

Project Update: January 2024

Based on the activities listed out in my application, here is the progress for each:

Activity 1: Month 1: Hiring field assistants and setting up field logistics; identifying and inviting target pharmacy owners and veterinarians for the awareness workshop; setting up logistics for the workshops and preparing materials for the same. I had identified approximately 306 pharmacies in the three districts (Nilgiris, Coimbatore, and Erode) that cover the study area and adjoining areas. Of these 87 sold drugs for veterinary use also. However, since there is a likelihood of misuse of human use diclofenac preparations for veterinary use also, I will be including all 306 pharmacies in my awareness campaign. In order to improve attendance at the workshops, I plan to request the help of the local forest department to co-host the workshops (if possible, on their premises), which will also be an incentive for pharmacy owners to attend the same.

Progress: Month 1: (12/10/23 – 11/11/23) I have hired two field assistants from the local tribal villages (Mr. A. Aananth and N. Vishnu). Both belong to the indigenous Irula tribe and are known to be good with observing and identifying vultures. They are also good elephant trackers which is important for us to be able to work safely in these areas which are known elephant habitats. I applied for research permission from the offices of the Chief Wildlife Warden, Tamil Nadu Forest Department, as well as the Field Directors of Mudumalai and Sathyamangalam Tiger Reserves to carry out vulture survey and access villages within the tiger reserve on (date). Unfortunately, they have taken more than 3 months to review the proposal (they have started batch reviews of all proposals received for permission), instead of the usual 1-2 months. I also applied for research permission from the CWS Internal Review Board for Research on Human Subjects for permission to carry out the pharmacy shop surveys and awareness programmes. I also visited local tribal villages to obtain information on nesting and roosting sites of the white-rumped vulture so that I can visit these sites later for my tree surveys. I prepared my questionnaires for the pharmacy shop surveys and material for the awareness workshops.

Activity 2: Month 1 - 2: Conducting awareness workshops on vulture-toxic drugs for local pharmacy owners and veterinarians; conducting pre- and post-workshop surveys to gauge change in awareness. I plan to hold 10 workshops (approximately 30 pharmacies each) across the three districts over a month. Pharmacy owners and veterinarians who purchase drugs from them will be invited to attend these workshops. I plan to request the help of the local forest department to hold these workshops on their premises, which will also be an incentive for pharmacy owners to attend the same. All participants will be provided with a poster on vulture species found in their area and information on how citizens can protect them. This can be displayed in their shops.

Progress: Month 1 - 2: (12/11/23 – 11/12/23) I pursued permission from the CWS IRB committee which raised some important points against the covert surveys I had planned. They advised me against covert pharmacy surveys due to the potential for retributive action against pharmacy owners who participate in our survey inadvertently. Hence, I am now conducting overt market surveys where I pose as a customer and directly ask pharmacies for target drugs for purchase of the same for livestock treatment. I revised my application and presented it to the committee for

approval. I also pursued the permission letter with the TNFD and visited the offices of the Field Directors of the Mudumalai and Sathyamangalam Tiger Reserves to enquire about the same. I met with the Deputy Directors of both Tiger Reserves, and they informed me they had forwarded my application to the Office of the CWW, TNFD for approval and assured me of their full support for the project. I could not do much more as I was waiting for permission from the above authorities before I could start my work.

Activity 3: Month 2: (to 8-10) Survey along streams and Moyar riverbank to identify locations of individual trees of tree species favored by vultures for nesting and roosting and mapping of the same - these will be trees that are not necessarily being used by vultures at the time of survey, but which belong to the same species and hence, could be potential future habitats.

Progress: Month 3: (12/12/23 – 11/01/24) Received permission from the CWS IRB to carry out my pharmacy surveys and awareness workshops. Therefore, I initiated the pharmacy market surveys in Nilgiri District. I have finished 15 pharmacy surveys for far and hope to finish 80 in total by the end of January 2024. We hope to complete all surveys by February 2024 and conduct the awareness workshops by the end of March 2024 (since the forest department wants to collaborate with us on the same and this is the timeline provided by them). However, I still did not hear any news from the Forest Department, although I was told by the office of the CWW that permission from the Forest Department will be granted to our project by early January 2024.

