# Notes on the Academy

ARTICLES

# Decolonising Indian ecology

7TH AUG 202111TH SEP 2021

THE NOTA COLLECTIVE

LEAVE A COMMENT

– Akshay and Grass Demon

As the world came to a standstill in the wake of the pandemic, and travel was abruptly restricted, long-term or ongoing field research suffered [1]. Projects which involved local communities/researchers at the field site were able to continue their work with little loss of data, but those without strong local support were suspended indefinitely. Veteran ecologist Vojtech Novotny called it "a test [of] the rhetoric of 'capacity building' within tropical countries (https://forestgeo.si.edu/blog/forestgeo-network-adapts-response-covid-induced-changes)". This reignited conversations around the involvement of local communities in field ecology by Western institutions, and associated 'parachute science (https://www.sciencefriday.com/segments/parachute-science-problem/)' [2] [3] [4]. A recent paper by Trisos et al. 2021 [5] furthered this conversation by providing a sharp look at the different, often unchallenged, ways in which colonial thought and practices pervade ecology, and provide concrete ways for ecologists to work towards decoloniality, the main points of which are summed up in the table below.

*Before we begin, let us clarify for the uninitiated what decolonisation means, according to Trisios et al. In the first instance, it is "[r]ecognizing that colonialism led to Euro-American centricity, dispossession, racism and ongoing power imbalances in how ecological research is produced and used". Following this recognition, decolonisation demands that we "actively [undo] those systems and ways of thinking". – NotA*

| **Decoloniality and anti-oppressive practices for a more ethical ecology** (https://www.nature.com/articles/s41559-021-01460-w.) | | |
|---|---|---|
| ***Decolonise your mind*** | – Language barriers hinder the transmission of scientific knowledge<br>– A multilingual mode of ecological research would enrich its communication<br>– Written, peer-reviewed knowledge is only a fraction of what is available – include other forms (oral traditions, art etc.) of knowledge in teaching curriculum | |
| ***Know the Histories*** | – Acknowledge histories of colonisation and displacement<br>– Collaborate with, and incorporate environmental and conservation practices of, local communities | |

| | | |
|---|---|---|
| ***Decolonising Access*** | – Publish in open-access journals Involve local researchers in the project and allow them data ownership<br>– For every scholar who travels to the global South, one scholar from that country should be admitted to study and carry out similar research in the Global North | |
| ***Decolonise expertise*** | – Ecological expertise among local communities have, sometimes, been ignored or 'discovered' much later by Western scientists<br>– Actively interfere and include diverse thoughts and knowledge that may otherwise get omitted or appropriated under existing power structures | |
| ***Practise ethical ecology in inclusive teams*** | – Create and work in diverse and inclusive teams<br>– Acknowledge structural limitations that some members might face in such diverse teamsBe open to changes in ways of thinking and working while being a part of diverse teams.<br>– Practice an intersectional approach to ecology<br>– Institutions should rethink their evaluation of scholars' work: recognise being part of collective work, efforts to diversify the field, and not just individual contributions. | |

The article repeatedly asks ecologists to introspect and consider who the audience for their writing is. We posed the following question to ourselves: what does it mean to decolonize ecology in the Indian context? Having worked in India as part of local research teams, we have experienced a few colonial legacies highlighted in Trisos et al. 2021: we have emailed our peers at American institutions to gain access to our own papers, and we have received some unfair comments during peer review. Yet, our experience is not the experience of the average Indian ecologist, because inequalities and power imbalances between the "Global South" and "Global North" play out on a regional scale within India: for instance, our alma maters are elite institutes not unlike a "Global North" within Indian academia. In fact, Trisos et al. are careful to note that their advice is not aimed at the West per se, but at "Western-trained scientists" with a "western world-view" – and this applies to nearly all ecologists at prominent institutions in India.

# Field ecology in India: Parachuting within

Our anecdotal experiences, while being a part of the Indian field ecology community, indicate that all the missteps highlighted by Trisos et al. play out at our doorstep.

It's news to no one that India is a deeply unequal country and venture capitalist Sajith Pai's heuristic provides a stark picture: India-1 has 6% of working Indians with the GDP and population of Mexico, while India-3 has 88% of the workforce and the GDP and population of sub-Saharan Africa (and India-2 lies in-between) [6]. Field ecology forces the two extreme Indias to interact. Ecologists routinely parachute into protected areas in India-3 from urban cocoons in India-1 cities like Bangalore, Mumbai, Pune and Chennai (see [7] for a sombre, detailed overview of India's income inequality). They employ members of the local community in data collection and step right back out. Basic research routinely forgets to acknowledge local help while applied research often remembers to thank parachute volunteers, fellow visitors from India-1, but not members of the local community who showed them the way around the forest.

