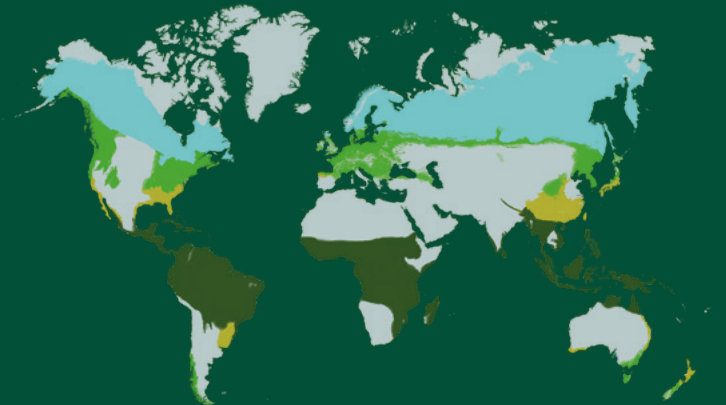


Forests and fire

Wildfires and deforestation are not only environmental problems – they are shaped by economic systems, policy decisions and global consumption. LSE research examines these forces to understand why forests are under pressure and how better policies can protect them.

What do forests do for the Earth?

Research by the **Centre for Economic Transition Expertise (CETEx)** sets out the critical role of forest ecosystems, from underpinning food systems to supporting livelihoods and providing a buffer for communities against environmental shocks. These benefits are known as ecosystem services. Often, they only become visible when they are disrupted.



Distribution of forests globally by climatic domain, 2020. Source: FAO (2020)

When forests are lost, these benefits decline. Air pollution and disease increase. Infrastructure becomes more vulnerable to floods and landslides. Economic systems become more exposed to climate hazards. These risks can transmit through financial systems via falling asset values, disrupted supply chains and rising insurance losses.

What drives deforestation?

Today, most large-scale forest loss is due to agricultural expansion, timber extraction, mining, infrastructure and urban growth, driven by global consumption patterns.



2001-2020: approximately 1.48 million km² of forest were lost globally

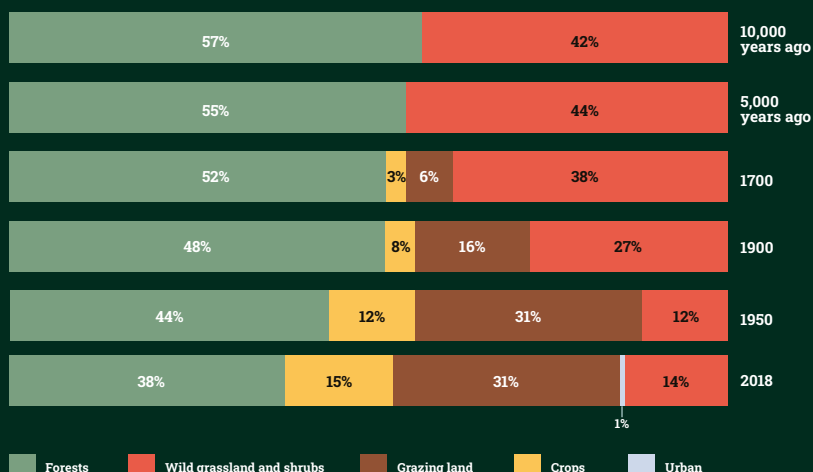


62% of tropical forest loss is linked to commodities such as beef, soy and palm oil



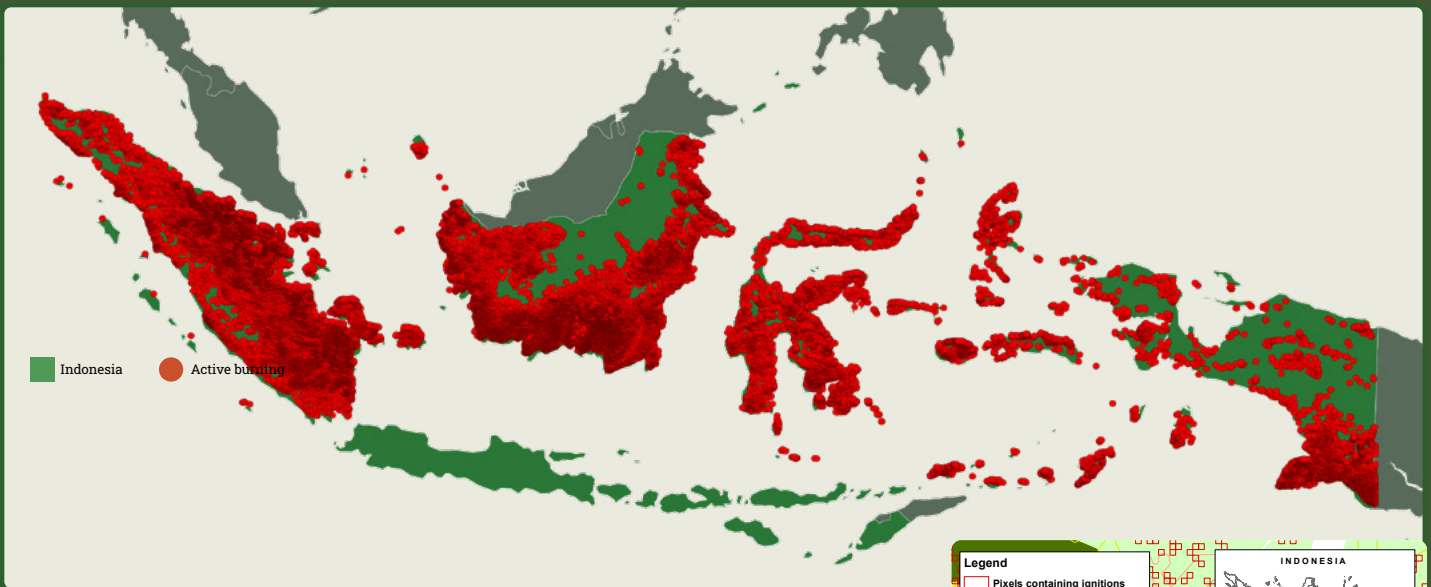
25% of tropical forest loss is associated with exports

Change in global land use over the ages



This graph shows the accelerating decline in forested area as agricultural needs increase. Source: Ritchie (2021)





Hotspots of active burning in Indonesia tracked over 15 years using NASA's MODIS system

Case study: Indonesia

Indonesia provides one of the clearest examples of how land-use policy, commercial incentives and fire risk intersect. **Dr Clare Balboni and Professor Robin Burgess** (STICERD) analysed 15 years of daily satellite data using NASA's MODIS system, which detects thermal anomalies at roughly one square kilometre resolution. Each "hotspot" indicates active burning.

These data were combined with land-use maps identifying oil palm concessions, wood fibre plantations, logging areas and protected forests. By overlaying fire detections with concession boundaries and forest loss records, researchers identified where fires ignited, how long they burned and whether they followed recent deforestation.