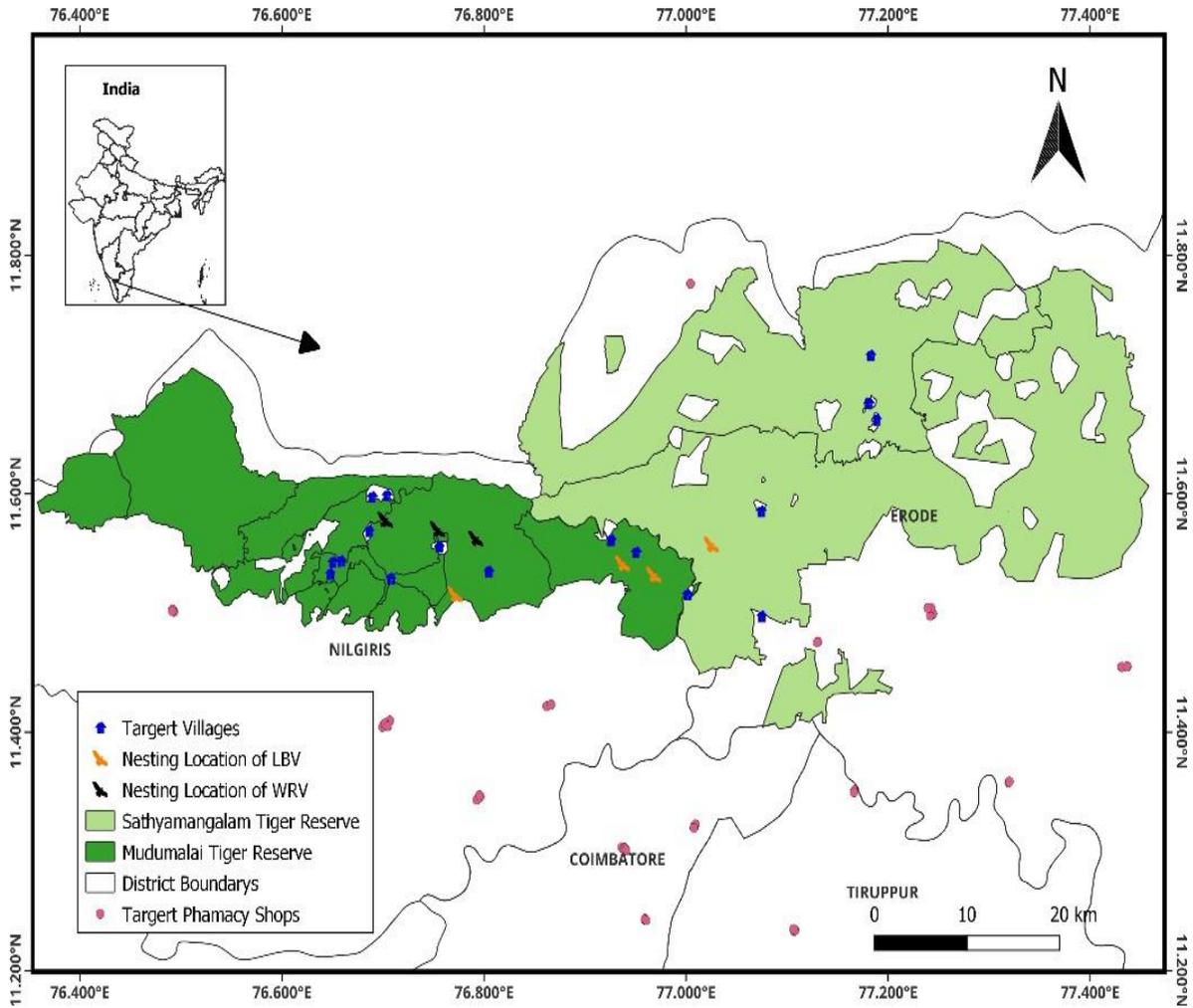
Meanwhile, the Tamil Nadu Forest Department invited me as a technical resource person to organise and carry out the annual synchronised vulture survey, from December 29 to 31, 2023 at Mudumalai Tiger Reserve. I was responsible for creating a team of over 50 volunteer bird watchers and coordinating the survey team of a total of 125 people including members of the Forest Department to survey the MTR. It was a great experience, and I was joined by my Project Head from CWS, Dr. Bindu Raghavan, in the same. Overall, it was a great experience, and I am currently helping the MTR authorities to analyse the data from the same.

As I am unable to start my tree surveys and started my pharmacy surveys late.



Synchronised vulture survey December 2023 team at Mudumalai Tiger Reserve
Vulture monitoring during the synchronised vulture survey.

Map: Known vulture species nesting locations, target villages, and pharmacy shops in the Mudumalai and Sathyamangalam Tiger Reserves.



White-rumped vulture on the nest, during the synchronized vulture survey. During the pharmacy market surveys.

Appendix 1. Pharmacy shop market survey form.

		SL:	Survey stage: (undercover)
Date:	Time:	Latitude:	Longitude:

Pharmacy name and address:

Tel/Mobil No./email id

Experience (years of practice)

Name of NSAID	Give √ (If present)		Name of NSAID	Give √ (If present)
Aceclofenac			Analgin	
Diclofenac			Aspirin	
Carprofen			Ibuprofen	
Flunixin			Naproxen	
Ketoprofen			Paracetamol	
Meloxicam			Piroxicam	
Nimesulide			Toifenamic acid	
Phenylbutazone				

Appendix 2. Copy of the permission letter from the CWS IRB Committee to carry out the pharmacy shop surveys and awareness programs.



APPROVAL STATUS UNDER CWS GUIDELINES FOR RESEARCH ON HUMAN SUBJECTS

Application # 01/01-2024

This is to certify that the CWS Research Proposal titled "*Vulture conservation in the Mudumalai-Sathyamangalam region of the Nilgiri Biosphere Reserve, India*", with Dr. Manigandan Selvaraj, Senior Research Fellow at CWS as Principal Investigator, scheduled to start on *January 2024* and funded by CWS, Rufford Small Grants Programs, The Habitats Trust and Idea Wild has been **approved** by the CWS Institutional Review Board for Research on Human Subjects, as per the guidelines set by the committee for judging an application for permission to conduct a study involving humans. The approval/ rejection may be referred to using the application number given above.

Mewh Singh

Mysore 04.01.2023

(Signature with date)

Chair, CWS Institutional Review Board for Research on Human Subjects