Communication of ecological research – applied or otherwise – to the local community is nearly absent. When outreach is made mandatory but without checks and balances, it becomes another item on the to-do list – posters are made and distributed in schools before wrapping up the project. Scientific communication and outreach are overwhelmingly in English, a particular irony given that less than 15% of India speaks English. However, efforts are being made to diversify the languages of science communication[8]. A handful of scholars have also gone the extra mile to publish bilingual abstracts (https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2435.13652) or engage in vernacular outreach[9], and they will hopefully inspire more to follow suit.

# Decolonizing the minds of Indian ecologists: hiding behind merit and ignoring histories

At the 2018 Student Conference on Conservation Science, one of India's premier ecologists made an impassioned appeal to the audience, indicating that "meritocracy [a good thing] is inherently discriminatory [a bad thing]". But this apparent Catch-22 argument was not used to challenge our perceptions of merit. In what can only be described as 'coloniality by omission', there was no mention of the necessity of affirmative action *regardless of merit.* The audience was instead fed the narrative of the 'inevitability' of discrimination in 'premier' institutions. This argument may have been reasonable if academia in India was truly just and representative. This is far from the truth.

Academia in India continues to be a firmly upper-caste bastion, despite reservation policies to rectify the status quo [10,11,12]. Even the above-average representation of women faculty within ecology does not shake the near-total dominance of upper-caste faculty. Pull up the faculty page of all elite institutes of ecology in India and see for yourself. Many of these 'premier' institutions in fact wiggle out of institutionalized reservations by citing their "deemed" university status, despite being funded by the government of India – even more egregious is the exemption of institutions of "national importance" from affirmative action policies by law. It is therefore easy to understand why ecological institutions in India, bubbles that they are, can get away with calls for a meritocracy.

We cannot decolonize our mind unless we open our eyes to the histories of caste, gender, and class inequalities that shape the academia of today, and stop using the by-now-well-critiqued concept of merit as a blanket excuse (see [12]). It is known that class, caste, religion, and gender and sexual identities strongly influence the experiences of researchers in Indian academics: sharing an identity with your peers and your supervisor can help you thrive, but if you have a different identity – one that is historically oppressed – your life is likely to be extraordinarily difficult [13,14]. Our personal experiences, fortunately, have been positive in this regard, but we are well aware that this is far from the norm.

There are differences in representation in the student community [15], and they only get starker when we take a look at the faculty positions: 93% of professor positions reserved for ST members have not been filled; in total, about half of all reserved seats remain unfilled in central institutes in India [16,17]. The few faculties from marginalized backgrounds who do get recruited also report facing discrimination [18]. Actively acknowledging, and trying to hold institutions accountable in the implementation of reservation and anti-discrimination policies are things that the academic fraternity could do at no significant cost to themselves.

It is important to note that it's not just academic minds that need decolonizing – ecology in India (especially applied) is largely practiced by large NGOs that are no different than academia in demographic. These applied ecologists too must recognize the centuries of oppression they stand on.

When Trisos et al. is discussed at lab-meetings or paper discussion sessions at academic institutions and NGOs in India, we hope it is clear that Trisos et al. are actually calling *us* out, asking *us* to take less space within India, not more.

# Decolonizing expertise

The Indian environmental movement tends to champion 'Indian' ecological values over Western ones. This is a tendency that, on the outset, seems like one that should be welcomed to achieve decolonization. However, the movement, dominated by upper caste people, also tends to ignore the effects of the caste system and even, at times, romanticises it as an 'indigenous knowledge system' [19]. This has resulted in alienation between Dalit-led anti-caste movements and the environmental movement [20]. The net result is an environmental ethos in India that has failed to recognize and incorporate different Indian perspectives about human-environmental relationships in the mainstream [19].

The broad narrative about the environmental movement holds true for ecologists and ethologists in the country, who again disproportionately represent upper castes and classes. They work closely with members of marginalised communities — often relying on them and their expertise, for their data — but their salaries are low and highly intermittent (often for the "field season" only), and they are rarely provided any job security or benefits like health insurance[21]. Changing these exploitative conditions also requires institutes to be flexible and allow the creation of posts that might not fit the usual categories of staff positions involved in lab-based research. Most of these people share their homes with wildlife and live near protected areas, and are often at loggerheads with the state machinery over their land-rights (with the state bolstering their arguments using the scientists' own data)[22]. The support for these colleagues in such fights has, sadly, not been unanimous amongst ecologists and conservationists. Such uncomfortable realities are precisely what Trisos et al. urge us to actively confront.

