

GDI RESEARCH MAGAZINE:

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# RESOURCES, ENVIRONMENT & DEVELOPMENT SPOTLIGHT

**INTERVIEWS**

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**NEW RESEARCH**

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**PROJECTS**

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**STORYTELLING**

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# Introduction

The Resources, Environment, and Development (RED) research group at the Global Development Institute is home to a cluster of exciting projects and researchers committed to tackling the development challenges associated with worsening climate change and biodiversity loss.

Development outcomes can be highly dependent on resource use, which has significant implications for the environment in which we live. The benefits and drawbacks of such resource use are often unevenly distributed, with Global North regions typically receiving disproportionate benefits. It should come as no surprise, for example, that [high-income countries are responsible for around 85% of global carbon emissions](#), with lower-income countries often bearing the brunt of rising temperatures and extreme weather events.

Although sustainability efforts are ramping up across the world, the social and economic impacts of such initiatives tend to be overlooked. This is where projects such as [Sustainable Forest Transitions](#) (SFT) come in. The team – which comprises a talented bunch of GDI lecturers, postdoctoral researchers, and PhD students – are working around the world to examine the changing nature of forest cover and human development at unprecedented scale. Over five years, they have been analysing how and whether forest-sector interventions are positively impacting forest cover and human development outcomes.

Closely linked to SFT is the [Observatory for Forests and Just Transitions](#), a Ford-Foundation-funded project that is providing evidence to support decision-making linked to land rights and climate justice in forest landscapes. More specifically, the observatory is addressing a lack of knowledge surrounding the role of land rights in simultaneously conserving forests, securing livelihood benefits, and advancing decarbonisation agendas.

Another justice issue under examination by GDI colleagues relates to how biodiversity conservation efforts are increasingly shaped by Earth Observation data. [Just Earth Observation for Conservation](#) is a project designed to transform our understanding of the social risks and benefits of such data in conservation. The team are developing solutions with relevant stakeholders, including affected residents, data analysts, and conservation managers in various parts of the world.

As shown in the interviews and research summaries presented in this magazine, the RED group is diverse and multidisciplinary. Beyond the large-scale projects described above, we have researchers producing work on the infrastructural dimensions of zoonotic disease spread, the ways in which utopianism can help us imagine positive climate futures, and the role of Indigenous communities in environmental stewardship. In the following pages, you can read more about our projects, the ways in which our researchers carry out their work, and how colleagues pass their knowledge down to students in the classroom.

We hope these insights will encourage you to explore researchers' work in greater depth. We included links to Open Access publications where relevant, giving you quick access to cutting-edge research in the field of environment and development. You can also sign up to the [GDI newsletter](#) to receive updates about all our research straight to your inbox or contact us directly at [gdi@manchester.ac.uk](mailto:gdi@manchester.ac.uk).



## Forests, Livelihoods, and the Future of Reforestation

Johan Oldekop

Professor of Environment & Development

**Q: Johan, could you start by introducing yourself and your work?**

JO: I'm a Professor of Environment and Development at GDI and I've been here for almost eight years. My work focuses on forests and livelihoods, specifically understanding the policies, interventions, and social processes that lead to better outcomes for both people and the environment. Most of this takes place in tropical and subtropical forest landscapes.

**Q: What first sparked your interest in forests and environmental issues?**

JO: I grew up in South America and spent many of my summers visiting wild, remote places. That experience really shaped my appreciation for the natural world. But nature doesn't exist in a vacuum. Almost everywhere, these are human dominated landscapes. If we want to address environmental problems, we have to understand what drives them, issues like disenfranchisement, power, and economic development. These are often at the root of environmental degradation, and they're central to any meaningful solutions.

**Q: You currently lead several major research projects. Could you summarise them for us?**

JO: I currently lead/co-lead two large research projects funded by UKRI, the ERC, and the Ford Foundation. These projects are part of a larger research programme studying the relationships between local rights to land and decarbonisation processes, and how these relationships influence environmental and social outcomes for Indigenous Peoples and Local Communities. My team and I combine big-data geospatial analyses with in-depth critical qualitative research. We work closely with collaborators in several case-study countries: Mexico, Brazil, Ghana, Kenya, India, Nepal, and Indonesia and we also conduct analyses at the global scale.

*"If we want to address environmental problems, we have to understand what drives them, issues like disenfranchisement, power, and economic development."*

**Q: What has the team been working on recently?**

JO: We are working on dozens of projects, but one that I am particularly excited about is trying to understand what is driving forest gains globally. Another project that we are starting just now will undertake a global synthesis of community conservation in both terrestrial and marine ecosystems, trying to understand where community conservation has come from, where it is now, and where it is likely to go in an increasingly uncertain world. I believe both these projects have the potential to change our understanding of how we can best restore our world and support Indigenous Peoples and Local Communities.

