

project **REPORT**

2021–2022

THE  
Dhole PROJECT



SAVING THE LAST OF ASIA'S WILD DOGS

# project **OBJECTIVES**

**The Dhole Project** was launched in **2016**. The aim of the project is to conduct research on the **endangered dhole** (Asiatic wild dog), understand the species' ecological requirements, and formulate **science-based strategies** to conserve its populations. The project is being implemented in **India**. But the scientific outputs from our work are designed to benefit dhole conservation **globally**.

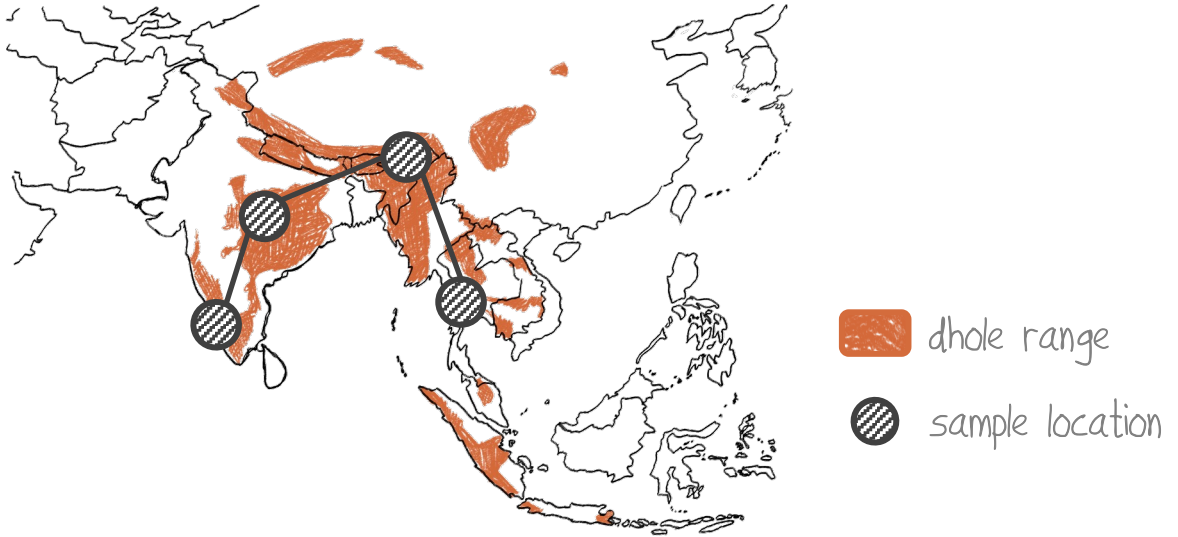
Our work relies on a **combination of methods** and approaches, each of which provides a different and unique understanding of **dhole ecology** and **conservation** needs. The project is focused on generating information that links dhole **individuals, packs, populations** and **meta-populations** across landscapes.

The broader objective of the project is to help wildlife managers, conservationists and local governments better **manage and conserve** dhole populations across **300,000 sq. km** of their geographic range.

In **2021–22**, we had the following objectives:

- Keep the field teams and project personnel safe and employed through COVID-19 lockdowns
- Establish methods to count dholes using DNA from their scats (poop) and restart monitoring work (post-COVID) in India's Western Ghats
- Examine habitat connectivity for dholes in India and initiate efforts to assess "dhole-friendly" areas outside wildlife reserves
- Collaborate with conservation scientists within and outside India to outline best-practices in dhole population monitoring
- Increase public knowledge on dhole ecology and conservation issues through communication and outreach
- Train citizen volunteers and wildlife managers in conducting field-based scientific research on dholes

## phylogeography | **GLOBAL**



Through **2019–21**, we gathered **genetic samples** from across global dhole range to identify **evolutionarily distinct** clusters of populations. This **phylogeography** approach will help us predict the future of dholes in different locations based on their **genetic history** and **make-up**.

## methods | **GLOBAL**

We are always looking for **cheap and efficient methods** to count and monitor dholes. So far, this could be done only through **genetics**: reliable but **expensive**. Collaborating with members of **IUCN Dhole Working Group**, we tried exploring alternative methodologies.