# Decolonizing access: it's more than just journal access

Decolonizing journal access would no doubt have a big impact on research in India. We believe that without Sci-Hub, most research in the country simply cannot happen – many senior scientists echo these words [20]. Even within these elite academic institutions, journal access is restrictive and researchers routinely rely on Sci-hub. Yet, as we speak, big publishing is challenging the use of Sci-Hub and LibGen in India in the Delhi High Court (see In defense of Piracy, Part I: Knowledge and Access (https://notacademy.in/2021/01/09/in-defence-of-piracy-part-i-knowledge-and-access/) [24] and Part II: Enclosures and Resistance (https://notacademy.in/2021/01/17/in-defence-of-piracy-part-ii-enclosures-and-resistance/) [25] for a detailed overview). Between September 2015 and February 2016, 1,946,052 papers were downloaded in India, at nearly 11,000 papers each day [26] – six years later, that

number is likely over 40,000 each day [27]. There is no doubt that a ban on Sci-Hub and LibGen in India will bring knowledge production in India to a grinding halt, with all efforts of decolonization in tow.

Trisos et al. suggest many other solutions apart from making journals accessible, in order to decolonize the publishing of knowledge and information: reciprocal exchange, increasing support and funding for marginalized communities, rights over data, etc. In this regard, it might be worth revisiting the assumption that writing and analyses take primacy over data. Why are important local collaborators – often from less-elite institutions and from smaller towns in India – relegated to 3rd and 4th authors because they only contributed to the data? Surely, ecology – famously called the science of the obvious – will benefit from joint first authorship of those who collect the data and those who analyze it? We believe that experienced ecologists can, with "deep listening" and "deeper engagement", arrive at truly decolonial solutions to this problem that Indian ecologists have only to open their eyes to recognize.

Trisos et al. also speak of reciprocal exchange: researchers from wealthy institutions travelling to low or middle-income countries for study and vice versa. An innocuous idea that no doubt many elite Indian institutions will welcome. But will an analogue within India — where researchers from elite institutions in urban India spend sizable amounts of time at small institutions outside the elite bubble and vice versa — be equally welcome? Alternatively, what if the state ensured appropriate representation among students being sent abroad with government funding [12]? Confronting the unease this idea likely elicits is the only acceptable first step. These ideas are far from radical, and ought to be fought for and enforced (https://roundtableindia.co.in/index.php?option%3Dcom_content%26view%3Darticle%26id%3D10133:govt-of-india-should-send-one-lakh-sc-st-youths-abroad-for-higher-education%26catid%3D129:events-and-activism%26Itemid%3D195&sa=D&source=editors&ust=1625152241594000&usg=AOvVaw3unp-8Mmqv4hxQkf5BmnEV) for higher education in general, not just in academia or ecology alone.

# The practice of ethical ecology in labs and teams, even at a cost

A tacit assumption in this paper is that decoloniality is a Pareto-efficient solution, that decoloniality presents many opportunities but few costs to the present status quo. This may be true in well-funded institutions of the Global North that can easily raise funds to improve diversity and decolonize their new edifice without compromising support for "fundamental" research that need not bother about decoloniality. However, there is no way to achieve decoloniality in the Indian ecology community without rolling back, without swallowing costs, making space and rejigging existing institutions even if this comes at the cost of doing "good science".

We firmly believe that ethical ecology begins with tough decisions that might unsettle the status quo – diverting funding to marginalized groups and flipping reward structures within academia are excellent suggestions in Trisos et al. that we think can be applied directly to India. In order to make this happen, we might need to make tough decisions: if we want to improve job security and compensation of field assistants while funding is limited, we have to accept that the only answer is doing less research. Understanding the coloniality of one's research may create discomfort, and sometimes the right answer may be to drop that research question – the controversy around the

Thirty-Metre Telescope protests (https://www.nytimes.com/2019/07/22/us/hawaii-telescope-protest.html) on Hawaii's Mauna Kea is a telling example of what might transpire if we ignore the warning signs.

Ultimately, it is important for all ecologists in India to recognize that decoloniality is more about recognizing and redressing inequalities and injustices that occur within the Indian ecology community, whether they arose as a consequence of colonial practices or not, than moving out from under the shadow of the Global North.

---

Akshay is an ecologist presently studying plant soil feedback in dipterocarp forests of Sri Lanka. He likes helping other people conserve nature. Grass Demon has worked in India in the field of ecology and behavior for nearly a decade.