**Q: Much of your work is applied. What kind of impact are you hoping to make?**

JO: A lot of what I do is about understanding how different drivers of change shape forest landscapes. The biggest impact comes from identifying pathways that lead to better outcomes for both people and forests. If we can communicate those insights to decision makers or donors, we can influence how things are talked about on the ground. It's not just about highlighting what works, knowing what doesn't work is equally important. Academia often focuses on success stories, but failures can be just as instructive.

**Q: Where can people follow your work?**

JO: I'm on [LinkedIn](#), though I mostly repost other people's brilliant ideas. The best way to keep up with our research is by subscribing to the Sustainable Forest Transitions Project [newsletter](#)—it's where we share updates on what we've been doing.

# Parks and Partnerships

**Rose Pritchard** - Presidential Fellow in Socio-Env Systems

A joy of being a socio-environmental researcher is the diversity of places, partnerships and people with which you get to engage. This is exemplified in our current project Just Earth Observation for Conservation (JEOC), which I co-ordinate alongside Tim Foster (UoM Faculty of Science and Engineering) and project manager Pepe Cano Nuñez.



JEOC is a five-year, ESRC-funded project exploring how increasing use of Earth Observation (EO) technologies such as satellites and drones is changing biodiversity conservation. Specifically, we're interested in what this technological turn means for the people living in and around conservation areas. The research team includes scholars and partners from the UK, Kenya, Guatemala, Spain, the US, and Mexico. Together we work across four case studies where conservation is a major land use type – the Maya Biosphere Reserve (Guatemala), the Mount Kenya area, l'Albufera de Valencia (Spain) and the Peak District National Park (UK).

I've been fascinated by the similarities and differences which have begun to emerge between the case study sites, both in terms of research findings and methodological approaches. EO is important in all these conservation areas, but it is becoming clearer how the applications and impacts of EO technologies and data are shaped by the entanglements of ecologies, histories,

## Just Earth Observation For Conservation

conservation values, socio-political relationships, economic motivators, and environmental policy frameworks from local to global. The differences between the contexts in which we work has also pushed us to be methodologically agile – for example, EO-for-conservation as a broad core theme proved a highly effective meeting point for a range of actors in Kenya, but a re-framing around more specific EO applications was needed in the UK. Unanticipated events, such as the devastating floods in Valencia in 2024, and growing global instability have led to new politics surrounding EO in our study locations. From this we have learned how long-term, cross-contextual projects require adaptability in the research design, seeking to balance the need to understand emergent changes with care for those who are living directly with the consequences.

JEOC is part of an expanding programme of data justice research in the Global Development Institute. Much of this research is specifically impact-focused and carried out in partnership with different kinds of conservation organisations. These partnerships challenge us to think through how we can move from theory and empirics of conservation data justice to changes in real-world practice. They also challenge us to think about our own positionality and theories of change – whose voices we should seek to amplify, and which kinds of interventions will be most effective when it comes to defining and promoting 'good' data governance in different conservation contexts.



# Priority Setting Successes

**Pepe Cano Nuñez** - Project Manager

The Observatory for Forests and Just Transitions (OFJT) was set up with the goal of better understanding how land rights, inequality, conservation and decarbonisations processes intersect in forest landscapes. Funded by the Ford Foundation, the project combines large-scale data analysis, in-depth case studies, and evidence syntheses across countries, including Mexico, Brazil and Ghana. From the start, Johan Oldekop and Charis Enns, OFJT's Principal Investigators, made it clear that this work could not be shaped by researchers only.

That intention came to life in September 2025, when OFJT organised a priority-setting workshop in Manchester. Expanding the scope beyond our initial geographical focus, we brought together twelve stakeholders from 7 different countries, representing civil society, activism, practice, and academia to co-create a research agenda collaboratively. As OFJT's Project Manager, my experience of the event began long before anyone arrived in the room: organising travel for the participants, working through time zones, visas, accommodation, and countless emails. Luckily, I didn't do it alone and had the help of Johan's broader research team, whose expertise coordinating and delivering priority-setting exercises is beyond impressive.

Once the workshop began, my focus quickly shifted from coordination to listening. From my position, I was struck by how much care participants took with each other's perspectives. Everyone was very engaged, understanding the importance of the topic at hand. They spoke openly about governance failures, community agency and what it means to live with the pressures of conservation and extractive frontiers tied to the energy transition.

Johan and the team managed the conversation effectively, keeping the pace yet allowing space for relevant discussions to develop, in what was, despite the intensity of the task, two-days full of energy.

Now, as we move forward with a co-authored journal submission and a call for proposals based on the identified priorities and themes, I appreciate the impact of this workshop on our project very clearly. Meaningful research starts with relationships. The careful organisation that the team put on for this event is not just about making things run smoothly, but about creating the conditions for all participants to focus on what they do best. Being part of this joint effort and seeing the results is a very rewarding part of my job.



# Nearly Half of Ghana's Cocoa Farms Could Be at Risk from Mining

Matilda Kabutey-Ongor, Abdul-Gafaru Abdulai, Fuad Mohammed Abubakar, Vida Afarebea Agyen, Samuel Annim, Charis Enns, Iris Fynn, Suhyun Jung, Sophie van Huellen, Johan Oldekop

Preliminary results highlight the need for land governance reforms and improved coordination within Ghana.



