2 and Annex 4.1.	Analysis and summarizing of results to feed into the baseline report and behaviour change strategy.
Output indicator 1.2 Numbers of target species traded online at the end of Y2Q2.	1.2 Identification of 29 relevant YouTube channels has contributed to providing the numbers of target species traded online. Evidence provided in 3.2. Data collection and analysis.	Continue to collect data from online media reports, YouTube, and e-commerce platforms, and expand data collection to Meta and CITES trade databases. Analysis of data to feed into baseline report.
Output indicator 1.3 Numbers of target species traded in physical markets at the end of Y2Q3.	1.3 Six surveys of two markets have contributed to providing the numbers of target species traded in physical spaces. Evidence provided in 3.2 and Annex 4.2.	Continue to conduct surveys in Mumbai and Kolkata and expand surveys to other cities if possible. Analysis of data to feed into baseline report.

<b>Output 2. Consumer profiles for target species including their motivations for purchase and triggers for behaviour change.</b>		
Output indicator 2.1 Interviews with at least 30 exotic pet owners are completed and analysed by the end of Y2Q2.	2.1 The team developed the interview questionnaire, and BIT provided their input and feedback. 2.1 Activity leading to this Output will commence in Y2Q1.	Questionnaire will be submitted to the Human Studies Ethics Committee, and interviews will begin upon approval. Results will inform development of consumer profiles (Indicator 2.3) and behaviour change strategies (Indicator 4.2).
Output indicator 2.2 At least 500 survey responses are analysed to identify types of consumers (that is, current/prospective owners/buyers of exotic pets), their preferences, and their response to targeted messaging by Y2Q3.	2.2 Preliminary survey questionnaire was developed, with BIT providing input on questions. 2.2 Activity leading to this Output will commence in Y2.	Questionnaire will be finalized based on results from Activities 1.1 and 2.2. Visual survey will be developed and run on website. Results will inform development of consumer profiles (Indicator 2.3) and behaviour change strategies (Indicator 4.2).
Output indicator 2.3 Top three consumer profiles are identified for behaviour change in Y2Q3.	2.3 Activity leading to this Output will commence in Y2.	Analyse results from interviews and surveys to develop key consumer profiles. Results will inform development of behaviour change strategies (Indicator 4.2). Share learnings and results with wider audience.
<b>Output 3. Baseline of public sentiment toward exotic pets to inform strategy and assist with future demand reduction interventions.</b>		
Output indicator 3.1 Sentiment analysis of at least 100 popular exotic pet sale videos on YouTube completed Y2Q1	3.1 Web-scraping and sentiment analysis of videos from 29 relevant YouTube channels is ongoing and will conclude in Y2.	Meta-data and comments will be analysed using Python Lexicon or Nvivo to develop baseline of public sentiment toward exotic pets.
Output indicator 3.2 Sentiment analysis of at least 100 Facebook posts selling exotic pets completed in Y2Q1.	3.2 Activity leading to this Output will commence and be completed in Y2, due to delay in scraping of comments from Meta as per their policy.	Comments from Meta will be compiled.
Output indicator 3.3 Summary report of sentiment analysis with results fed into behaviour change strategy in Y2Q4.	3.3 Activity leading to this Output will commence and be completed in Y2.	Results from analysis of YouTube and Meta comments will be used to develop report on sentiment analysis, which may also be incorporated into behaviour change strategies.
<b>Output 4. Behaviour change strategies for priority consumer profiles of target species.</b>		
Output indicator 4.1 Two consultation meetings with behaviour change experts to draft interventions for behaviour change by Y2Q4.	4.1 Activity leading to this Output will commence and be completed in Y2.	To be commenced and completed in Y2.
Output indicator 4.2 Behaviour change strategies for focal species and three priority consumer profiles including suggested interventions is developed by end of Y2Q4.	4.2 Activity leading to this Output will commence and be completed in Y2.	To be commenced and completed in Y2.

