The Circular Bioeconomy Alliance Nature-First Economy Event:
Towards a Healthy Society on a Thriving Planet

On October 15th, the Circular Bioeconomy Alliance was joined by over 120 guests at St. James's Palace, including scientists, experts, business and Indigenous Leaders. We came together to discuss the fundamental role that nature plays for human health and how a nature-first economy can catalyze the systemic change that our world needs to prosper in harmony with nature.

We enjoyed speeches from Marc Palahí, Rutendo Ngara and Professor Baroness Katherine Willis. We also hosted three panels, focused on nature in our bodies, our built environment and our food. Together these speakers highlighted the need to move away from a broken system in which we medicate chronic diseases, whilst living lives that are disconnected from nature and eating ultra processed foods. Instead, we need to create a world in which we can live in harmony with nature, sustaining ourselves with nourishing foods and preventing widespread societal unwellness.

Credit: Ian Jones

Credit: Ian Jones

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The agenda for the day

Welcome speech from Vijay Rangarajan, Vice-Chair of the Trustees for the CBA.

Speech from Marc Palahí, Chief Executive Officer of the CBA, framing 'the why' for the transition to a Nature-First Economy, and how we can accelerate this transition.

Two keynote speeches from Rutendo Lerato Ngara and Professor Baroness Katherine Willis, CBE focused on what, together, indigenous wisdom & science can tell us about nature and human health, and how these knowledges overlap.

Panel - Nature in our Bodies, with:

- Tari Haahtela, Professor Emeritus of Clinical Allergology, University of Helsinki
- Massimo Mercati, Chief Executive Officer, Aboca
- Debbie Sharp, Professor of Primary Health Care, University of Bristol

Panel - Nature in our Built Environment, with:

- Vicente Guallart, Co-founder of Urbanitree, Former Chief Architect of Barcelona
- Matilda van den Bosch, Senior Researcher, EFI Biocities Facility and Barcelona Institute for Global Health
- Elise Van Middelem, Founder & CEO, SUGi

Speech from Beptuk Metuktire, Legal representative of Instituto Raoni and Young Leader of Mebêngôkre-Kayapó, focusing on the priorities of his people for the coming years: protecting Indigenous territories, preserving ancestral wisdom, empowering youth leadership, and advancing sustainable bioeconomy initiatives.

Panel – Nature in our food, with:

- Hardy Vogtmann, Professor of Organic Agriculture, University of Kassel
- Éliane Ubalijoro, Chief Executive Officer, CIFOR-ICRAF
- Patrick Holden, Farmer and Founder, Sustainable Food Trust
- Victoria Stevens, Partner, Bramble Intelligence

Workshops in small groups to co-create the changes required that were discussed in the agenda. In groups, we asked guests to identify barriers, propose solutions, and suggest Living Lab concepts that could demonstrate how to scale nature-first approaches.

Evening reception with His Majesty The King

Take aways from the keynote speeches

Across the three speeches from Marc Palahí, Rutendo Lerato Ngara and Professor Baroness Katherine Willis, we heard that we urgently need a new economic paradigm. We have reached a tipping point after over a century of reliance on a fossil-fuel-driven, extractive economy and continue to push the planet beyond its safe operating boundaries:

- Massive biodiversity loss, ecosystem degradation, and pollution threaten the resilience of value chains, food supply and living environments.
- The economic consequences are already visible: insured losses from climate and nature degradation have doubled in the last decade, with 2024 likely to set new records.
- The agricultural sector alone faces losses of €28 billion annually in Europe, with only a fraction insured.
- The cocoa and coffee industries have seen huge price increases and supply chain instability driven by climate extremes and disease outbreaks in West Africa, Brazil, and Vietnam and studies show over 15 global food supply chains were disrupted by heatwaves, floods, and droughts in just the past four years.
- Rising climate volatility means food inflation could grow by 3.5% per year for the next decade.
- At the same, we need to recognise that human health is dependent on planetary health. Nature is crucial for maintaining mental and physical health and addressing chronic illnesses across broader society.

Credit: Ian Jones

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You can watch Marc Palahi's full speech and find his presentation slides on the CBA website, using this link.