Ghana's economy is being reshaped by extractive industries. Gold, once secondary to cocoa, is now the stronger driver of GDP growth. According to the Ghana Statistical Service (GSS), in the third quarter of 2024, gold output rose 34% year-on-year, while cocoa contracted by 30% between 2023-2024 (ICCO, 2025)

This shift underscores the growing dominance of mining and the vulnerability of agriculture, raising urgent questions about the trade-offs between short-term extractive gains and long-term agricultural and ecological sustainability.

A scoping study from The University of Manchester, UK, AmariSTAT, and partner institutions highlights how mining is reshaping land use in Ghana's forest belt. Preliminary results show that up to 44% of cocoa farms could be at risk from mining activities. This risk poses concerns for food security, rural livelihoods, forest restoration, and the long-term sustainability of cocoa production in Ghana, underscoring the need for urgent land governance reforms in Ghana's forest regions.

Overlaying secondary spatial data compiled from satellite data and national records of mining concessions in Ghana, the scoping study identifies that between 1.8% and 16% of cocoa farms (depending on the data used) are directly located within active or detected mining areas, indicating that agricultural production could be competing with extractive operations for the same land. An additional 12.5% to 28% of cocoa farms lie within a 1km radius of mining sites. These significant overlaps could be putting cocoa farms at

heightened risk of deforestation, soil erosion, and contamination of water and food sources. These overlaps are most pronounced in the Western, Ashanti, Brong Ahafo, and Eastern regions, areas central to Ghana's cocoa economy.

These findings point to potential increasing pressures on rural livelihoods, tenure security, and environmental sustainability. Researchers are calling for stronger land governance, better coordination between key oversight bodies, and increased investment in safety monitoring in high-risk areas.

Dr. Vida Afarebea Agyen, Amaris Institute of Statistics and Economics (AmariStat), said:

***"These results highlight the urgent need to strengthen land governance in Ghana. Farmers must be protected from losing their livelihoods, while at the same time, policies must provide better and fairer alternatives for those who depend on artisanal mining."***

***COCOBOD, the Minerals Commission, and the recently established Ghana Gold Board must swiftly increase their coordination to effectively manage this critical issue. Without this, the livelihoods of cocoa farmers, small-scale artisanal miners, and our forests are at risk."***

## Exploring Terrestrial Ecotopias

Heather Alberro - Lecturer in Sustainability

In *Terrestrial Ecotopias*, Heather Alberro invites readers to imagine futures that break away from the fatalism of our current moment. Blending literary analysis, activist histories, and Indigenous futurism, she explores how more than human worlds might flourish beyond the confines of the 'Capitalocene'.

We feature here an edited excerpt from an interview with Heather. We encourage you to [read the full interview on the GDI blog](#).

**Q: To start us off, how did this book come about?**

HA: This book sprouted out of my PhD thesis, which examined radical environmental movements like Earth First!, Hambacher Forst, and earlier strains of the Sea Shepherd Conservation Society, and how their ecological worldviews and close kinship bonds with other earth beings informed their activist tactics, critiques of the status quo, and visions for sustainable futures. After discovering the diverse field of utopian studies, I started to frame such movements as examples of a particular type of ecotopianism (what I term 'terrestrial ecotopias' in my book) that struggles to create more harmonious and respectful socio-ecological relations in the here and now, on earth, rather than projecting such visions to distant times or places. I then realised how pervasive eco-dystopias are in popular culture (i.e. Mad Max, Snowpiercer, The Road) and academic discourses, and how much we tend to focus on what's wrong with our fundamentally unjust and unsustainable global socioeconomic system. However, as crucial as critiques are, we also need some inkling of the kinds of worlds we wish to strive towards, otherwise we remain politically paralysed. So, I decided to write this book exploring positive visions and strivings for sustainable worlds. I also added a few new chapters beyond what I covered in my PhD, after stumbling upon and being hugely inspired by indigenous green speculative fiction.

**Q: What is an 'ecotopia'? And where can we find them?**

HA: Ecotopianism involves (1) criticisms of the socio-ecological harms of industrial-capitalist, consumerist societies, and (2) strivings for more

socio-ecologically sustainable worlds. Ecotopias come in many shapes, colours and sizes, as seen in social and artistic movements, literature, theoretical and academic debates, popular culture, policy, and virtually every other aspect of human (and more-than-human) endeavour. In the literary genre, (eco) utopias and dystopias are depicted as imagined societies usually displaced temporally or spatially—often, wherein you'll have a character who serves as 'the visitor' experiencing the utopian (or dystopian) society from their position of unfamiliarity. This temporal and/or geographic displacement is what facilitates utopias' and dystopias' critical function—by placing the familiar world of the author under critical scrutiny via its juxtaposition alongside the imagined better (or nightmarish) world. This serves as an important reminder that no given 'reality' is ever natural nor inevitable, but always subject to change. Ecotopias can range from the more technocratic forms, or books, movements, etc. that center technology and AI as central drivers of transformative change for sustainability, to the 'deep green' or more politically oriented ecotopias, which argue for fundamental changes in values, culture, political systems and power asymmetries for building more ethical human-nature relations.