We found a method using **camera-trap surveys** to estimate **dhole numbers!** Replicating this in other parts of dhole range may solve one of the greatest mysteries about the species: **how many dholes are left in the world?**

Read all about it in this paper published in **PeerJ journal**

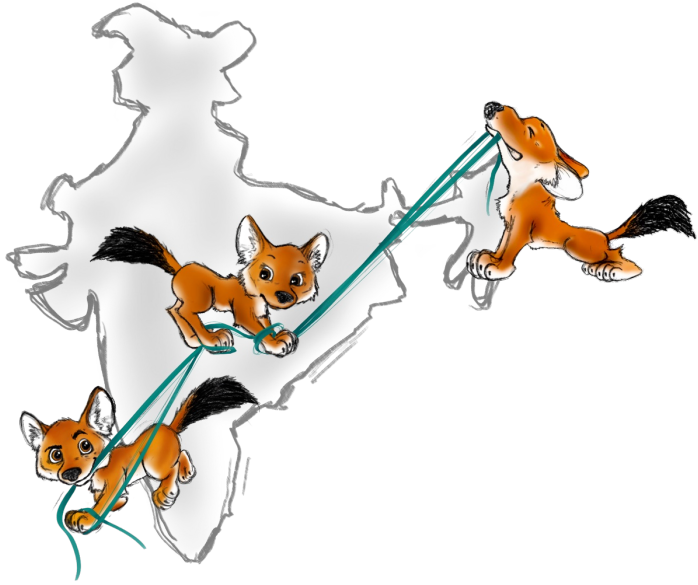
## connectivity | **INDIA**

In **2021**, we mapped **habitat connectivity** for dhole populations across India. Our work identifies **forest corridors** that need to be consolidated and protected for dholes to **disperse** across parks.

We found that connected dhole populations currently exist in **three** conservation landscapes: **western-eastern ghats, central India** and **northeast India**.

This is the **first countrywide connectivity** study for any species in **India**.

Read all about it in this paper published in **[Journal of Applied Ecology](#)**



## bioacoustics | **INDIA**



Dholes are highly social animals. **Acoustic communication** (sounds they make to speak with each other) plays an important role in their pack activities. Each dhole may also have a unique **acoustic signature**; so, we could try **identifying individuals** based on their sounds. Our new initiative is aimed at documenting dhole '**vocal repertoire**' using audio recordings from multiple **zoos** in India.

## populations | **WESTERN GHATS**

**1472** km surveyed

**426** scats collected

**2035** signs recorded



We started **monitoring** dhole populations using DNA from their scats (poop) in **wayanad sanctuary**, 2019. Field work was paused in 2020–21 due to COVID. In **2022**, we were back in **wayanad** to monitor dholes, their co-predators and prey species. Having just completed surveys in **periyar**, we next plan to cover **kottayam–ranni**, **parambikulam**, **nemmara** and **wayanad territorial** areas in the Western Ghats.

Read more about this in our paper published in **Biological Conservation**

## behavior | **WESTERN GHATS**



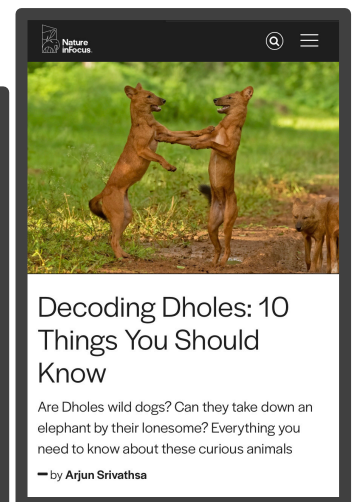
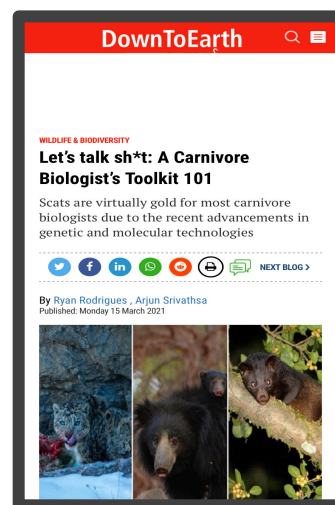
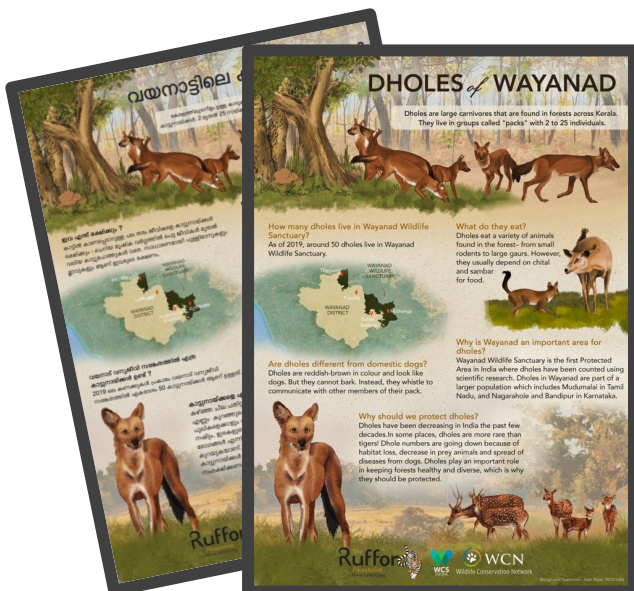
Dholes mostly live **inside parks**. But **smaller populations** also live in unprotected forests and **coffee/tea plantations**, sharing space with people. Our work in the **Valparai plateau** of Western Ghats aims to understand human–dhole **interactions**, and identify “dhole-friendly” areas in these **shared spaces**.