We need to reinvent the economy in harmony with nature, recognising that nature does not belong to us; we belong to nature. It is not a resource to exploit but the infrastructure of life–supporting air, water, food, and climate. The transition to a "nature-first" economy, or a circular bioeconomy, requires reimagining our relationship with the planet. This shift aligns the economy with the laws of thermodynamics and nature's open, solar-powered systems. A circular bioeconomy invests in biodiversity and nature-based solutions as the foundation for sustainable production and consumption systems. Examples include:

- Nature protection and restoration is critical for human health. Multiple studies have demonstrated that frequent contact with nature is vital for mental and physical resilience.
- Regenerative agriculture and nature-based solutions such as agroforestry.
- Alternative materials, including biobased textiles, mass timber and biobased packaging.

- Investing in bioeconomy innovation, for example nanocellulose.
- Reframing healthcare away from medicating chronic disease to holistic and preventative healthcare that recognises connection with nature as a key element for human health.
- Redesign our built environment to integrate nature into daily life, using existing science and evidence to optimize for mitigation, adaptation and human health.

These innovations already exist; the challenge now is financing and scaling them. The CBA was founded to accelerate this transformation through global collaboration between science, business, and communities.

Ultimately, trees themselves provide us with a powerful lesson. Trees transformed the planet 400 million years ago, cooling it and enabling life to evolve. They remain symbols of wisdom, balance, and interconnection across cultures and religions. Trees embody the flow of energy from sunlight to life, representing the harmony between humanity and nature. Let's take inspiration from them as we work to transition to a nature-first economy.

Credit: Ian Jones

Credit: Ian Jones

You can watch Rutendo Lerato Ngara's full speech here and Professor Baroness Katherine Willis' full speech here.

Take aways from the three panels

Panel 1: Nature in our Built Environment - the recording of the panel can be found here

Increasing urbanization poses both a threat to and an opportunity for nature restoration and conservation. By 2050, 70% of the global population will live in cities. Urbanisation brings undeniable benefits – education, jobs, and culture – but also deep environmental and health challenges, including biodiversity loss, heat stress, air and noise pollution. The panel agreed that the future of sustainable cities depends on reintegrating nature into the built environment – not as decoration, but as critical infrastructure for human and planetary health.

1) Nature in our cities improves resilience as well as human health.

Dr. Matilda van den Bosch emphasised that the evidence base linking access to nature and improved health is now *robust and conclusive*. Living close to nature significantly reduces mortality, depression, anxiety, and chronic diseases.

- Longitudinal and brain imaging studies show causal relationships: people exposed to green environments have lower stress responses and stronger mental resilience.
- Elise Van Middelem highlighted that nature-based solutions can directly mitigate urban risks such as heatwaves, poor air quality, and flooding. Small, 'pocket-forests' cool city streets, support biodiversity, and become spaces for learning and community gathering. In London alone, 31 pocket forests now act as "urban acupuncture" – small, strategic green points that collectively restore ecological balance.
- However, there is not enough awareness of these direct links, and the huge benefits they can have, including economically. Policy priorities still diverge, slowing action. Quick-fix technological solutions often overshadow nature-based ones in city planning – a communication and governance gap that must be bridged.

2) We need to design cities using principles for 'biocities'.

Architect Vicente Guallart explored how architecture can shift from being part of the problem to being a driver of regeneration.

- Cities must evolve from carbon-intensive "concrete jungles" into biocities that follow the rules of nature.
- Timber and other biomaterials can replace concrete and steel, reducing emissions while creating healthier urban environments.
- The vision is to create regional circular economies, where materials and value chains are local, renewable, and regenerative.

He pointed out that cities have always transformed after crises – wars or industrial revolutions – and today's climate crisis is the moment to reinvent urban living once again.

3) We need to address key challenges to move forward.

Governance, financing, cultural inertia, and outdated building systems are key barriers to change:

- We need to integrate urban, rural, and natural systems, investing city resources into managing forests and landscapes to produce sustainable materials such as timber, while addressing housing shortages and rural decline simultaneously. We need investment and leadership, with "living labs" that demonstrate timber-based, nature-integrated construction models regionally and globally.