**Q: Scholars play with a variety of terms to define the geological epoch through which we're currently living, from Donna Haraway's Chthulucene to Jason Moore's 'Capitalocene' – a foundational term in your book. What is it about this definition that you find most elucidating?**

HA: I opted for the term 'Capitalocene' because its diagnosis encompasses a key systemic driver of contemporary socioecological breakdown, in my



view and as shared by many of the movements and literary works that I explore in the book. Rooted in colonialism, capitalism has now become a hegemonic global system whose inherent drive towards endless expansionism, privatisation and commodification not only generates a litany of social injustices but is also ecologically calamitous. Unlike the Anthropocene, which suggests that humans as a homogenous whole are the culprits, the Capitalocene highlights that our socio-ecological woes are the result of historically specific, socially constructed systems that can be unmade.

**Q: You write that this Capitalocene, the world we are living in now, is not inevitable. How can we reject “capitalist realism” and imagine different ecological futures when capital’s influence over our lives feels so totalising?**

HA: Indeed! Political apathy and fatalism seem so pervasive, no doubt a hangover of the famous Thatcherite maxim that ‘there is no alternative [to neoliberal capitalism]’. But we must remember that

**Unlike the Anthropocene, which suggests that humans as a homogenous whole are the culprits, the Capitalocene highlights that our socio-ecological woes are the result of historically specific, socially constructed systems that can be unmade.**

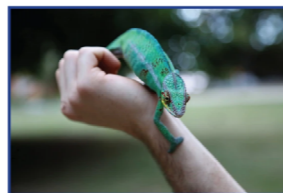
capitalism is only around 500 years old; for the overwhelming majority of human history, thousands of diverse cultures, socioeconomic and political systems existed and continue to do so. This is why I draw so much inspiration from alternative local and indigenous traditions and social movements – they are living reminders that other worlds and ways of being are *always possible*.

**Q: Your book is grounded in literary analysis. What role does literature (and other forms of cultural production) play in fomenting hope and dissent? How does it interact with climate activism?**

HA: Storytelling is crucial for offering novel perspectives that challenge mainstream narratives, the status quo and prevailing assumptions about what’s possible. Literary works are uniquely adept at depicting worlds and relationships in vivid detail, which is vital for being able to imagine alternatives

worlds and ways of being. Similarly, the utopian movement Solarpunk has been instrumental in designing rich artistic illustrations depicting what ecotopias might look and feel like. However, the book also focuses on activism as another unique modality of transformative change and form of ecotopianism. From the suffragettes to anti-apartheid, civil rights movements, Fridays for Future and Extinction Rebellion, social movements are the lifeblood of transformative change, whose popular discontent puts needed pressure on established political systems. Importantly, literature and social movements are not separate entities, but often influence one another.

TERRESTRIAL ECOTOPIAS  
MULTISPECIES FLOURISHING IN  
AND BEYOND THE CAPITALOCENE



HEATHER ALBERGO

**Q: What role do Indigenous epistemologies have to play in countering the Capitalocene? How can those of us embedded in Western institutions approach Indigenous thought in an ethical and productive way?**

HA: Engaging with alternative, activist, indigenous, etc. worldviews and epistemologies is essential for decentering Western-capitalist and Eurocentric perspectives. Other ways of thinking and being remind us of the pluriverse of possibilities that constitute our shared earthly existence. For instance, social and ethical systems based on reciprocity, respect and care for the natural world, common rather than private management of resources, and socioeconomic systems based on balanced subsistence rather than endless growth and accumulation have been the norm for many cultures. However, the mode of engagement matters. It’s crucial to do our best to avoid replicating ‘epistemic extractivism’, or appropriating local and indigenous ideas and practices as our own and subsuming them into Western knowledge systems, without meaningfully acknowledging the original knowledge-producers or their contexts and attendant struggles.

**Q: You talk about “great refusals” within ecotopian social movements. Could you explain what this means? How can these refusals become ways of building new worlds rather than just pushing back against the old ones?**

HA: The ‘great refusal’ is a concept by utopian critical theorist Herbert Marcuse in reference to the function and power of social movements. I draw on this concept in the book to refer to social movements, and ecotopias more widely, as ‘refusals’ of the hegemonic status quo which masquerades itself as natural and inevitable. By refusing the globalised, (neo)colonial-capitalist order, ecotopian movements are also announcing alternative worlds and ways of being in the form of post-anthropocentric values, intentional communities (i.e. eco-villages, housing coops), pushing for more progressive social and environmental policies, and building intersectional alliances with other radical movements around the globe.