---

Footnotes

1. Forrester, N. (2020, November 27). *How to manage when your fieldwork is cancelled.* Nature. https://www.nature.com/articles/d41586-020-03368-0 (https://www.nature.com/articles/d41586-020-03368-0) ↩

2. Yan, W. (2021, April 7). *'Parachute Science' Doesn't Work in a Pandemic.* The Atlantic. [https://www.theatlantic.com/science/archive/2021/04/parachute-science-doesnt-work-in-a-pandemic/618522/ (https://www.theatlantic.com/science/archive/2021/04/parachute-science-doesnt-work-in-a-pandemic/618522/) ↩

3. de Vos, A. (2020, July 1). *The Problem of 'Colonial Science.* Scientific American. https://www.scientificamerican.com/article/the-problem-of-colonial-science/ (https://www.scientificamerican.com/article/the-problem-of-colonial-science/) ↩

4. The Lancet Global Health. (2018). Closing the door on parachutes and parasites. *The Lancet Global Health*, *6*(6), e593. https://doi.org/10.1016/s2214-109x(18)30239-0 (https://doi.org/10.1016/s2214-109x(18)30239-0) ↩

5. Trisos, C. H., Auerbach, J., & Katti, M. (2021). Decoloniality and anti-oppressive practices for a more ethical ecology. *Nature Ecology & Evolution*, 1-8. https://doi.org/10.1038/s41559-021-01460-w (https://doi.org/10.1038/s41559-021-01460-w) ↩

6. Pai, S. (2019, July 4). *India2, English Tax and Building for the Next Billion Users*. Medium. https://blog.usejournal.com/india2-english-tax-and-building-for-the-next-billion-users-198701f0a7a6 (https://blog.usejournal.com/india2-english-tax-and-building-for-the-next-billion-users-198701f0a7a6) ↩

7. Shukla, R. (2010). *How India earns, spends and saves: unmasking the real India*. SAGE Publications India. ↩

8. Paul, D. (2021, February 19). *We need to be aware of privileged caste hegemony in science and its communication.* Research Matters. https://researchmatters.in/news/we-need-be-aware-privileged-caste-hegemony-science-and-its-communication (https://researchmatters.in/news/we-need-be-aware-privileged-caste-hegemony-science-and-its-communication) ↩

9. Sankaran, S., Majumder, S., Viswanathan, A., & Guttal, V. (2019). Clustering and correlations: Inferring resilience from spatial patterns in ecosystems. *Methods in Ecology and Evolution*, *10*(12), 2079–2089. https://doi.org/10.1111/2041-210x.13304 (https://doi.org/10.1111/2041-210x.13304) ↩

10. Sahoo, P. (2021, June 20). *Isolated, invisible: LGBTQ scientists talk about their experience at workplace.* Hindustan Times. https://www.hindustantimes.com/cities/others/isolated-invisible-lgbtq-scientists-talk-about-their-experience-at-workplace-101624216113486.html (https://www.hindustantimes.com/cities/others/isolated-invisible-lgbtq-scientists-talk-about-their-experience-at-workplace-101624216113486.html) ↩

11. Pathania, G. J., & Tierney, W. G. (2018). An ethnography of caste and class at an Indian university: creating capital. *Tertiary Education and Management*, *24*(3), 221–231. https://doi.org/10.1080/13583883.2018.1439998 (https://doi.org/10.1080/13583883.2018.1439998) ↩

12. *Undark Magazine. (2021, July 23). Dalit Scientists Face Barriers in India's Top Science Institutes*. https://undark.org/2021/07/26/dalit-scientists-face-barriers-in-indias-top-science-institutes/ (https://undark.org/2021/07/26/dalit-scientists-face-barriers-in-indias-top-science-institutes/) ↩ ↩ (1) ↩ (2)

13. Thomas, R. (2020). Brahmins as scientists and science as Brahmins' calling: caste in an Indian Scientific Research Institute. *Public Understanding of Science*, *29*(3), 306-318. https://doi.org/10.1177/0963662520903690 (https://doi.org/10.1177%2F0963662520903690) ↩

14. Henry, O., & Ferry, M. (2017). When cracking the jee is not enough. Processes of elimination and differentiation, from entry to placement, in the Indian Institutes of Technology (IITs). *South Asia Multidisciplinary Academic Journal*, (15). https://doi.org/10.4000/samaj.4291 (https://doi.org/10.4000/samaj.4291) ↩