- At the same time, we need to have coherent policy asks so that governments, councils and planners can take action.
- Finally, small but visible community action on the ground helps create hope, momentum and a sense of ownership amongst city residents.

During the event, the CBA and The King's Foundation announced a new joint initiative on nature and health at Highgrove Gardens. The project scientifically evaluates methods of assessing health and exposure to nature, measuring connections between biodiversity, the environment and human health. Using innovative digital tools, this project will track health in real time, providing evidence around specific nature-based solutions for communities. We look forward to sharing the results in the future.

Credit: Ian Jones

Panel 2: Nature in our Bodies - the recording of the panel can be found here

We are seeing increasing evidence of the link between contact with nature and improved human health. Human bodies are ecosystems connected to wider ecosystems. The modern disease burden reflects loss of 'protective exposures', including green spaces.

1) We need to recognise the protective health factors that nature provides.

- Finland ran a 10-year national allergy program grounded in the biodiversity hypothesis, shifting clinical guidance from allergen avoidance to building tolerance via contact with nature. This highlighted significant cumulative savings on public health versus minimal upfront spend.
- The UK is piloting green prescribing, twinning GP practices with regenerative farms. Patients spend 2 hours/week for 6 weeks doing real farm tasks (from calving to harvesting). These pilots highlighted strong qualitative improvements for patients, and prescribing solutions beyond pharmaceuticals provides a cost-effective way to manage healthcare budgets.

2) Transforming the healthcare system will require diverse and simultaneous solutions.

- Develop clear protocols for integrating nature prescribing into primary care, and commission more trials that can demonstrate health outcomes and positive financial impacts. Use these results to unlock private-public investment.

- Within routine reporting, we should track microbiome indicators for soil, food and humans, alongside antibiotic use, and environmental co-benefits.
- More research into and awareness of the environmental and nature impacts of standard pharmaceuticals.
- We need to conduct more research into the potential of nature-based complexes derived from plants as a basis for supporting human health.

Panel 3: Nature in our Food - the recording of the panel can be found here

The food we eat has significant impact on the climate, nature, and human health. Currently our food systems are responsible for serious harm; they account for approximately 30% of global GHG emissions, up to 80% of biodiversity loss and are accelerating numerous global health crises globally. However, transforming our food systems is also one of the biggest opportunities for nature protection and human health improvements.

1) The key challenge is economic incentives, rather than technical feasibility.
   - Today it often pays more to farm in an extractive manner than regeneratively. The current pricing of food is misleading, with recent reports suggesting that the true price of food could be up to three times the amount we're currently paying.
   - Farmers are rarely paid for delivering public goods (e.g. soil and water quality, biodiversity, nutrients in food), which leads to spending to solve multiple crises. For example, paying to purify polluted water, whilst also spending significant amounts on harmful agricultural subsidies that contribute to water pollution.

2) The link between our food and our health is becoming increasingly clear.
   - Nutrient density in staple foods has declined with current farming practices and ultra-processed diets are linked to chronic health problems.
   - There is increasing evidence for the link between the microbiomes in soils and plants with the human microbiome; healthier soils enable micronutrient uptake and more resilient immunity.
   - Framing regenerative agriculture as a key healthcare solution could unlock policy progress and public-private investment.

3) There are multiple solutions that can be simultaneously applied to accelerate transformation.
   - Focus on regenerative agriculture as a solution for resilience, food security and human health, particularly when engaging with policymakers.

- Communicate with stories and lived experience; nature and health are tangible and personal, whereas carbon is abstract. Importantly, get children, communities and decision-makers in touch with their food and onto farms.
- Develop clearer and more honest labelling that allows consumers to “shop for solutions.”
- Supporting shorter value chains, which can cut processing losses, improve the nutrients in food and reconnect eaters with landscapes.
- Develop aggregated offtake agreements for food produced in harmony with nature (e.g. between retailers and manufacturers) and pay premiums for verified ecological performance.
- Make the hidden costs of our current food system visible. Phase out harmful subsidies, and instead pay for ecosystem services and health improvements.