**Q: You describe hope as something active rather than passive. What forms of hope feel most significant right now, and where/how do you see them taking shape in the world around us?**

Perhaps my favourite definition of active or ‘concrete’ hope in Ernst Bloch’s terms is Rebecca Solnit’s in her poignant work, *Hope in the dark: Untold histories, wild possibilities* (originally recommended to me by one of my Earth First! research participants!):

***Hope is... “an axe you break down doors with in an emergency; because hope should shove you out the door, because it will take everything you have to steer the future away from endless war, from the annihilation of the earth’s treasures and the grinding down of poor and marginal. Hope just means another world might be possible, not promised” (2016, p. 4).***

Crucially, hope is the opposite of blind optimism, because the latter, by assuming the inevitability of a particular outcome, extinguishes the grounds of possibility that are essential for hope to flourish. Hope is only possible when we don’t know what will happen, so we actively fight to bring about the outcome or world we desire. I see this sort of hope in action everywhere. For instance, in the global network of ecological distribution conflicts chronicled by the EJ Atlas (over 4,500 cases and counting!), in the multi-tribe alliances across the Amazon daily keeping extractive industries at bay, in the youth-led Fridays for Future movement refusing elder generations’ inaction on climate change. Hope is also alive in HE spaces wherein staff and students insist on embedding climate justice into

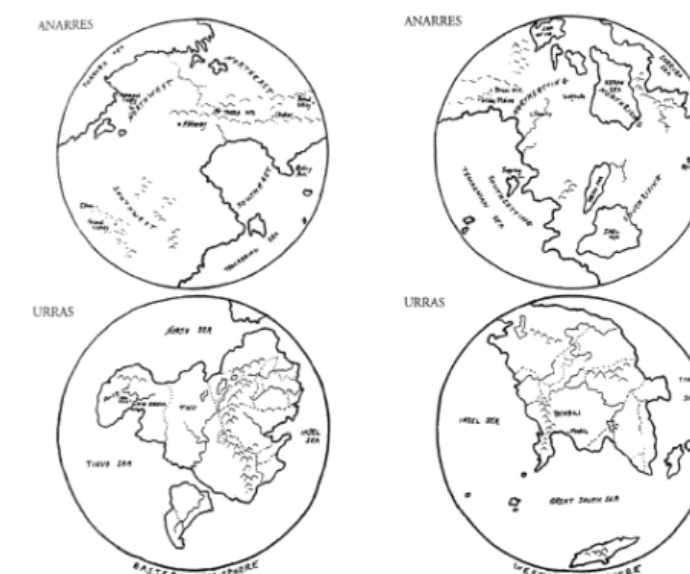
**Utopianism also reminds us that another world is always possible, but never guaranteed- what kind of world we bring into being, whether it’s a utopia or dystopia, depends on our actions today and every day.**

their curricula. These manifestations of hope are what ensure that we don’t fully descend into a dystopian hellscape of endless war, racial and xenophobic hatred, misogynistic violence and ecological annihilation.

## Literary work to explore in the vein of ecotopias

As recommended by Heather:

- Starhawk’s *The Fifth Sacred Thing*
- Ursula Le Guin’s *Always Coming Home*
- Joshua Whitehead’s *Love after the end: An anthology of Two-Spirit and Indigiqueer speculative fiction*



Maps of the ‘sister-worlds’ of Anarres and Urras from the frontispiece of Ursula K. Le Guin’s *The Dispossessed* (1974) - By H Tidal

# When a cartoon fox becomes a research method: Rethinking co-production and who decides

Mariana Hernández-Montilla

PhD Researcher



***I made a cartoon fox to thank a community. It became something else: a way of doing research.***

Her name is Kachi. In Mixtec (an indigenous language in Mexico), *kachi* means to say, to speak, to tell. She is a little fox who lives in a forest threatened by *El Olvido* - “forgetting”. The spirits of water and earth, Doña Cristalina and Don Nicanor, are her allies. The elders know them. The children are beginning to forget.

I designed her as a way to give something back, something the communities could keep. That was the idea. I did not expect the making to become part of the finding out, or that deciding what the film was would turn out to be a decision about who the research belonged to.

## The research behind the fox

The Mixteca Alta is a highland region in Oaxaca, Mexico, where Ñuu Savi (Mixtec) Indigenous communities have been restoring degraded forests for decades, largely through their own communal governance systems, and mostly without recognition in national policy. For almost three years I have been working with two of those communities, trying to understand how they define what successful forest restoration means on their own terms. The concept that keeps coming up is *arraigo*: a sense of deep rootedness, of belonging to a place across generations, across landscape, across collective memory.

In Tepelmeme Villa de Morelos and San Cristóbal Suchixtlahuaca, success in forest restoration is measured in *quedarse*, in staying. In water returning. In youth having reasons to come back. After conducting fieldwork interviews with the communities, my transcripts could capture the words but not always what was behind them. Stories about rituals before planting; about asking the land permission; relationship between forests and water in terms that sit outside any ecological framework I was trained in.

That is why I started making an animated documentary.