## training | **CAPACITY**



The project engaged with **2 research assistants, 3 research associates, 5 domain experts, 6 field interns** and **70 forest department staff members** in 2021–22. Assistants and interns were trained in conducting **field surveys** of large carnivores, **genetic sampling** protocols, carrying out **literature** surveys, using **GIS tools**, data **processing** and **statistical analysis**.

## outreach | **AWARENESS**

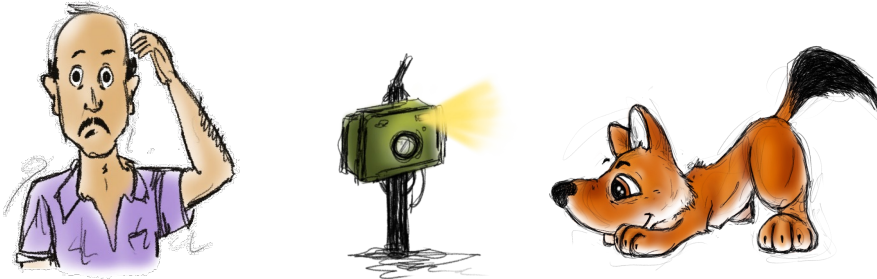


In **2021–22**, we published **8 articles** on dholes in popular media. We made **posters** of our dhole work in **wayanad** to communicate our research findings with local stakeholders. These posters (in **english** and **malayalam** languages) were shared with the **forest department** for display in public offices.

## what NEXT ?

We have loads of exciting stuff in the pipeline for 2023!

We plan to set up **camera-traps** across **multi-use forests** of Western Ghats to understand **human-dhole interactions** in shared spaces.



We are **expanding** our dhole conservation monitoring in the Western Ghats from **one location** (2019, 2022) to **six locations** (2022–23).



Using cutting-edge methods like **DNA meta-barcoding**, we aim to examine differences in **dhole dietary requirements** inside versus outside wildlife reserves.



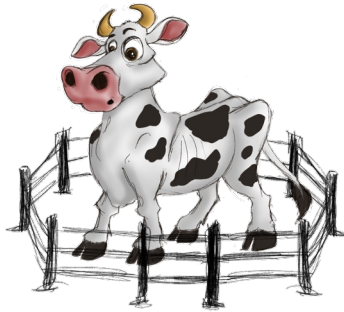
## what **NEXT ?**

...and there's more.

Our on-going work aims to understand how **dholes** co-exist with their two main competitors— **leopards** and **tigers**— across **Asia**.



Through **collaborations** with dhole conservationists from multiple countries, we plan to examine **human-dhole conflict** and outline **best practices** for livestock-related **conflict mitigation**.

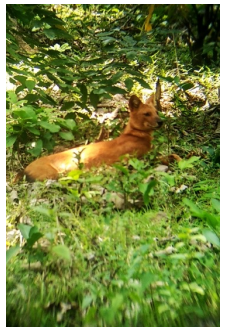
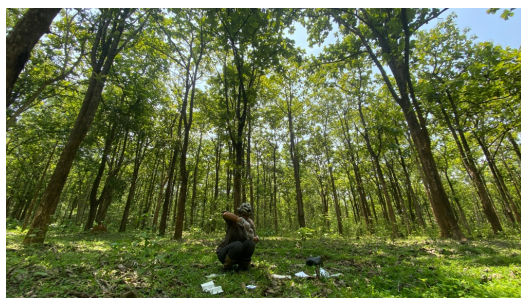


We look forward to the **2<sup>nd</sup> IUCN dhole meeting** in **Nepal**. Our agenda includes updating the **Red List Assessment**, and creating **National Dhole Conservation Plans** for Nepal, Bhutan, India and Thailand.