## Annex 2: Project's full current logframe - updated version approved on 13th Jan 2024

Project summary	SMART Indicators	Means of verification	Important Assumptions
<b>Impact:</b> Improved conservation outlook for target species through development of an evidence-based behaviour change strategy to reduce demand for exotic pets.			
<b>Outcome:</b> Increased evidence-base available for the development and implementation of a behaviour change campaign to reduce demand for target species as exotic pets.	0.1 Baseline data on the size of the market for target species is collected by Y2Q3.	0.1 Copies of market survey results; summary report of baseline data.	<ol style="list-style-type: none"> <li>1. Impacts from ongoing Covid-19 pandemic do not disrupt project activities.</li> <li>2. Project species continue to be popular as pets.</li> <li>3. Sale of wildlife continues in markets and online platforms despite enforcement efforts.</li> <li>4. Proposed Amendment to current wildlife laws does not impact the nature of wildlife sales.</li> <li>5. Seizures of non-charismatic wildlife like turtles and lizards are reported by media organizations.</li> <li>6. Consumers answer survey questions honestly and authentically so that consumer groups can be identified.</li> </ol>
	0.2 Consumer groups for target species are identified and profiles developed by Y2Q3.	0.2 Copies of consumer profiles (disaggregated by gender if appropriate); results from consumer surveys (disaggregated by gender); results from sentiment analysis.	
	0.3 Finalized behaviour change strategy for key consumers of target species is developed by Y2Q4.	0.3 Copy of the finalized strategy including gender considerations and monitoring plan.	
<b>Output 1:</b> Detailed baseline of online and physical trade in target species in pet trade in India.	1.1 At least 20 experts (including veterinarians, rescuers, and biologists) are interviewed by the end of Y1Q2.	1.1 Copies of survey/interview results with relevant experts (disaggregated by gender and by type of expert); copies of meeting notes.	<ol style="list-style-type: none"> <li>1. Sale of wildlife continues in markets and online platforms despite enforcement efforts.</li> <li>2. Proposed Amendment to current wildlife laws does not impact the nature of wildlife sales.</li> <li>3. Seizures of non-charismatic wildlife like turtles and lizards are reported by media organizations.</li> </ol>
	1.2 Numbers of target species traded online at the end of Y2Q2.	1.2 Database of open-source information, including seizure records and online trade results.	
	1.3 Numbers of target species traded in physical markets at the end of Y2Q3.	1.3 Images and reports generated from surveying markets.	
<b>Output 2:</b> Consumer profiles for target species including their motivations for purchase and triggers for behaviour change.	2.1 Interviews with at least 30 exotic pet owners are completed and analysed by the end of Y2Q2	2.1 Copies of interview results with exotic pet owners (disaggregated by gender and other relevant demographics if appropriate).	<ol style="list-style-type: none"> <li>1. Project species continue to be popular as pets.</li> <li>2. Consumers answer survey questions honestly and authentically so that consumer groups can be identified.</li> </ol>
	2.2 At least 500 survey responses are analysed to identify types of consumers (that is, current/prospective owners/buyers of exotic pets), their	2.2 Copy of survey questions; online platform for survey roll out; survey results (disaggregated by gender and other relevant demographics if appropriate).	