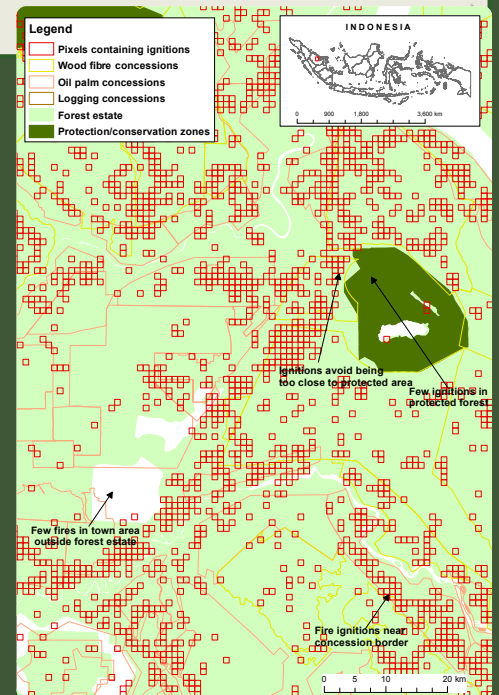
The patterns were clear:



Fire probability per hectare 8x higher in oil palm and wood fibre concessions than in other land categories. Nearly 1/2 of all concession fires occurred in oil palm areas.



Areas deforested in the previous year were approximately 275% more likely to experience fire, suggesting a strong link between land clearing and burning.



The figure shows a map of the Riau region in Indonesia. Using remote sensing (satellite) data from 2000-2016, each 1km² red grid cell represents at least one detected ignition within different concessions zones (wood fibre, oil palm or logging). A concession gives private companies the rights to establish plantations on public lands.



During the 2015 fire crisis, Indonesian fires released an estimated 400 megatonnes of CO₂ equivalent at their peak.



The largest single fire burned 656 km² – about the size of Singapore.



On some days, emissions exceeded the daily emissions from all US economic activity.



The resulting haze affected Indonesia, Malaysia and Singapore and was linked to significant public health impacts.

Why are wildfires getting harder to fight?

Wildfires are becoming more intense, unpredictable and harder to control – but are they actually getting worse? And if global burned areas are falling overall, why are extreme “monster fires” still causing devastation?

In [this video](#), Dr Tom Smith (Associate Professor in Environmental Geography) explains the science behind modern wildfires and how climate change, land use and decades of fire suppression have made today's fires harder to fight.



Policies protecting forests and

reducing fire and forest loss

Satellite monitoring has reshaped accountability as fire activity can now be detected, dated and geographically attributed with increasing precision. This allows regulators to identify repeated burning patterns and assess compliance.

Reducing forest loss requires addressing its drivers which include land-use planning, enforcement, incentives for sustainable agriculture and clearer international standards for deforestation-free supply chains. Financial institutions are increasingly assessing exposure to deforestation-related risk.

At the global level, **proposals for long-term funding mechanisms aim to tie economic incentives with forest protection**, particularly in lower-income, forest-rich countries.

The challenge is not to halt development, but to shape it in ways that preserve the ecological systems on which both local and global stability depend.

The evidence shows the right policies can reduce forest fires, but further action is needed to match the scale of the problem.



What do we need for a productive and healthy ocean economy?

The ocean economy encompasses all economic activities related to the ocean. It has grown rapidly since 1970 in areas like fishing, shipping and tourism as well as new sectors like deep-sea mining and subsea cables and data centres.



1 trillion

Estimated value of the ocean economy today



3 trillion

Projected value of the ocean economy in 2030

Some ocean economy activities have greatly harmed ocean health, and worsening ocean health threatens the ocean economy in turn.

A sustainable ocean economy

Terms like “blue economy” and “decarbonised ocean economy” are increasingly used to highlight the need to lessen the ocean economy’s environmental impact.

Researchers in the **Centre for Economic Transition Expertise (CETEx)** go further. They argue for a sustainable ocean economy. This is about more than reducing the carbon emissions of ocean-related activities. It’s about managing marine resources, protecting marine and coastal ecosystems like mangrove forests, and ensuring inclusive development.

The role of blue finance

Blue finance aims to ensure good outcomes and investment for marine environments through financial instruments like blue bonds and blue loans. Yet more is needed. Sustainable Development Goal 14 focuses on “life below water” but this has received the least investment of all SDGs.



175 billion

World Economic Forum estimate of investment needed to achieve SDG 14 by 2030.



ONLY 9%

Of all investment in nature-based solutions to climate change, only 9% has been directed at oceans.

How do you think we could bridge this investment gap?

Shipping is a key part of the ocean and world economy: 80% of global goods are transported by sea. Shipping is also responsible for 2.8% of global greenhouse gas emissions.



Coastal and marine tourism makes up at least 50% of total global tourism. However, the sector is expected to contribute 5.3% of greenhouse gas emissions by 2030, up from 3.7% in 2005.



A sustainable ocean economy isn’t just about shifting away from fossil fuels for low-carbon alternatives (decarbonisation). It also integrates social objectives to ensure ecosystem protection.

How can models help

predict sea level rise?

Satellite image of Thwaites Glacier, one of the most rapidly thinning ice streams in West Antarctica.

Our ability to reliably predict sea levels is crucial. If we don't adapt, sea level rise could be catastrophic, especially for coastal communities. But if forecasts are inaccurately pessimistic, we may over-adapt and waste important resources.

Dr Ieva Kazlauskaitė (Department of Statistics) is part of a team modelling the West Antarctic Ice Sheet. With enough ice to raise global mean sea levels by up to 5m, its fate will shape the future of our coastlines.

The team finds that higher resolutions of ice-sheet models – which produce more detailed simulations – give more accurate and less varied predictions of contributions to sea level rise than lower resolutions.

But the challenge is cost – you could potentially run 20 low-resolution simulations for the same cost as 3 high-resolution simulations. Lower-resolution models may be cheaper, but their variability makes planning for climate adaptation difficult.

The new IceDice project, running until 2028, aims to transform how we model the West Antarctic Ice Sheet. It will use advanced models that can explore far more scenarios than traditional simulations.

This ensures planners and policymakers can evaluate adaptation strategies under plausible futures, balancing risk and resources effectively to help safeguard communities and support coastal resilience planning.



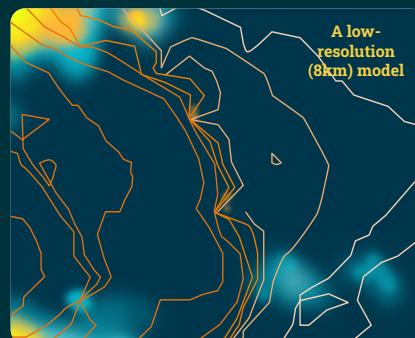
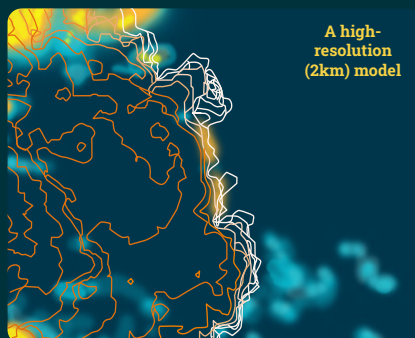
1 trillion

Possible yearly flood-related costs by 2100 without adaptation

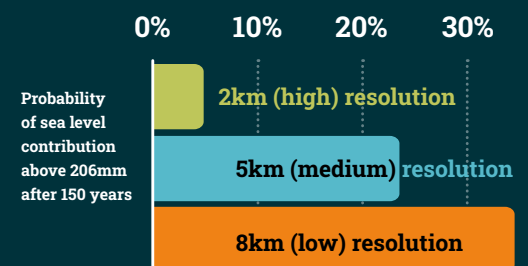


200 million

Global population currently exposed to sea level rise, set to double by 2060



These images show the differences between simulations at two model resolutions for the retreat of Thwaites Glacier over 150 years.