*Los Seres de la Montaña* follows Kachi and the forest spirits as they protect their landscape from *El Olvido*, the forgetting that grows when younger generations lose the thread connecting them to the land. In the

story, Kachi plants seeds but the forest does not recover, because she plants without ceremony, without permission, without the old knowledge. *El Olvido* grows precisely through that gap. The film will be ten minutes long, for children aged 6 to 12. It is also, in some sense, for the elders watching the young people leave.

## When we started drawing

The co-production began remotely with José Miguel, a long-time friend and talented designer. When resources are scarce, you turn first to the people you trust, and for me, that was him. José Miguel is in Venezuela, the communities are in Mexico, and I am in Manchester. We have been shaping the film across WhatsApp, Zoom calls, and sketches sent across three time zones. Something unexpected started happening.

When we worked on how to represent Doña Cristalina - what form she takes, whether she has a face, how she moves, whether she is mostly water or mostly light - the conversations went somewhere my interview guide had never pointed. Deciding how to draw a forest spirit forces a decision about what it is. That is not a design question. It is ontological. The communities were defining things I had only partially understood. In my academic writing, *arraigo* takes multiple dimensions to describe. In *Kachi*, it lives in how she moves through the forest and why she cannot stay silent: because if she does, the spirits lose their voice, the elders lose their interlocutors, and the children grow up not knowing what they are losing.

**The film was supposed to be where the research ended. Instead, it became where new questions began.**

## What the form could not hold

I trained as a biologist. Moving into social sciences has been a challenging journey. Making a documentary adds another layer, not only intellectually, but institutionally. Ethics applications, funding forms, risk assessments: these are where the limits become visible. Each asks you to declare in advance your methods and outputs. I had already navigated this: my research included participatory mapping approved as a primary method, so I understood the distinction between method and output. But the documentary felt different. It was the return, not the research. So, I classified it as dissemination and moved on, leaving unchecked a box labelled “creative practice as research.”

I do not think the form is wrong. The problem is the logic it encodes: that you know, before the making begins, which side of the line you are on. That methods and outputs can be separated in advance. That the method and the return are different things, decided ahead of time. At the time of submission, the documentary did best fit the dissemination category. That assumption held - until the co-production process began to generate knowledge I had not anticipated. After that, I spent months trying to describe what the process was producing in language careful not to claim too much - softening, hedging - because I had already accepted the classification before the work began, and the work had quietly exceeded it. I called it dissemination. The communities made it research.

## Who decides

My research is built around a distinction the communities themselves name: *decidimos versus nos dicen*, those who decide and those who are told. It describes who holds authority over restoration. It also, I have come to think, describes who holds authority over research. Who defines what counts as a method? The form does, in advance, before the fieldwork, before the co-production, before anyone has sat together and tried to draw what a forest spirit looks like from the inside. The moment you commit a creative activity to the dissemination column; you have already told the institution that the communities are the audience. Not the authors. That decision tends to go unexamined, and it has consequences for what research with communities can produce and claim.



# Featured Publications

## Deforestation and human development in the Brazilian tropical dry forest

(Forest Policy and Economics, 2025)

**Lucas Alencar, Luke Parry, Felipe Melo**

Most of what we know about how deforestation relates to human well-being comes from the Amazon, yet around 27 million people live in the Caatinga - South America's largest tropical dry forest, and one of its most understudied. We wanted to test whether clearing Caatinga vegetation really delivers lasting gains in human development, or whether it follows the same "boom-bust" pattern seen in other frontiers. Using 20 years of census data alongside satellite-based deforestation records across 1,207 municipalities, we found that deforestation does boost development, but only up to a point. Beyond roughly 50% forest loss, progress stalls and, for some indicators, reverses. The message is sobering: development dependent on natural resources extraction doesn't deliver promised welfare gains and is no substitute for investing in institutions, public services, and more equitable land governance. For anyone working on sustainable development in drylands, this paper challenges the common sense among investor, land speculators and politicians that forest clearance is a necessary step for prosperity.



Summaries provided by **Lucas Alencar**, Research Associate (Sustainable Forests Transitions Project), GDI

## Long-term landscape structure change in contrasting land occupation strategies of the Brazilian Amazon

(Land Use Policy, 2025)

**Lucas Alencar, Maria Isabel Sobral Escada, José Luís Campana Camargo**

The Brazilian Amazon has been historically shaped by two major and very different colonisation models: large-scale "Geometric" land grants tied to agribusiness, and "Fishbone" smallholder settlements that branch off federal roads. We wanted to know what these two strategies have done to the landscape over the long run. Using 30 years of Landsat imagery (1985–2015) across 14 Amazonian landscapes, we found that both models produced similar amounts of total deforestation, but left radically different forests behind. Fishbone landscapes are shattered into thousands of small, irregular fragments with two to three times more area exposed to edge effects; Geometric landscapes retain larger forest patches, but embedded in hostile pasture or soy matrices. Each pattern carries distinct threats to biodiversity. The takeaway is simple: how we deforest matters as much as how much, and any credible restoration policy must be tailored to the specific pattern of forest loss.