Project summary	SMART Indicators	Means of verification	Important Assumptions
	preferences, and their response to targeted messaging by Y2Q3.		
	2.3 Top three consumer profiles are identified for behaviour change in Y2Q3.	2.3 Copy of meeting minutes for development of profiles; Copies of consumer profiles (gender specific if appropriate).	
<b>Output 3:</b> Baseline of public sentiment toward exotic pets to inform strategy and assist with future demand reduction interventions	3.1 Sentiment analysis of at least 100 popular exotic pet sale videos on YouTube completed Y2Q1.	3.1 Database of online trade results; copy of sentiment analysis; copies of example comments on videos.	1. Sale of wildlife continues in markets and online platforms despite enforcement efforts. 2. Proposed Amendment to current wildlife laws does not impact the nature of wildlife sales. 3. Seizures of non-charismatic wildlife like turtles and lizards are reported by media organizations.
	3.2 Sentiment analysis of at least 100 Facebook posts selling exotic pets completed in Y2Q1.	3.2 Database of online trade results; copy of sentiment analysis; copies of example comments on videos.	
	3.3 Summary report of sentiment analysis with results fed into behaviour change strategy in Y2Q4.	3.3 Copy of summary report.	
<b>Output 4:</b> Behaviour change strategies for priority consumer profiles of target species.	4.1 Two consultation meetings with behaviour change experts to draft interventions for behaviour change by Y2Q4.	4.1 Minutes of meetings with behaviour change consultants; draft interventions and strategy.	1. Project species continue to be popular as pets. 2. Consumers answer survey questions honestly and authentically so that consumer groups can be identified.
	4.2 Behaviour change strategies for focal species and three priority consumer profiles including suggested interventions is developed by end of Y2Q4.	4.2 Copy of behaviour change strategy including suggested interventions.	
<b>Activities</b> (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 Conduct consultation meetings with expert veterinarians, biologists, and wildlife rescue centre staff, etc. to develop nuanced understanding of the species in trade, consumers, and challenges. 1.2 Conduct preliminary online searches to finalise list of keywords for social media/e-commerce websites for further data compilation. 1.3 Conduct web-scraping to compile data from media reports, CITES database, e-commerce, and social media websites, etc. 1.4 Clean and analyse data from 1.3 to establish a detailed record of the exotic pet species found in online markets, with a focus on Psittaciformes, Squamates, and Testudines. 1.5 Conduct annual market surveys in target pet markets in two cities in India.			
2.1 Develop the questionnaire (based on existing consumer survey literature) for interviews with owners/collectors and get human studies ethics committee clearance for the same. 2.2 Conduct interviews with owners/collectors of exotic pets to further develop questionnaire and refine messaging options to change behaviour.			

Project summary	SMART Indicators	Means of verification	Important Assumptions
<p>2.3 Based on the results of 1.1 and 2.2, and in consultation with behaviour change consultants, finalize questionnaire for online consumer survey including pre-tested messaging options.</p> <p>2.4 Create and run the consumer (that is current/prospective owners/buyers of exotic pets) survey website, including promoting it on social media and search engines.</p> <p>2.5 Analyse consumer survey data to identify and develop at least 3 key consumer profiles in consultation with behaviour change experts.</p> <p>3.1 Compile metadata on social media posts of exotic pets (along with 1.3).</p> <p>3.2 Conduct analysis of meta data to establish an understanding of public sentiment toward exotic pets, against which future interventions can be measured.</p> <p>4.1 Develop behaviour change strategies in consultation with behaviour change experts.</p>			



## Annex 3 Standard Indicators

**Table 1 Project Standard Indicators**

<b>IWTCF Indicator number</b>	<b>Name of indicator</b>	<b>Units</b>	<b>Disaggregation</b>	<b>Year 1 Total</b>	<b>Year 2 Total</b>	<b>Total to date</b>	<b>Total planned during the project</b>
IWTCF-D13	0.1 Baseline data on the size of the market for target species is collected by Y2Q3	Number	None	-	-	Development of the report is underway	1
IWTCF-C07	2.1 Interviews with at least 30 exotic pet owners are completed and analysed by the end of Y2Q2	People	F/M	-	-	Activity has not yet started	30
IWTCF-C07	2.2 At least 500 survey responses are analysed to identify consumers, their preferences, and their response to targeted messaging by Y2Q3	People	F/M	-	-	Activity has not yet started	500

**Table 2 Publications**

<b>Title</b>	<b>Type</b> (e.g. journals, best practice manual, blog post, online videos, podcasts, CDs)	<b>Detail</b> (authors, year)	<b>Gender of Lead Author</b>	<b>Nationality of Lead Author</b>	<b>Publishers</b> (name, city)	<b>Available from</b> (e.g. weblink or publisher if not available online)

## Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the <b>correct template</b> (checking fund, type of report (i.e. Annual or Final), and year) and <b>deleted the blue guidance text</b> before submission?	<input checked="" type="checkbox"/>
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> putting the project number in the subject line.	<input checked="" type="checkbox"/>
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> about the best way to deliver the report, putting the project number in the subject line.	
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	<input checked="" type="checkbox"/>
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 17)?	
Have you involved your partners in preparation of the report and named the main contributors	<input checked="" type="checkbox"/>
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	