This table shows how ice-sheet models with different spatial resolutions project different probabilities of sea level contribution over time.

How can the ocean inspire us?

After graduating from LSE in 2014 with an MSc in Economics and Management, **Bingqian Gao** built her career as a data specialist in consulting and AI. A decade later, driven by a deep love for the ocean, she stepped away from that path and became a professional freediver and underwater photographer.

Since then, Bingqian has created a multi-disciplinary body of work exploring marine conservation, human resilience and our connection to nature, with photography, data visualisation, and short films.

Watch her award-winning short film unWRECKed.



Bingqian's underwater photography provides emotional access to a living world that remains mysterious and distant to many. A form of witnessing, it creates curiosity and connection from which care can grow.

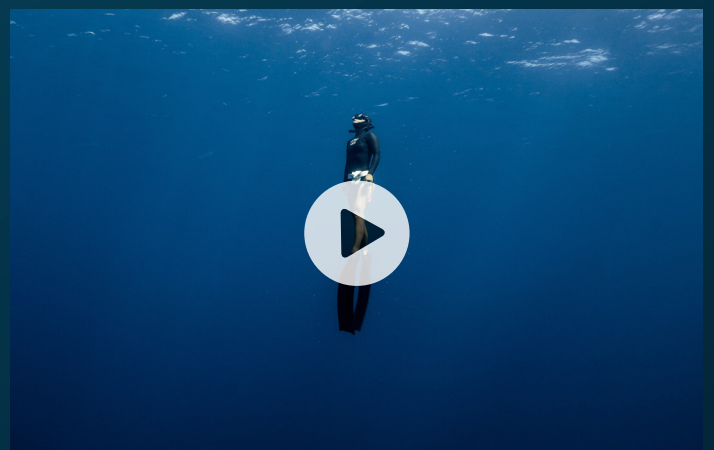
“

The ocean's value is not only economic or instrumental. It is also relational, intrinsic and transformative.”

Photographs: Bingqian Gao www.bingqiangao.com/underwater-photography

“

Freediving teaches me how to move my attention, to be present, to listen to my body, to practise relaxation in a stressful situation, and to let go of unhelpful thought patterns. It is liberating.”



Experience Bingqian's guided relaxation exercise inspired by freediving.

Sustainable cities: The importance of child-friendly urban design

When young children are considered in urban planning policy, it is often in the realms of health or education, but the built environment of cities can support or hinder healthy early childhood development. The needs of children and their caregivers should be considered across all aspects of urban life.



250 million children under 5 – across almost every country in the world – do not receive the care they need to reach their full potential.



New parents are sleep-deprived, stressed, and time-poor. Transitioning to parenthood can be a struggle.



Better urban environments allow us to build strong, healthy connections at every level.



Over 90% of brain development occurs before age 5.



The biggest reported challenges for babies, toddlers and caregivers in your city

Research by Katie Beck and Marie Kaune (Urban Academy, LSE Cities) analysed real-world challenges reported by 358 city teams from 75 countries.

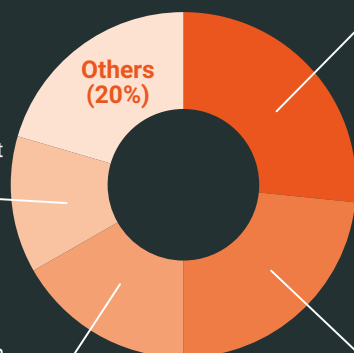
URBAN95 ACADEMY

The Urban95 Academy is a fully-funded executive education programme for municipal leaders to gain tools and develop strategies to make cities better for babies, toddlers and their caregivers. The Academy is a joint collaboration from the Van Leer Foundation and LSE Cities.



Inequality (13%)

- Poverty and informality
- Lack of affordable housing
- Lack of access to education
- Barriers to women's employment



Physical environment (27%)

- Lack of adequate inclusive and green public space with play areas
- Lack of consideration for children's needs in public space
- Rapid urban expansion



Policy and governance (17%)

- Lack of visibility or consideration of children in urban planning
- Lack of provision, accessibility and regulation of early childhood education and development services
- Siloed thinking about children and caregivers across government

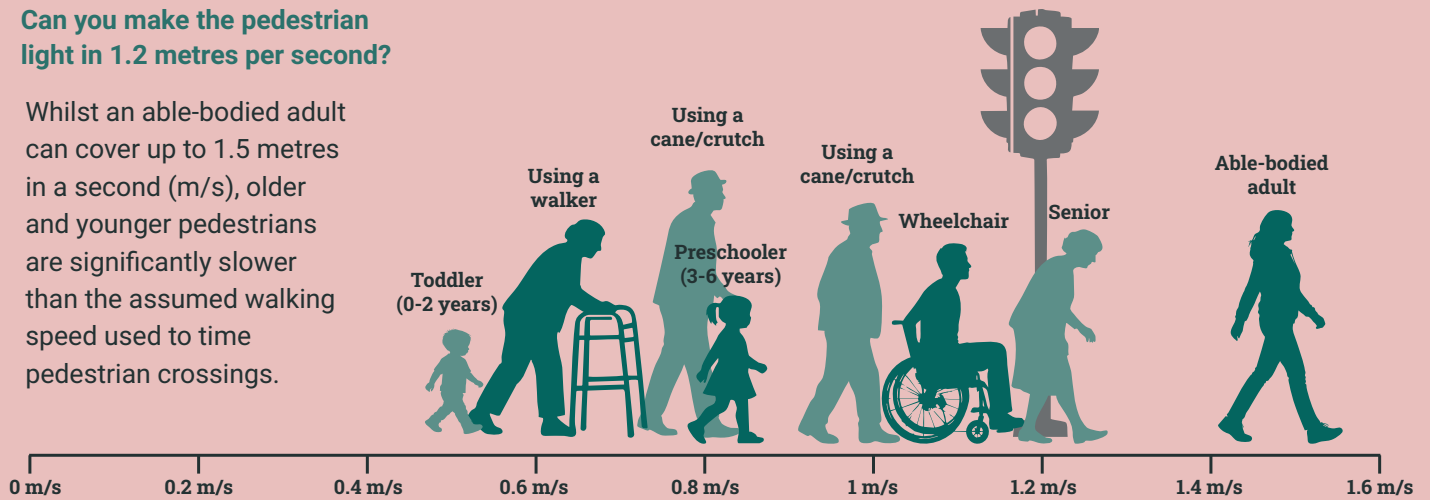
Mobility (23%)

- Lack of pedestrian and cycling infrastructure
- Car-centric planning and car dependence
- Traffic and safety concerns on streets
- Poor quality or inaccessible pavements



Can you make the pedestrian light in 1.2 metres per second?