Key points from the workshops

The Built Environment Working Groups

Barriers Identified

The working sessions identified systemic barriers that severely hamper a nature-forward transformation of the global building sector. The sector's business-as-usual path is linear, mechanistic, and extractive, relying heavily on geographically attenuated and energy and emissions intensive supply chains. To transform the predatory relationship between forests and cities into a symbiotic and synergistic nature-based economy, the barriers within construction, planning and governance of our cities must be addressed in a coordinated, trans-sectoral and integrated manner. These barriers include (but are not limited to):

- Significant gaps in ecosystem and climate science knowledge, skills and education amongst key stakeholders: architects, engineers, and builders who specify and consume materials and utilize emissions intensive methods; building investors, developers, and financiers who establish economic criteria for financial success and define metrics of "value"; urban/land/resource governance among the public and consumer culture in general, in which misconception and lack of social license can reduce social and cultural incentive for changes that might productively reshape demand.
- A lack of economic incentive within and by capital markets for nature-based building and management solutions: philanthropy and government programs provide only short-term infusions of funds, creating precarity in the longitudinal development of nascent techniques, technologies, and commercial enterprises. Contested environmental assessments create confusion for investors who may lack an economic, ecological, and technical through-line. A failure to assess and properly price the cost of using unsustainable construction materials, particularly regarding embodied carbon.
- Inflexibility and glacial adaptation of building regulation and among regulators, which tends to cement environmentally deleterious practice into the building sector and stifle innovative solutions.
- Disciplinary silos between and within education, government, and finance that limit the crucial interdisciplinary and trans-sectoral transfer of up-to-date assessments and potentially cutting-edge actions.
- Lack of coordination within bioregions where the potential for nature-forward governing action is subdivided and fragmented and otherwise constrained by the somewhat artificially established boundaries of political jurisdiction.
- Over simplification of biodiversity in urban greening and Sustainable Urban Drainage Schemes (SUDS) – with a limited range of species and limited focus on long term resilience and maintenance.
- Significant sunk costs in the building industry and path dependencies among the construction workforce place a drag on potential innovation in and adoption of nature-based materials, means, methods.
- Urban retrofit and material salvage using nature-based methods is poorly understood and existing building stocks are severely undervalued. New construction promotes single building lifecycles and makes even the most biobased, carbon-positive building effectively carbon neutral over its lifetime. Demolition and landfilling remain the conventional approach in building development. This lack of circularity will result in excessive and undue burdens as

burgeoning global populations place more demands on natural systems for building materials and land area.

Solutions and Levers for Change

The working sessions called for interdisciplinary, trans-sectoral, evidence-based and transparently assessed demonstrations of regenerative building practice that:

- Promote the upstream health and stability of natural systems and monitor their benefits to the health and well-being of human and non-humans alike.
- Explore opportunities for mixed use development and low-cost high-quality housing in cities.
- Span multiple life cycles of construction material and buildings produced through nature first principles, design and planning criteria, and means and methods.
- Explore opportunities for short rotation planted forests on low productivity farmland and in the urban fringe.
- Enhance the resilience, durability, and circularity of the built environment to reduce the burdens placed on natural ecosystems.
- Understand and seek to integrate buildings, infrastructures and the cities they form as subsystems of nature: as natural energy generators, as a critical component of healthy watersheds, as surfaces that mitigate urban heat, as durable and monetizable reservoirs of photosynthetic carbon and improve urban drainage and water management.

Establishing enabling conditions for system change in the making and management of human settlement requires:

- Education and training programs across all age groups and sectors in nature-first values and approaches that show how building can serve nature and build social license and public support for bio-circular methods and the necessary regenerative management of and interventions in climate-stressed natural systems.
- Regulatory reboots that catalyze nature-based innovations in material procurement, product manufacture, building assembly and operational management.
- Incentives to capital markets to:
    - invest with a broader, systemic focus instead of on technological widgets as one size fits all solutions.
    - internalize ecological costs formerly ignored as economic “externalities” (biodiversity loss, soil degradation, GHG emissions, land conversion, etc.)
    - invest in the restoration and expansion of natural systems that will regenerate biomass and create opportunities for new products.
- New small scale, low capital expenditure, distributed manufacturing networks coordinated with ecological silviculture programs to sink and set the knowledge bases and supply systems that are needed to grow rural/urban economies, empower workforces and support entrepreneurs, and facilitate and habituate the use of nature-based, biological building materials as a substitute for the mineral based, extractive material classes and systems that currently build our cities.