## Can indigenous political representation improve forest conservation? India's experience

(World Development, 2026)

**Bina Agarwal, Shamindra Nath Roy, Shiva Chakravarti Sharma**

In ecological discourse, there is a mythology about indigenous communities, that they are close to nature and hence "natural" stewards of the environment. In this paper we approach this idea somewhat agnostically, arguing that indigenous communities, often being poor, might equally favour more extraction for subsistence or prioritise infrastructure for development, leading to greater degradation. Existing assumptions thus need probing.

We do so by examining if political representation by indigenous communities at different levels of governance affects forest conservation. For this we use India's unique but globally relevant example of multilayered enactments which granted Scheduled Tribes political representation, and hence influence over forests, in constituencies reserved for them at two levels: state assemblies and village councils.

Focusing on Chhattisgarh state, we use GIS technologies for accessing forest cover, village boundaries, and village characteristics, to compare the state's approx 20,000 villages over 19 years, 2001-2019, differentiating between the two levels of reservation and between delimitation time periods. We find that over 2001-2019, village area under forest cover increased by almost 240,000 hectares for the 10,554 ever-reserved villages, constituting four times the increase in never-reserved villages.

Regression analysis further shows that relative to never-reserved villages the likelihood of an increase in percentage village area under forest cover is significantly higher with solely assembly-level reservation, but significantly lower with solely village-level reservation. This suggests a policy win-win for the former in promoting both social inclusion and conservation. In the latter, however, divergent interests could stymie outcomes, needing

additional incentives to conserve. This paper - the first one globally to cover the effect of multi-level indigenous representation over two decades - holds lessons for other countries with large forest areas and indigenous populations.



Summary provided by **Bina Agarwal**, Professor of Development Economics and Environment, GDI

## Forwarding forest restoration: Seven key socio-ecological issues for advancing forest restoration in a world in flux

(People and Nature, 2026)

**Mariana Hernandez-Montilla, Katie Devenish, Lucas Alencar, et al.**

Restoring forests has become a centerpiece of global environmental policy as a means of simultaneously mitigating the climate and biodiversity crises. If done right, it can also offer economic benefits to local communities through forest bioeconomies, carbon payments, or agroforestry. However, forest restoration efforts face persistent challenges, and as the world rapidly changes new challenges and opportunities are emerging. In this study we wanted to help restoration practitioners and policy-makers get ahead of these changes and future-proof their work. To do so, we convened a group of 25 experts on forest restoration from around the world, and used a structured Delphi-like expert elicitation exercise to collectively identify 7 key socio-ecological issues likely to have a substantial impact on forest restoration over the next 5-10 years. These issues are : (i) adverse environmental impacts of poorly designed forest restoration initiatives; (ii) continued inattention to human well-being and diverse values; (iii) the funding

gap for long-term restoration and challenges of private investment; (iv) new power dynamics and elite captures; (v) the looming technological revolution from Artificial Intelligence and related technologies; (vi) increasing need for adaptation to climate change to be built into restoration practice; and (vii) increasing competition and contestation for land.

Some of these issues reflect the continuation and consequences of problematic, top-down, carbon-centric approaches to restoring forests which risk negative social and ecological impacts. Others may represent opportunities to support more bottom-up, community-led restoration through expanding natural capital markets and technology, but only if markets are well-regulated, the technology is accessible and supported with capacity-building. We hope that by raising awareness of these issues, we can help practitioners and policy-makers to take advantage of emerging opportunities and address challenges, improving the effectiveness and equity of future restoration efforts.



Summary provided by **Katie Devenish**, Research Associate (Sustainable Forests Transitions Project), GDI

## Contrasting patterns of deforestation and reforestation in India's tropical dry woodlands

(Environmental Research Letters, 2026)

**Dhanapal Govindarajulu, Timothy Foster, Rose Pritchard, Matthias Baumann, Tobias Kuemmerle, Bhumika Morey, Abhijeet Parmar, Ashwini Chhatre and Johan A Oldekop**

Although dry woodland cover has increased, net gains mask significant losses, particularly within government-administered lands that contain much of India's remaining natural dry forests.

Gains within government-administered forest lands are likely driven by increased restoration and afforestation efforts to achieve India's forest cover targets under schemes like the Green India Mission, the Compensatory Afforestation Fund, and the National Afforestation Programme. In contrast, many of the observed gains outside government lands are likely due to large-scale timber and tree-crop plantations.

These loss and gain patterns have important implications for carbon storage, biodiversity conservation, and forest-dependent livelihoods, as plantation-driven gains outside government lands are unlikely to provide equivalent ecological functions to natural gains. Countries reporting to global biodiversity and restoration targets often monitor forest cover alone and thus inadequately report progress against forest integrity goals and targets.

We show why monitoring deforestation and reforestation jointly, and at high spatial resolution, is important for monitoring efforts linked to global biodiversity and restoration agendas.