Whilst an able-bodied adult can cover up to 1.5 metres in a second (m/s), older and younger pedestrians are significantly slower than the assumed walking speed used to time pedestrian crossings.



How could we address these challenges?

Child-friendly urban design is:

- Care-centred, based on lived experience and inclusive
- Connected, close to services and public space
- With reliable, affordable, safe and accessible transport and stable, quality, safe and affordable housing



Istanbul, Turkey

The Zümrütevler Square was transformed to create a public space where the neighbourhood can spend time and children can play. Roads were painted to encourage traffic calming; sitting areas and low-cost play elements were designed where children and their caregivers could spend their time comfortably.



Rotterdam, Netherlands

Nature-based play and parks offer children a greater range of possibilities for imaginative and autonomous play, exploring and creating – as well as spending time in nature, which evidence increasingly shows is critical for mental health and wellbeing.



Udaipur, India

Traffic-calming intervention in front of the Vidya Bhawan pre-primary school in Udaipur to encourage drivers to slow down and make it easier for children to cross the road. The intersection was painted in vibrant colours, with creative designs to make it safer for young children and everyone to cross.



Sustainable cities: Sounds of urban climate adaptation

These soundscapes capture crucial parts of city life in Jordan, Uganda and Ghana – from waste management to transport congestion, to living with water scarcity.

Research by the International Growth Centre (IGC) explores their environmental impact and considers the potential of more climate-friendly and equitable urban policies.



Water scarcity in Amman, Jordan

The Middle East and North Africa region is one of the most water-scarce in the world.

The Mujib Dam supplies around 20 million cubic metres of water each year to Jordan's capital, Amman, as well as tourist resorts, nature reserves and agricultural lands. The nearby Nukheila Valley experiences flash flooding, causing sediment build-up that decreases the dam's water storage capacity annually.

In countries like Jordan, water scarcity, worsened by climate crisis, is a chronic problem. Amman may not be able to eliminate scarcity but the city can come up with strategies to manage it.



82 gallons

Average daily
supply of water
per head in the
United States



33 gallons

Average daily
supply of water
per head in
Amman, Jordan



Click to listen to the
sounds of water
management
in Jordan



How can institutions ensure fair water allocation in Amman?

In Amman, piped water is delivered only 24-36 hours per week, on designated "water days".

IGC research by **Abdulrazzak Tamim** finds striking differences in household use. When the duration of the water supply increases, high-rent households respond, while low-rent households do not.

This is not because lower-income households use less water. Instead, they have limited private storage capacity and cannot save water for later use.

Policies that focus on subsidising household water storage are likely to ensure more equitable water allocation than extending supply hours or using pricing.





Transport congestion in Kampala, Uganda

In theory, a person can travel across Kampala in an hour. In practice, congestion makes daily life slow, costly and stressful, with high air pollution levels. Informality shapes how the city moves.



Over 90%

Motorised trips in African cities that occur in informal transport markets; in Uganda, these are mostly via motorcycle taxis (bodas bodas)

US \$
1.5 million

Daily cost of Kampala congestion, equivalent to 1.9% of Uganda's GDP



IGC research estimates that 2 planned BRT lines in Kampala could decrease the daily cost of total travel time by around \$173,000

How can we reduce congestion in Kampala?

Strategic investment in efficient public transport could reduce congestion, improve health, raise productivity, and support more inclusive urban growth.

IGC research by **Laurenz Baertsch** combined Google Maps data on travel speeds and congestion since 2019 with street-level surveys to capture invisible parts of Kampala's urban economy. This revealed large inequalities in access to schools, hospitals and government services due to congestion and road quality, not distance alone.

Bus rapid transit (BRT) systems, where buses have priority or sole use on dedicated lanes, could help in high-density urban areas like Kampala.



191 cities have BRT systems – only 6 in Africa, compared to 64 in Latin America



Click to listen to the sounds of transport congestion in Kampala

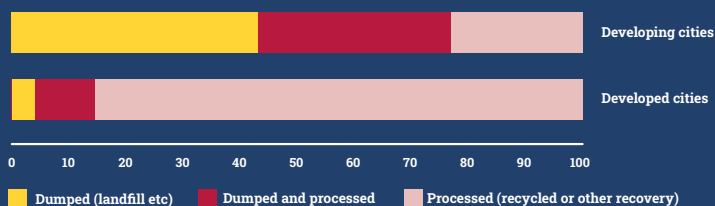


Waste management in Accra, Ghana

When cities expand and waste collections fail to keep pace, the consequences are visible – blocked drains, deteriorating air quality and higher flood risk.

In developing cities like Accra, Ghana, informal waste workers have stepped in where formal systems fall short. These workers, often among the poorest residents, play an essential role.

Waste disposal type in developing and developed cities*



Metric tonnes of solid waste generated by Accra residents a year



Reclaimable waste that is recycled in Accra, mainly by informal pickers



Accra's household waste that is collected by informal collectors, mainly Borla Taxis

How can we improve waste management in Accra?

Informality is not a problem to eliminate in Accra. Small pricing measures could help the informal market deliver waste management more sustainably at scale.

IGC researchers **Ignacio Banares Sanchez** and **Yoshiki Wiskamp** surveyed 1800 households in Accra about their choice of waste collection.

The research shows households choose informal services that collect waste more frequently and at lower cost. Small cost reductions and increased collections make households less likely to dump waste informally, decreasing the probability of blocked drains and flood damage.

However, collectors still often use illegal dumpsites for final disposal, affecting air and water quality. The research finds that subsidies encouraging collectors to use formal, environmentally controlled disposal sites reduce pollution and are less costly than expanding waste infrastructure.



125 households have no access to collection services, leading to dumping or burning waste

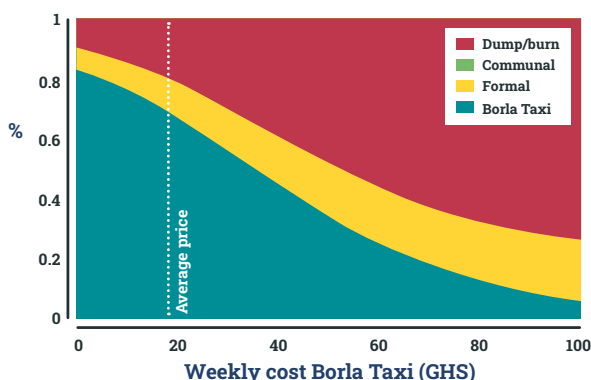


1150 households only have access to informal collection services



Over 80% of households rely on informal waste collection, even when formal services are available

Waste disposal choices at different Borla Taxi prices



Click to listen to the sounds of waste management in Accra



Holding the powerful to account: How can we assess if corporates are meeting their environmental commitments?

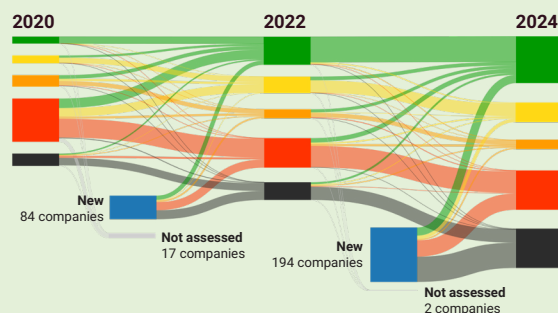
The TPI Global Climate Transition Centre data are used to assess the alignment of forward-looking targets from companies, banks and countries with the goals of the 2015 UN Paris Agreement, which aims to limit the global average temperature rise to 1.5°C.