The Agricultural Value Chain Working Groups

Barriers Identified

The workshop groups identified a range of systemic, financial, cultural, and structural barriers slowing progress toward a nature-positive food system. While the scientific and evidence bases for transformation are well established, the main challenges lie in realigning incentives, scaling proof points, and shifting mindsets across value chains.

1) Economic and Financial Barriers

- Short-term investment horizons conflict with the 3–5 year cycles of regenerative transitions.
- The "investable universe" is too small – few large-scale projects exist to attract institutional capital, and most opportunities are too fragmented or early-stage for big investors.
- Transition costs remain high, with limited mechanisms for de-risking or financing early adoption.
- Lack of long-term contracts prevents farmers and businesses from committing to change.
- True costs of food are not internalised, leaving sustainable products uncompetitive in price.

2) Market and Demand Challenges

- Consumer awareness and demand for nature-positive food remain low, despite increasing information availability.
- Premium pricing models limit scale; regenerative products are still niche rather than mainstream.
- Limited traceability and visibility in supply chains hinder accountability and reward for better practices.
- Bottlenecks among processors and wholesalers constrain market access for regenerative producers.

3) Policy and Governance Gaps

- Policy signals are weak or inconsistent, providing little confidence for long-term investment.
- Incentives remain misaligned – harmful subsidies persist while nature-positive outcomes are under-rewarded.
- Coordination across ministries and sectors (agriculture, finance, health, environment) is insufficient, limiting systemic action.

4) Cultural and Behavioural Barriers

- A dominant "manager mentality" among large-company stakeholders prioritises short-term performance (salary, bonuses) over long-term innovation.
- Few entrepreneurs or risk-takers are engaged in the transformation agenda.
- Farmers often lack confidence to make major changes without clear proof of returns or support networks.
- Overreliance on technical or industrial fixes continues to reinforce extractive models rather than nature-based solutions.

5) Evidence, Communication, and Certification

- More research isn't needed—evidence already exists—but existing proof points remain small (e.g. limited regenerative product lines) that demonstrate feasibility but not market-scale impact, and communication remains weak, especially at consumer and policymaker levels.
- Certification schemes (e.g., organic) can be confusing or insufficiently representative of true regenerative outcomes.

- Technology and data systems often support industrial rather than regenerative farming practices.
- Mass-market, scalable business models are still emerging, with most success stories confined to pilot or boutique scale.

Solutions and Levers for Change

The different workshop groups highlighted a range of practical, financial, and systemic solutions that can accelerate the shift to regenerative agricultural systems. Participants agreed that while the science and need for change are clear, action must now focus on scaling proven models, aligning finance, and simplifying the value chain.

1) Strengthening Market Commitments

- Off-takers must lead by offering long-term contracts that reward regenerative practices and embed traceability and transformation milestones into procurement models.
- Scaling successful pilots– for example the CBA Cotton Living Lab 1.0–was identified as an immediate priority to prove commercial viability and attract broader participation.

2) Mobilising and Redesigning Finance

- Support growth capital for entrepreneurs willing to take early risks and demonstrate new business models.
- Innovative financial products such as green or sustainability-linked bonds could unlock large-scale capital–though there are still governance questions around who holds these instruments on the balance sheet.
- Insurance products should recognise that more nature on farms reduces risk, rewarding biodiversity and soil health through premium adjustments or credit scores.
- Shift public subsidies and create political incentives to experiment with new financial tools that de-risk farmer transitions.

3) Measurement, Certification, and Communication

- Establish common, outcomes-based measurement frameworks–aligned across finance, government, and corporate reporting–to enable credibility and comparability.
- Link certification systems with technology (e.g., digital traceability, remote sensing) to reduce complexity and cost.
- Governments and regulators should take ownership of standardisation, ensuring frameworks are scalable and finance ready.
- Integrate education and access to healthier, less-processed food as a public health strategy to reduce long-term healthcare costs.