Summary provided by **Johan Oldekop**, Professor of Environment & Development GDI

## A horizon scan of global issues on forests and livelihoods for 2026

(Forest Policy and Economics, 2026)

**Matilda Kabutey-Ongor, Katie Devenish, Mariana Hernández-Montilla, Lucas Alencar, Sandra Barragan-Contreras, Victorine Che Thöner, Reem Hajjar, Yayan Hidayat, David Kaimowitz, Birendra K. Karna, Duong T. Khuu, Anders C. Krogh, Anne M. Larson, Estefania Liehr, Doris Mutta, Peter Newton, Sandy Nofyanza, Bryson Ogden, Manuel Pulgar Vidal, Adithya Pradeep, Johan A. Oldekop**

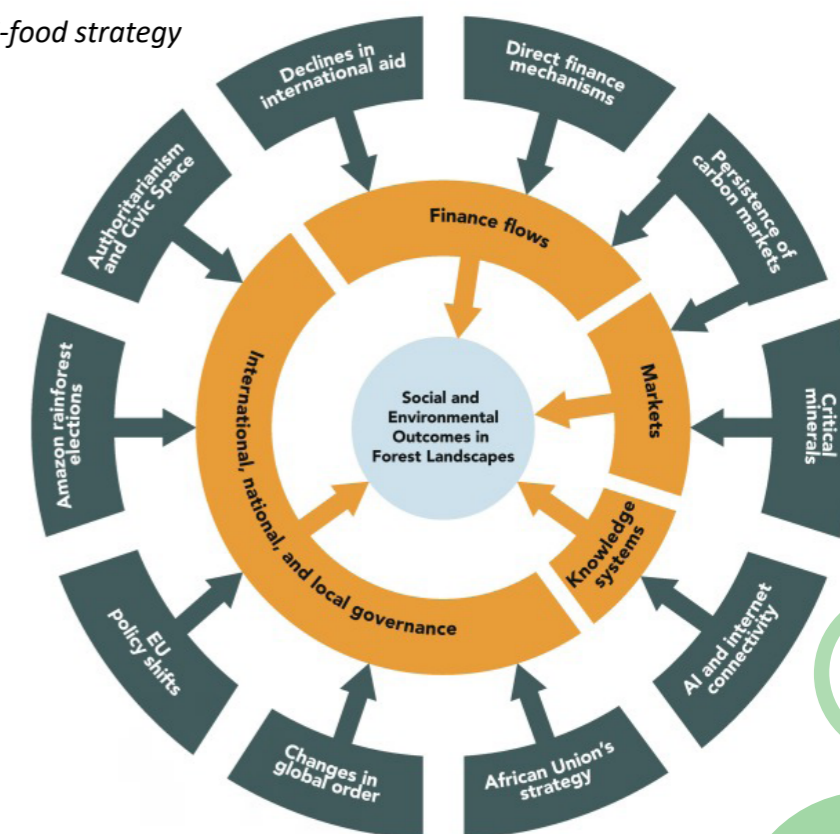
Thriving forests and forest-connected communities' livelihoods depend on stable governance arrangements, secure rights, and favourable financial and market conditions. To identify emerging, near-term challenges and opportunities, we identified:

### 10 emerging issues expected to shape forests and forest-connected livelihoods over the next decade -

1. the decline of traditional Global North aid and research funding;
2. social-ecological change driven by technologies including artificial intelligence, remote sensing, and expanding satellite internet connectivity;
3. accelerating demand for gold and critical minerals, particularly rare earths / noble earths, and the expansion of extraction frontiers;
4. rising authoritarianism and shrinking civic space;
5. evolving regulation and growth of carbon and emerging biodiversity and ecosystem service markets
6. erosion of the post-World War II multilateral order and associated international norms;
7. emergence of innovative mechanisms for direct financing to Indigenous Peoples and Local Communities;
8. major shifts in EU trade and due-diligence regimes;
9. the African Union's new ten-year agri-food strategy and its implications for land use;
10. the uncertain fate of the Amazon rainforest under upcoming national elections in Brazil, Peru, and Colombia.

By identifying and discussing these key issues, our horizon scan yields new understanding and foresight of how rapidly unfolding current events and advances may influence forests, forest-connected communities, and their livelihoods in the coming years. In so doing, our exercise also develops an agenda for research, policy, and practice at the intersection of forests and livelihoods.

This research has also been featured in [Mongabay](#).



Learn more about this paper by listening to [a new podcast episode](#) published by *People and Nature* featuring **Katie Devenish** and **Mariana Hernandez-Montilla**





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SUSTAINABLE  
FOREST  
TRANSITIONS

**Edited by the GDI Communications and Impact Team**



**Skyla Baily**

Digital Communications Officer  
[skyla.baily@manchester.ac.uk](mailto:skyla.baily@manchester.ac.uk)



**Chris Jordan**

Communications & Impact Manager  
[chris.jordan@manchester.ac.uk](mailto:chris.jordan@manchester.ac.uk)



**Louisa Hann**

Research Communications Officer  
[louisa.hann@manchester.ac.uk](mailto:louisa.hann@manchester.ac.uk)