How are companies assessed?

International greenhouse gas emissions targets are translated into sector-specific benchmarks against which the targets of individual companies can be compared. The benchmarks are developed using data from integrated assessment models developed by organisations like the International Energy Agency, which take a global carbon budget and allocate it to different regions and sectors.

The evaluation includes both significant and material emissions. For many sectors, such as oil and gas and auto manufacturing, this includes supply chain emissions (also known as Scope 3 emissions). Disclosure and mitigation of these emissions are crucial to achieving meaningful corporate decarbonisation.

This granular, forward-looking analysis is less susceptible to “gaming” than competing approaches to assessment. It ensures that companies are held accountable for driving real-world emissions reductions, and that investors do not only pursue portfolio decarbonisation on paper.



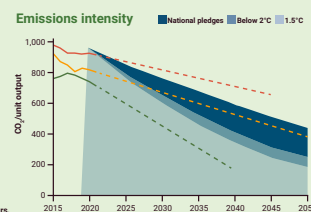
Key	COMPANIES		
	2020 cycle	2022 cycle	2024 cycle
1.5°C	25 (9%)	100 (28%)	167 (30%)
Below 2°C	28 (10%)	59 (16%)	70 (13%)
National Pledges	41 (14%)	32 (9%)	34 (6%)
Not aligned	154 (53%)	105 (29%)	140 (25%)
No or unsuitable	44 (15%)	63 (18%)	140 (25%)

Change in Carbon Performance alignment among companies in the TPI corporate universe in 2050 from the assessment cycles in 2020, 2022 and 2024.

The diagram shows an illustration of target alignment assessment for three sample companies.

Alignment is evaluated in the short, medium and long term because cumulative emissions will determine the ultimate outcomes for the climate.

Company A is not aligned with any of the benchmarks in 2050.
Company B is eventually aligned with the National Pledges in 2050, but with neither Below 2°C nor 1.5°C scenarios.
Company C is aligned with all benchmarks, including 1.5°C, in all years.



How do investors make use of the TPI Centre's research and data?



Risk assessment
Exposing transition risk hotspots in portfolios



Investment decisions
Identifying opportunities across sectors and geographies



Portfolio alignment
Reaching own climate targets



Active ownership
Engaging with investee entities and proxy voting



Product creation
Creating climate-sensitive financial products



Screening
Excluding/including investee entities



Reporting and compliance
Supporting voluntary and regulatory disclosures



Show of commitment
Demonstrating commitment to the Paris Agreement

TPI Global Climate Transition Centre
Research and Data at LSE

The TPI Global Climate Transition Centre (TPI Centre) is an independent, authoritative source of research and data on the progress of corporate and sovereign entities in transitioning to a low-carbon economy.

It is the academic partner of the Transition Pathway Initiative (TPI), a global initiative led by asset owners and supported by asset managers, aimed at helping investors.

More than 155 investors globally, representing approximately US\$92 trillion combined Assets Under Management and Advice, have pledged support for TPI.

Explore how your investee companies, banks or countries are doing.

The TPI online tool gives anyone access to these assessments

How can you make use of this tool?



Where do you bank your money?



What companies or funds do you invest in or buy from?



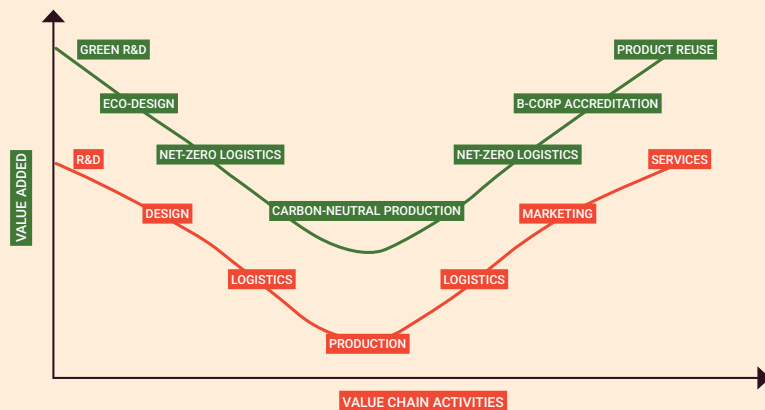
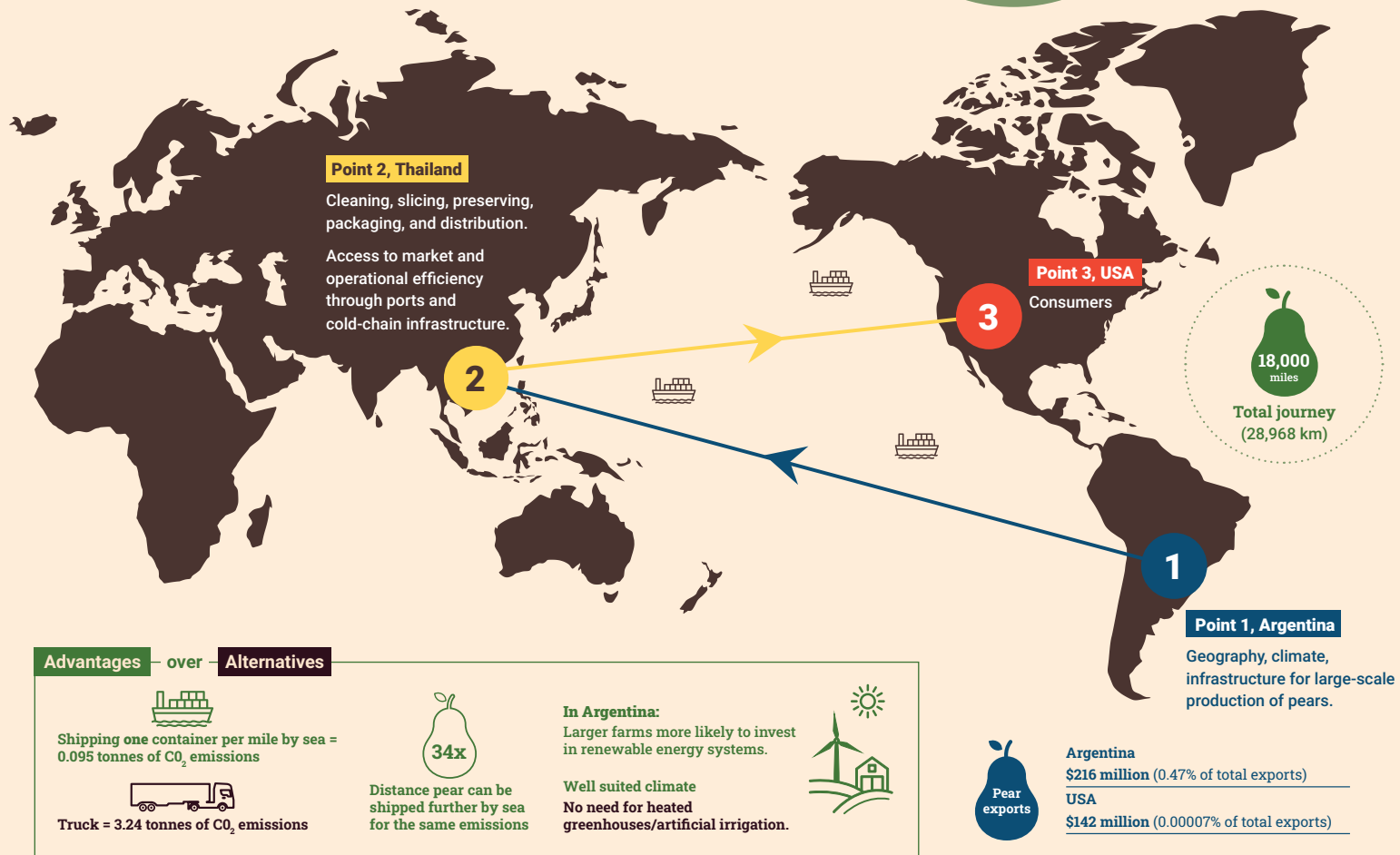
Do you invest in any sovereign bonds?