4) Re-structuring Supply Chains and Value Distribution

- Simplify and shorten agricultural supply chains, reducing intermediaries and ensuring that value and capital flow upstream to farmers and landscapes.
- Build a pipeline of "missing-middle" businesses to bridge small regenerative producers and large corporates, distributing value more fairly across the chain and encourage ecosystem-based partnerships that connect producers, processors, and retailers in integrated transformation programs.
- Promote community-based food access initiatives that improve public health while strengthening local nature-positive economies.

The Health Sector Working Groups

Barriers Identified

Throughout the event, speakers and working groups highlighted multiple barriers to transitioning to a holistic approach to healthcare that includes connection with nature as a key element of wellbeing and illness prevention.

- There are limited comparative studies that can shift the needle with key decision makers like policymakers and investors.
- We use very inconsistent language across the health and nature worlds with no shared understanding of key terminology.
- A lack of awareness and education of the benefits of nature on human health in medical training.
- There are deep structural siloes between key potential decision makers, for example in the UK solutions would need the Treasury, Department of Health and Social Care, educators, landowners and local authorities all working together under shared vision.
- It's hard for small scale, often volunteer led nature-based practices (like SUGi pocket forests) to move to scale nationally, which means potential medical benefits are highly localised.

Solutions and Levers for Change

The working groups identified multiple solutions to improve current health sector models, and there was clear agreement that we need to connect healthcare and nature industries and experts and accelerate the transition we need to transition to a healthy society on a thriving planet.

- We need to shift from isolated research projects looking only at health outcomes to more integrated research that provides a cost-benefit analysis comparing nature intervention to standard medicines and synthesises health outcomes across multiple nature studies.
- We need to develop a shared taxonomy that allows for different stakeholders from two worlds to talk to each other about the shared benefits of nature protection and restoration alongside human health outcomes.
- Broaden education and training in the health sector to raise awareness of the impact of nature on health outcomes, particularly when it comes to prevention of chronic diseases.
- Facilitate cross-sectoral planning and problem-solving, particularly across different government departments (e.g. health and climate ministries).
- Collaborate with other organizations to scale up testing to demonstrate the link between nature protection and health outcomes within the context of existing projects (e.g. Poundbury).

The Finance Working Groups

Barriers Identified

So far, it has proven different to scale finance for nature-based solutions and to emphasize investment into illness prevention, alongside medication.

- There is currently a quantification gap that makes it hard to measure and monetize risk reduction from nature-based solutions. The data that currently exists cannot always be trusted and usually is not usable as investment-grade nature-data.
- Fragmented incentives deepen siloes and prevent key stakeholders from collaborating to scale up solutions, for example finance ministries, insurers, and development finance institutions.

- Governments and treasuries require short-term payback periods, which prevents appropriate long-term investment and decision-making.
- The uniqueness of landscapes means that there is fragmentation across different frameworks, taxonomies, measurements and certifications.

Solutions and Levers for Change

The finance working groups identified multiple specific solutions that could increase investment into nature-based solutions and preventative healthcare. These include:

- Rapid improvements in data and transparency supports validation for investments.
- Use philanthropy and donor-advised funds for first-loss or guarantee capital to test new insurance products. Utilizing these in time-bound, thesis-driven, expert-led vehicles, we can unlock investment at scale.
- Encourage treasuries and central banks to integrate cost-of-risk analysis for nature degradation into fiscal planning, and encourage health departments to do the same for health planning.
- Translate ecological resilience into a "cost of risk" narrative that resonates with finance ministries, insurers, and corporate boards.

Conclusion

We would like to thank all of the organizers, speakers and attendees who made the 2025 CBA Nature-First Economy Event such a success, and we would like to thank everyone who continues to show their support for the CBA. As you can see from this report, the day was filled with rich discussions and a strong willingness for collaboration. We are thrilled to receive so many ideas for potential projects and Living Labs, which we will consider and explore further over the next 12-24 months. We look forward to collaborating with many of the guests at the event to refine and move forward with some of these project ideas, that we believe, could greatly contribute to accelerating the transition to a healthy society on a thriving planet.