Resume

Shawn Dsouza

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[Google Scholar](#) | [GitHub](#) | [Personal Website](#) | [ORCID](#)

RESEARCH INTERESTS

I am interested in how anthropogenic disturbance reshapes natural systems by altering animal behaviour, trophic interactions and ecosystem functioning. My research focuses on understanding how animals perceive and respond to human in their environment, and how these behavioural shifts cascade across trophic levels to influence ecosystem structure and function. I integrate multiple approaches including systematic reviews and meta-analyses, agent-based modelling, Bayesian inference, and field-based experiments to study behaviour across spatial and temporal scales. Going forward, I aim to develop predictive frameworks that combine behavioural theory with data-driven models to better anticipate ecological responses to global change, and to inform conservation and management under uncertainty.

EDUCATION

Ph.D. in Biology   *2021 – 2026 (Expected)*
Center for Ecological Sciences,
Indian Institute of Science (IISc), Bangalore
Thesis: Fishes *do* fear the reaper: Understanding the impact of human interactions on animal behaviour in the wild

I conducted research on human disturbance and its impact on natural systems, focusing on changes in animal behaviour and it's implication for the functioning of ecological systems. I developed methodologies to assess and understand anthropogenic impacts on animal behaviour and ecology through various tools including meta-analysis of available literature, agent based models, remote underwater video surveys and predator model experiments. I have submitted my thesis and am currently awaiting reviews.

Advisors: Prof. Kartik Shanker & Prof. Maria Thaker.

M.Sc. in Biodiversity   *2017*

M.E.S. Abasaheb Garware College,

Savitribai Phule Pune University

Thesis: Impacts of human disturbance on animal behaviour and ecological system functioning.

CGPA: 8.65/10

B.Sc. in Zoology   *2015*

S.I.E.S. College of Arts, Science and Commerce,

Mumbai University

RESEARCH & PROFESSIONAL EXPERIENCE

Research Affiliate   *May 2022 – December 2024*

Dakshin Foundation, Bangalore

I led the elasmobranch monitoring program in Malvan, Maharashtra, overseeing data collection across multiple landing centers. I also consulted various ongoing projects concerning marine systems and fisheries.

Research Assistant   *June 2017 – February 2021*

Dakshin Foundation, Bangalore

I studied the effects of fisheries on sea snake species' interactions using a combination of stable isotope analysis and fisheries dependent methods. I also managed the bycatch projects at the organisation as well as outreach and communication activities for the same.

PUBLICATIONS

Peer – reviewed publications

- **Dsouza, S.**, Shanker, K., & Thaker, M. (2025). Are human super-predators always super-scary? A meta-analysis of wild animal behavioural responses to human interactions. *Ecology Letters*. 28(12). e70287.

- Patre, M. V., Bora, G., Jakhete, S., **Dsouza, S.**, & Shanker, K. (2026). Microplastic accumulation in marine organisms across trophic levels along the west coast of India. *Marine Pollution Bulletin*, 222, 118816.

- Ruidas, H., Bora, G., **Dsouza, S.**, & Shanker, K. (2025). Assessing the impact of microplastics on gonadal health of the spadenose shark (Scoliodon laticaudus) on the west coast of India. *Marine Pollution Bulletin,* 212, 117464.

- Bora, G., **Dsouza, S.**, & Shanker, K. (2024). Diet composition and variation in four commonly landed and threatened shark species in Maharashtra, India. *Regional Studies in Marine Science*, 74, 103531.

- **Dsouza, S.**, & Padhye, A. (2022). A cross taxonomic comparison of bird and butterfly communities of Tamhini Wildlife Sanctuary across two decades. *Current Science*. 123(10). 1253-1258.

- **Dsouza, S.**, Rao, C., Manoharakrishnan, M., & Shanker, K. (2021). Resource use and the impacts of fisheries on two sympatric sea snake species on the west coast of India. *Marine Biology*, 168(9), 1-11.

- **Dsouza, S.**, & Rao, C. (2021). Demographics and reproductive biology of Hydrophis schistosus may make it more resilient to bycatch effects than other sea snakes. *Regional Studies in Marine Science*, 47, 101948.

- Rao, C., **Dsouza, S.**, Gupta, T., Manoharakrishnan, M., & Lobo, A. S. (2021). Fisheries induced shift in sea snake community assemblages along the Konkan coast, India. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 31(9), 2402-2411.

- Jojan, A., **Dsouza, S.**, Mukerjee, P., Rao, C., & Shanker, K. (2018). Critiquing narrow critiques of convention on biological diversity. *Economic & Political Weekly*, 53(44), 17.

Preprints under review

- **Dsouza, S.**, Joshi, A., Ahmad, S., Ahuja, B., & Shanker, K. (2025) Local extraction of predatory fish may initiate behaviourally mediated trophic cascades in coral reefs in the Andaman Islands. *BioArXiv.* 2025-11

- **Dsouza, S.**, Joshi, A., & Shanker, K. (2025). Does the loss of piscivorous predators in a coral reef alter risk allocation in reef-associated fish?. *BioArXiv.* 2025-11

GRANTS, AWARDS & FELLOWSHIPS

- ISBE Travel Grant (2024) – International Society for Behavioural Ecology ($2,500)

- Prime Minister's Research Fellowship (PMRF) (2022) – IISc Bangalore

- GATE Fellowship (2021) – IISc Bangalore

- Mangrove Foundation of Maharashtra (2018) – Small Grant (~$6000)

- Rufford Foundation (UK) – Small Grant (~$6000)

- WWF–India (2017) – Small Grant (~$800)

TECHNICAL & METHODOLOGICAL SKILLS

- Strong affinity for computers and programming; quick to learn and adopt new tools and technologies

- Proficient in **R** and **Python** for data analysis, modelling, and visualization

- **Statistical modelling and inference**, including linear and non-linear regression, classical hypothesis testing, Bayesian analysis, generalized linear and mixed models, zero-inflated and non-linear models, and causal and counterfactual analyses

- Development of reproducible computational workflows using **Linux**, **Git**, **Docker**, and **LaTeX**

- Extensive field and experimental experience, including behavioural observations, predator cue and risk-manipulation experiments, Baited Remote Underwater Video Surveys (BRUVS), fisheries-dependent sampling, and stable isotope–based food-web analyses

- Experience in grant writing, scientific synthesis, and communicating research to academic, policy, and public audiences