Why must a pear cross three continents before reaching a lunchbox?

From a climate perspective, long-distance food miles seem like a bad idea, but **Professor Riccardo Crescenzi** and **Oliver Harman** (Department of Geography and Environment and Global School of Sustainability) argue that a well-governed Global Value Chain can reduce, rather than increase, environmental harm. And a Green Global Value Chain* (GVC) can benefit the local economy, as well as the environment.



One of the most viral images of global trade is a meme: a plastic cup of fruit, with three labels: "Grown in Argentina, Packaged in Thailand, Sold in the USA" posted on Reddit in 2020.



Greening Global Value Chains

Supply chains can address sustainability at every stage, including eco-design, carbon-neutral or energy-efficient production, net-zero distribution, and supporting the final consumer with reuse, recycling, or circularity.

This approach can apply to any sector, not just those producing green products or within green industries, and to any region.

Research shows that environmental upgrading does not have to be a trade-off. By taking advantage of what a region already does well, GGVCs can add additional economic value, a process they call green upgrading.

GGVCs require deliberate efforts by firms, investors, and policymakers to embed environmental goals into global production.

* Global Value Chains (GVCs) describe the geographically dispersed web of activities that take a product or service from conception through production to end use. These activities – ranging from design, marketing, logistics, and after-sales – are increasingly fragmented across countries, creating dense networks of firms, regions, and workers that contribute value at various points in the chain.

Holding the powerful to account: Addressing gender-based violence in supply chains

Pauline Jerrentrup's (PhD candidate, Department of Management) research seeks sustainable solutions to labour rights abuses in global supply chains.

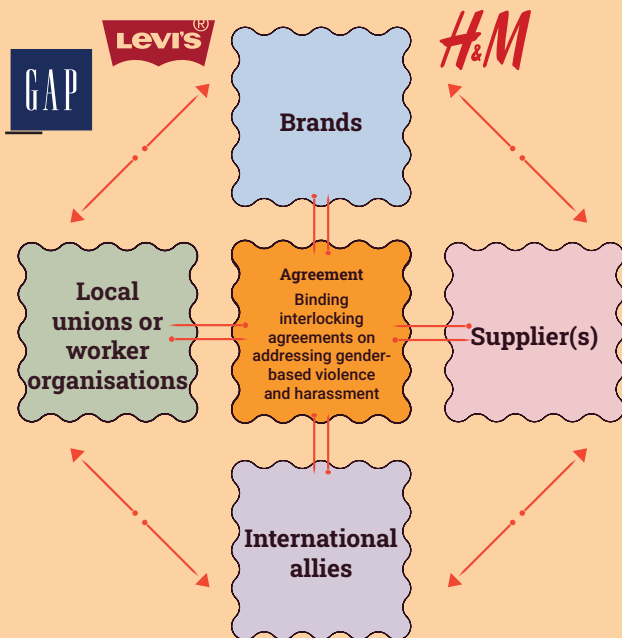
Following allegations of widespread sexual violence in textile factories, NGOs encouraged international brands to leverage their supply-chain power to address gender-based violence and harassment (GBVH) through innovative partnerships with local unions.

What are enforceable brand-union agreements?

Legally binding contracts between international brands, local unions, and NGOs, which go beyond voluntary corporate social responsibility commitments.

Terms of agreement

- Gender-based violence training
- Monitors ensuring protection from verbal harassment and sexual intimidation
- Grievance procedures



Case study India

Dindigul Agreement to Eliminate GBVH at the Natchi Apparel Factory and Spinning Mills operated by Eastman Exports in Kaithian Kottai, Tamil Nadu, India, 2022

The first time brands, such as H&M and Gap, have ever signed up to a binding initiative to tackle gender-based violence in Asia's garment industry, which supplies millions of tonnes of clothing for UK high streets.

Case study Lesotho, Africa

The Lesotho Agreements to Eliminate GBVH at Nien Hsing Textile Co.Ltd, 2019

10,000 garment workers producing denim clothing in five factories owned by a Taiwanese company supplying international brands, such as Levi Strauss.

The first agreement of this type.



Do they work?

The findings show that these agreements can improve conditions on the factory floor where unions have access and enforcement power.

However, both case studies also reveal a major limitation: brands stopped sourcing from factories after signing the agreements, leading to large-scale job losses that ultimately harmed workers' livelihoods.

The research highlights that for such interventions to be effective, they must include binding commitments by brands to maintain sourcing relationships.

Lesotho
2021-2022

81
investigations completed

404
calls received

6,159
attended training

India
Two-year
review

76%
of GBVH grievances were
resolved within two weeks

Holding the powerful to account: What is the role of professional responsibility and influence?

The case of animal welfare and meat consumption

Veterinarians hold significant influence over food systems, animal welfare policy and farming practices. Their expertise shapes and legitimises government regulation, welfare standards, and public understanding of how animals should be treated.

Tensions can arise when professional institutions become closely aligned with the industries they serve.

Dr Steven McCulloch, (Research Fellow in Veterinary Policy at the Jeremy Collier Centre for Animal Sentience and the Global School of Sustainability), calls for far greater scrutiny to protect animals, people and the planet.

Institutional support for intensive farming, severe confinement systems and widespread tail docking continues to shape veterinary policy and practice in the UK and USA.

If the policies of national veterinary institutions contradict scientific evidence or ethical responsibilities, those within the profession and outside of it should be willing and empowered to challenge them.

Globally, over **80 billion land animals** are slaughtered each year, including around **1.5 billion pigs**.



Pork is the most widely consumed meat in the world.

“

I promise and solemnly declare that I will pursue the work of my profession with integrity and accept my responsibilities to the public, my clients, the profession and the Royal College of Veterinary Surgeons, and that, above all, my constant endeavour will be to ensure the health and welfare of animals committed to my care.”