15. Sahoo, P. (2021, February 7). *Very few PhD students in top Indian institutes from SC, ST category: Data*. Hindustan Times. https://www.hindustantimes.com/cities/mumbai-news/very-few-phd-students-in-top-indian-institutes-from-sc-st-category-data-101612721331846.html (https://www.hindustantimes.com/cities/mumbai-news/very-few-phd-students-in-top-indian-institutes-from-sc-st-category-data-101612721331846.html) ↩

16. Deeksha, J. (2021, February 8). *Inefficiency of Merit: Have India's top technical, scientific institutes used the 'merit' debate to deny jobs to teachers from oppressed communities?* The New Indian Express. https://www.edexlive.com/news/2021/feb/08/have-indias-top-technical-scientific-institutes-used-the-merit-debate-to-to-deny-jobs-to-teachers-fr-18060.html (https://www.edexlive.com/news/2021/feb/08/have-indias-top-technical-scientific-institutes-used-the-merit-debate-to-to-deny-jobs-to-teachers-fr-18060.html) ↩

17. Jebaraj, P. (2021, March 16). *Over 60% OBC, SC positions vacant in IIMs*. The Hindu. https://www.thehindu.com/education/93-of-st-professor-positions-at-central-universities-80-of-st-posts-at-iims-unfilled/article34076556.ece (https://www.thehindu.com/education/93-of-st-professor-positions-at-central-universities-80-of-st-posts-at-iims-unfilled/article34076556.ece) ↩

18. Maktoob staff. (2021, July 2). *2 years of caste discrimination: Assistant Professor quits IIT Madras*. Maktoob Media. https://maktoobmedia.com/2021/07/02/2-years-of-caste-discrimination-assistant-professor-quits-iit-madras/ (https://maktoobmedia.com/2021/07/02/2-years-of-caste-discrimination-assistant-professor-quits-iit-madras/) ↩

19. Sharma, M. (2017). *Caste and nature: Dalits and Indian Environmental Policies*. Oxford University Press. ↩ ↩ (1)

20. Omvedt, G. (1997, June 24). *Why dalits dislike enviromentalists*. The Hindu. http://ces.iisc.ernet.in/hpg/envis/doc97html/envenv627.html (http://ces.iisc.ernet.in/hpg/envis/doc97html/envenv627.html) ↩

21. Sarania, B., Tamma, K., Agnihotri, S., Krishnan, S., & Lahiri, S. (2021, June 28). *Shifting Our Gaze – Towards a Just, Inclusive Approach to Research in the Field.*. The Wire. https://science.thewire.in/environment/call-to-decolonise-ecology-conservation-field-research/ (https://science.thewire.in/environment/call-to-decolonise-ecology-conservation-field-research/) ↩

22. Sethi, N. (2019, Feb 20). *SC Orders Forced Eviction of More Than 1 Million Tribals, Forest-Dwellers.* . The Wire. https://thewire.in/rights/sc-orders-forced-eviction-of-more-than-1-million-tribals-forest-dwellers (https://thewire.in/rights/sc-orders-forced-eviction-of-more-than-1-million-tribals-forest-dwellers) ↩

23. Krotoski, A. (2021, June 14). *BBC Radio 4 – The Digital Human, Series 23, Shadow*. BBC. https://www.bbc.co.uk/programmes/m000wz2h (https://www.bbc.co.uk/programmes/m000wz2h) ↩ ↩ (1)

24. The NOTA Collective. (2021a, January 09). In Defence of Piracy, Part I: Knowledge and Access. Notes on the Academy. https://notacademy.in/2021/01/09/in-defence-of-piracy-part-i-knowledge-and-access/ (https://notacademy.in/2021/01/09/in-defence-of-piracy-part-i-knowledge-and-access/) ↩ ↩ (1)

25. The NOTA Collective. (2021b, January 17). In Defence of Piracy, Part II: Enclosures and Resistance. Notes on the Academy. https://notacademy.in/2021/01/17/in-defence-of-piracy-part-ii-enclosures-and-resistance/ (https://notacademy.in/2021/01/17/in-defence-of-piracy-part-ii-enclosures-and-resistance/) ↩ ↩ (1)

26. Bohannon, J. (2016). Who's downloading pirated papers? Everyone. *Science*, *352*(6285), 508–512. https://doi.org/10.1126/science.352.6285.508 (https://doi.org/10.1126/science.352.6285.508) ↩

27. Singh, V. K., Srichandan, S. S., & Bhattacharya, S. (2021). What do Indian researchers download from Sci-Hub. *arXiv preprint arXiv:2103.16783*. ↩

ACADEMIA, CASTEISM, DECOLONISATION, IMPERIALISM, LANGUAGE BARRIER, PIRACY, SCI-HUB