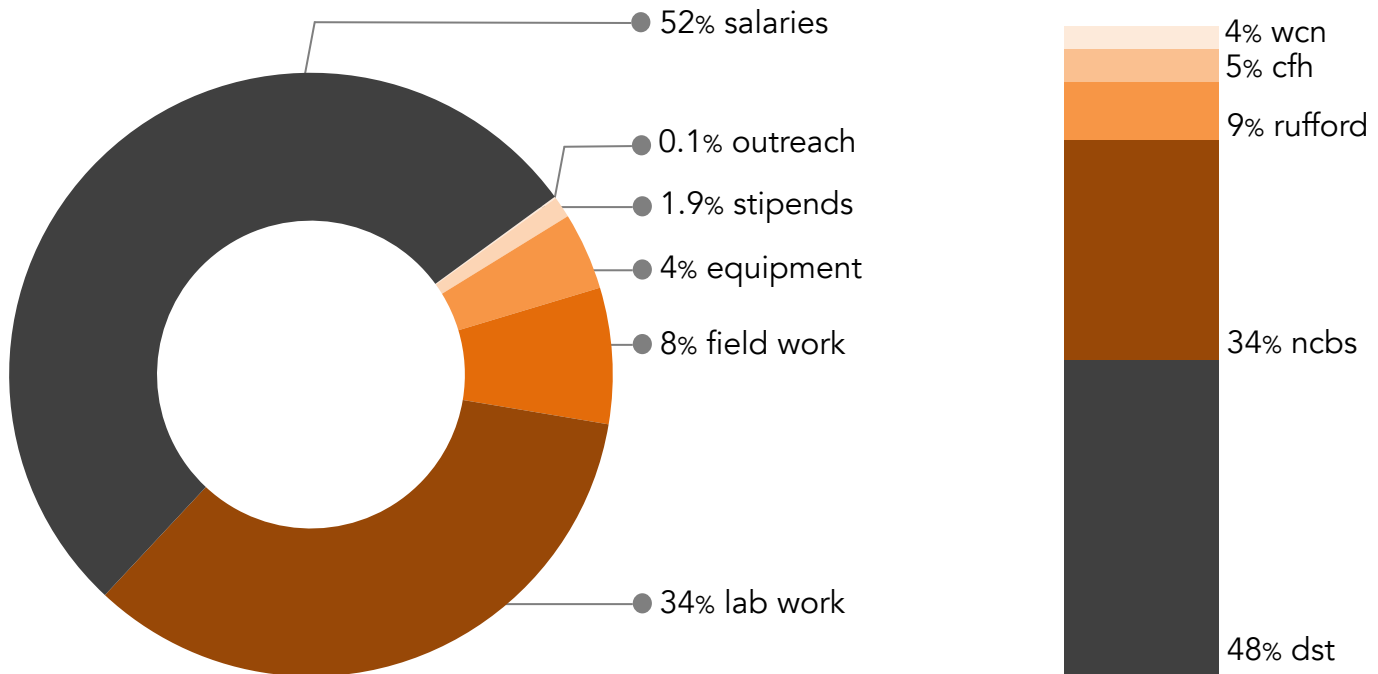




# project GALLERY



## budget | **FUNDING**



We spent a total of **56,736 USD** towards the project in 2021–22. Chart on the left: project expenditure by categories; right: budget breakdown by funding sources.

[dst: dept. of science and technology, govt. of india; ncbs: national centre for biological sciences; cfh: conservation, food and health foundation; wcn: wildlife conservation network]

## acknowledgements



We thank the Kerala Forest Department for their consistent support and assistance; National Centre for Biological Sciences (TIFR), Government of India's DST INSPIRE Fellowship, Wildlife Conservation Society–India, The Rufford Foundation, The Conservation, Food and Health Foundation, Wildlife Conservation Network, and our individual donors. Personnel: Arjun Srivathsa, Ryan Rodrigues, Mayank Shukla, Sabiya Sheikh, Sujay Kotian, Pooja Saravanan, Abhijith Sureshbabu, Abraham Pious, Anjana Edayatil, Adnan Ahmed, Alphonsa George, Vishnu Thavara and Uma Ramakrishnan.

# THE DHOLE PROJECT



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supporting institutions and organizations



विज्ञान एवं प्रौद्योगिकी विभाग  
DEPARTMENT OF  
**SCIENCE & TECHNOLOGY**



THE CONSERVATION, FOOD & HEALTH FOUNDATION