Royal College of Veterinary Surgeons (RCVS)
Declaration on admission to the profession

Veterinary power

Chief Veterinary
Officers and
government
advisers

Advisory
committees and
expert panel

International
bodies

National
veterinary
associations

Watch ‘The hidden truth behind pig farming and meat production’ as part of the LSE Future Proof series:



Photo: © Jo-Anne McArthur, Djurrrattsalliansen, We Animals



Reducing meat consumption

Veterinarians also have influence over our food systems – their duties extend beyond animal welfare to protecting public health and the environment.

Intensive animal farming is a major driver of emissions, deforestation, antimicrobial resistance, zoonotic pandemics and animal suffering. **No national veterinary association across the world has adopted quantified meat-reduction targets.**

The EAT – Lancet Commission recommends:

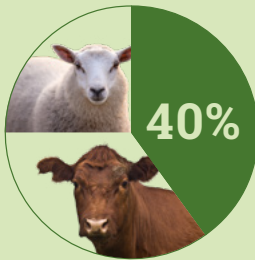


50% reduction in global red and processed meat consumption by 2050 in order to safeguard human and planetary health.

Climate Change Committee (UK) recommendations by 2050

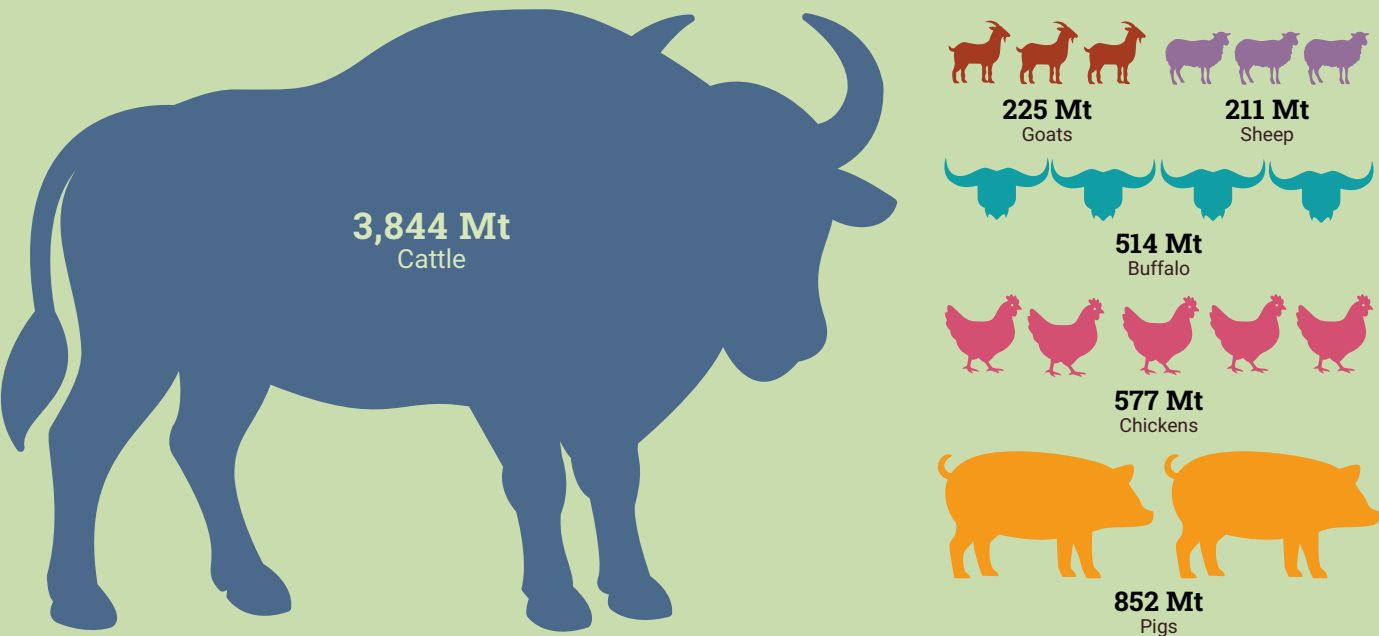


35% reduction in total meat consumption

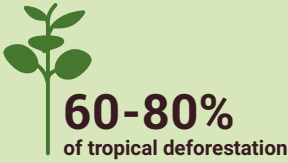
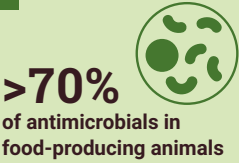
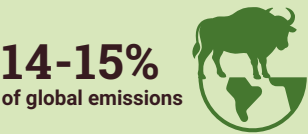


40% reduction in beef and lamb

Global greenhouse gas emissions from livestock (megatonnes CO₂ equivalent)



Agriculture is responsible for ...



Entangled environments

As the comparative study of culture and society, anthropology helps deepen our understanding of the relationships between people and environments, and how these are shaped by social, cultural, political and economic processes.

These fieldwork photos, taken by researchers in the **Department of Anthropology at LSE**, show the diverse and changing ways that the lives of humans, animals and nature are “entangled” – sometimes mutually sustaining, sometimes marked by exploitation, struggle, scarcity and violence.

What does it mean to you to “demand” climate action?

Demanding climate action

Catherine-Ann McNamara-Peach

Taken during fieldwork with the climate activist group Extinction Rebellion (XR), this photo captures moments of protest taking place in public spaces in response to climate change.

Photo by Catherine-Ann McNamara-Peach: Act Now. XR Brighton's structure "The Lightship Greta" appears in Brighton as part of a march for climate justice in November 2021 in response to COP26. Brighton climate activists wear yellow Breton raincoats in their role as "Greta crew".





Photo by Daniel Zohar: Manuel carries a basket full of crushed timiu (barbasco), a fish poison said to have been human in the mythological past.

Living with nonhumans

Daniel Zohar, PhD researcher

The Achuar people live in the rainforests of Ecuador and Peru, and have vast knowledge of their environment as hunters and horticulturalists.

They view some nonhuman beings as social and psychological actors as well as kin, but also engage in their partial commodification.

How do you relate to and shape the natural world?

Living precariously

Joane Marner, PhD researcher

The Birhor, meaning "forest people", are a tribal community in Eastern India classified as a "particularly vulnerable tribal group" due to their precarious living conditions.

The Birhor have lived a nomadic lifecycle but recently accepted government houses. Birhor life remains centred on the present, hunting and gathering their food daily.



Photo by Joane Marner: The dense duckweed is a promising sight for these Birhor children, the first to be born in settled villages. It means the pond owner has been away for a while and won't notice the loss of two or three turtles.

How can we understand nonhumans as subjects and kin?



Photo by Yufei Zhou: Tibetan pastoralists raise and train pups on the pastures to become livestock guard dogs. Behind the pup is his doghouse made of yak dung.

From pastoral guards to trophy pets

Yufei Zhou, PhD researcher

Traditionally Tibetan Mastiffs guarded livestock for Tibetan pastoralists. However, in the early 2000s, these dogs became commodified as luxury status symbols in Chinese cities, fetching exorbitant prices, a phenomenon known as the Tibetan Mastiff Fever.



Photo by Marco del Gallo: This seascape is made of a dense and intricate mass of bamboo, plastic barrels and tanks, and fishing devices used by small-scale fishermen. Nearby is another human-made landscape – the ongoing luxury reclamation project.

Living in “common”

Marco del Gallo, PhD researcher

Fishing in Jakarta, Indonesia, has become targeted by forced evictions to make space for large-scale luxury coastal reclamation projects, leading to an ongoing battle over the control of “common” resources, in this case the sea.

Who should have the right to access common space?

Living with scarcity

Dr Andrea E Pia, Associate Professor

A complex struggle for water sovereignty unfolds in the ecologically stressed highlands of China’s Yunnan Province.

This research shows rural grassroots actors successfully challenging top-down regulatory control, showing how local agency is becoming essential to surviving environmental and climatic upheaval.

BELOW Photo by Andrea E Pia: A Han Chinese firefighter delivers drinking water to a drought-stricken Yi village on the Yunnan-Guizhou Plateau.



ABOVE Photo by Andrea E Pia: The head of a major water reservoir in Southwest China stands before the impounded waters in 2013. In the 1960s, thousands of farmers, mobilised by the Chinese Communist Party motto, “Man Must Conquer Nature” (人定胜天), toiled to build it. Due to its faulty design, the reservoir was breached a few years later: thousands perished in the flood that followed.



Photos by Phoebe McBride: Soundwalks led by artist Maja Žečo explore how sound travels through, occupies, and encloses the space of St. Fittick’s Park, Aberdeen.



Living with energy transition

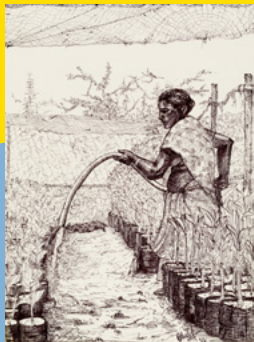
Dr Gisa Weszkalnys, Associate Professor

What can we hear in a landscape on the front line of energy transition? This creative collaboration used sound to explore St. Fittick’s Park in Aberdeen, Scotland – an important biodiversity space partially earmarked as an energy transition zone. The work reframes energy transition not as an economic opportunity but as lived experience and a contested terrain demanding new ways of sensing, knowing and imagining what comes next.

Community action



Dr Ganga Shreedhar's (Department of Psychological and Behavioural Science) fieldwork with coastal communities in India examines how systemic changes to their region are shaping their actions, aspirations, and wellbeing.



Illustrations: Ganga Shreedhar | Photos: Advitya Thapa | Cow photo (right): Ganga Shreedhar | Research team: Ganga Shreedhar, Advitya Thapa and Anomitra Chatterjee

Community-led mangrove regeneration

Mangrove conservation efforts begin in the plant nursery (far left) run by the Forest Department. When the saplings are strong enough, they are taken to the canal and estuary in trucks for planting by the edges of the river. The local community, who live in villages in and around the region, are paid on a daily wage basis for their reforestation work.



Photography and drawing help.. the researcher.. to notice behaviour, emotions, light, texture, scale, and detail that might otherwise pass unremarked in the pace of fieldwork."

Frontline communities in Pulicat, Tamil Nadu, India

Coastal degradation

India's second-largest brackish water lagoon and its adjoining bird sanctuary, home to migratory and endemic species, are under significant and compounding threat.

The Pulicat region is transforming at a pace that profoundly impacts the lives of local communities. This is through the conversion of ecologically sensitive landscape to ports or industrial infrastructure, and the enclosure of common and open-access land, alongside coastal erosion, climate change, air and water pollution.



A note on photography and field sketching as research method

The photographs and sketches in this exhibition sit alongside, rather than separately from, the qualitative interviews and quantitative survey work that form the core of this research. They function as a complementary method in their own right.

Where survey data captures patterns across hundreds of respondents and interviews surface individual narratives, photography and drawing help slow the researcher down and sharpen observation. To notice behaviour, emotions, light, texture, scale, and detail that might otherwise pass unremarked in the pace of fieldwork.

The act of drawing, in particular, is an interpretive process. You make deliberate decisions about what to include, what to simply, and what to emphasise. In this sense it is closer to the act of analysis than it might first seem.

These visual records also serve as memory aids, anchoring field notes and interview accounts to specific places, moments, and encounters.



In research that engages directly with loss, displacement and climate anxiety, drawing and photography offer researchers a means of processing, the emotional weight of what they are witnessing."

Header image: An artisanal fisherman stakes his driftnet from his catamaran – a precarious livelihood on a shifting estuarine ecosystem. **Above left:** Pelican fishing the Kosathalaiyar. **Above middle:** LPG pipelines cross the Kosathalaiyar, its banks lined with coal yards and thermal power stations. Energy is displacing water as livelihood infrastructure. **Bottom left:** A fragmented coastal forest at the edge of the Buckingham Canal, a JCB backhoe loader hollowing it out. **Above right:** Community-led mangrove planting with the Forest Department – regeneration through stewardship.



Am I a climate activist?

Amanda Segnini (far left, photo on right), Atlantic Fellow for Social and Economic Equity and co-founder of the youth-led non-profit organisation Engajamundo, shares her story of becoming a climate justice and land rights campaigner.

Atlantic Fellows

FOR SOCIAL AND
ECONOMIC EQUITY

“

Have you ever thought you could change the future?

Have you doubted yourself and thought change was impossible?

You are not alone.

At university in Brazil, I was curious about how change happens.

I learned about the UN, environmental struggles and social inequalities. However, it all seemed distant from my reality.

In 2012, the Rio+20 conference was held in Brazil, bringing together over 2,000 young people from across the world.

But the experience revealed a startling reality: the voices of the Global South were still largely misrepresented.

This was the catalyst.

It became clear that we needed to organise our own power.

What if there were a permanent youth mobilisation?

From that spark, we created the youth-led organisation Engajamundo

which empowers young people to be part of the solution to the world's pressing issues.

Since 2013, Engajamundo has impacted over 100,000 young people

including Indigenous youth as well as vulnerable and racialised communities, and is a hub of youth leadership in Brazil.

Shaping Engajamundo became the defining part of my journey.

It was when I first started calling myself a climate activist.

Being a climate activist is never static; it shifts with the collective needs, the political landscape and opportunities that we face.

For me, the work requires a love for the community, an understanding of the power structures that sustain the climate crisis, and – most importantly – care.

How are we holding each other to remain strong and alive?

”

Photos, clockwise from top left:

The climate is changing and we are part of the solution, and you? (translation). Earth Day mobilisation at Av. Paulista, São Paulo, 2014. Engajamundo archive.

Engajamundo activist during a retreat. Engajamundo archive.

Amanda Segnini, Daniele Santos, and Débora Leão, Engajamundo co-founders, COP21 Paris 2015. Engajamundo archive.

Wanderson Costa. Credit Siene Paulino (2022).



How can change inspire you?

Organising and movement-building begin with noticing change – in ourselves, in our communities, and in the living world we depend on – and choosing to meet that change by dreaming of, and building, a different future together.

Where do you find spaces of hope that sustain you?

When you were young, what did you want to change?

What felt unfair, urgent, or worth protecting?

What is one thing you have noticed has changed in your community?

“

How can we share the work with our community; how does activism end up being this door and key that we end up turning?

For me, Engajamundo was and still is my school, the place where I find myself in a collective struggle.”

Wanderson Costa
Co-director of Engajamundo