

Leading a Sustainable Land Use Transition

UNSPLASH/HOACH LE DINH

This belongs to a series of CEO Briefings.

The first CEO briefing: "[Investing in a Nature-positive, Net-zero and Equitable Global Economy](#)"

Key messages

1. Unsustainable land use and land-use change is threatening the health of our planet, people and economy. Some 75 % of the land surface on earth has been severely altered and the health and well-being of 3.2 billion people are undermined.
2. The forestry, land-use and agriculture (FLAG) sector is both affected by climate change and contributes to it. But it can also mitigate and help us adapt to climate change. It has the potential to deliver up to 30% of needed mitigation actions from now to 2050, including removals.
3. Ensuring that land is managed for long-term resilience requires innovation in the way we produce and consume food and fibre.
4. Farmers, rural communities and indigenous people should be put at the centre of the transition to ensure equitable distribution of value and strengthened land rights.
5. The impact of business and dependence on land are often embedded in supply chains. It is an economic imperative for all businesses to mitigate land-use related physical, reputational, market, legal and financial risk and contribute to corporate net-zero, nature-positive commitments.
6. A sustainable transition in food, land and ocean-use systems can create \$3.6 trillion of annual business value and 191 million jobs by 2030.

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Unsustainable land use is threatening the health of our planet, people and economy

- **Land-use change** is the process where human activities transform the natural landscape. In the past two centuries, humans have converted or modified 70% of the world's grasslands, 50% of the savannah, 45% of the temperate deciduous forest and 27% of the tropical forest ([UNCCD](#)).
- **Land-use change is driving species extinction, causing water stress and intensifying climate change.** The threat of unsustainable land and ocean use impacts [72%](#) of (near-) threatened and endangered species. Food and agriculture systems are currently responsible for over [30%](#) of greenhouse gas emissions, [70%](#) of freshwater use, and over [80%](#) of tropical deforestation and habitat loss.
- **The health and well-being of 3.2 billion people are undermined.** If adequately managed, land provides a balanced and nutritious diet, contributes to mental well-being and brings employment, with the agricultural sector employing [65%](#) of the world's working poor. However, [23%](#) of land areas have seen a reduction in productivity due to land degradation since 1970, with soil health endangered by erosion, salinization, acidification, chemical pollution and other threats.
- **Land degradation could become a major contributor to mass human migration, food insecurity and increased conflicts.** By 2025, an estimated [two-thirds of the world](#) will face water shortages and [135 million](#) people may be displaced by 2045 because of desertification.
- **We are losing more value than we create because of current land-use patterns.** Between 1997 and 2011, land-use change caused losses averaging [\\$20 trillion](#) worth of ecosystem services every year. Land degradation alone accounted for 30% of that, three times the global market value of agricultural products.

The way we feed, clothe and fuel our societies is driving land-use change

- **Food and agriculture systems are the main drivers of land-use change**, with commercial agriculture (both large and small-scale) – primarily cattle, soy, palm oil and monoculture tree plantations for wood products – accounting for [60% of tropical deforestation](#) 2013-2019.
- **The way we produce and consume food and fibre is often not sustainable.** Today, about [60%](#) of the world's agricultural land is already used for livestock grazing, yet demand for more animal-based products like meat and dairy is projected to rise by nearly [70%](#) by 2050. Added to this is the inefficiency in how we consume and recycle food and fibre. An estimated [one third](#) of all food produced globally is lost or goes to waste. The current [cost of externalities in the food system](#) (including impacts on the environment and human health) is estimated to be \$19.8 trillion, almost doubling the current total global spending on food.
- **Energy production and mineral extraction also have an impact on land.** Demand for [biomass energy](#) may cause land-use conflicts and requires clear sustainability standards for biomass supply. In addition, while wind and solar can contribute to reducing GHG emissions, if improperly sited they can cause [habitat loss and fragmentation, pollution and disturbance](#). The production of some metals will need to increase [twelvefold](#) by 2050, further intensifying the exploitation of natural resources and land-use change.

Key terms

- **30 by 30:** Target 3 of the post-2020 Global Biodiversity Framework (GBF) "Protect and conserve 30% of terrestrial, inland water, coastal and ocean areas by 2030"
- **Land degradation:** A negative trend in land conditions expressed as long-term reduction or loss of at least one of the following – biological productivity, ecological integrity, or value to humans. Forest degradation is land degradation that occurs in forest land.
- **Soil health:** The continued capacity of [soil functions](#) including but not limited to biomass production, including agriculture and forestry; storing, filtering and transforming nutrients, substances and water; [biodiversity pool](#) and [carbon pool](#). The [10 main threats](#) to soil functions are soil erosion, soil organic carbon loss, nutrient imbalance, soil acidification, soil contamination, waterlogging, soil compaction, soil sealing, salinization and loss of soil biodiversity.
- **Forestry, land-use and agriculture (FLAG):** Also known in the scientific community as Agriculture, Forestry and Other Land Use (AFOLU), it includes two distinct sectors – Agriculture and LULUCF (Land Use, Land Use Change and Forestry).
- **Soil carbon sequestration:** Atmospheric concentrations of carbon dioxide can be lowered by storing carbon dioxide in terrestrial ecosystems. There is a major potential for increasing soil carbon through the restoration of degraded soils and the widespread adoption of soil conservation practices.

Transforming land-use systems is an economic imperative for businesses

- **Businesses' physical risks and impacts on land are often hidden in their supply chains.** For retail, consumer goods and lifestyle, more than [50%](#) of the gross value added (GVA) of their supply chain is highly or moderately dependent on nature. Some [98%](#) of the impact on land use in the fashion retail industry are from upstream raw material extraction.
- **Land-use related reputational, market, legal and financial risks are rising.** Consumers' searches for sustainable goods increased by [71%](#) between 2016 and 2020. Governments are taking more ambitious actions to conserve and restore the land. Just after [141 world leaders committed to reversing deforestation](#) at COP26, the [EU also announced landmark legal proposals](#) to ban imports of beef, palm oil, soy, cocoa and other products linked to deforestation.
- **There are no pathways to 1.5 degrees without sustainable and regenerative land use.** The forestry, land-use and agriculture (FLAG) sector has the potential to deliver up to [30%](#) of needed mitigation actions from now through to 2050 and is one of the few sectors that can remove carbon from the atmosphere.¹ For example, the upper metre of the world's soils contains [twice as much](#) carbon as the atmosphere. Despite the huge potential, only [14 countries out of 184](#) referred to soil organic carbon in their Nationally Determined Contributions (NDC) commitments. Nature-based Solutions, like forest protection and mangrove restoration, were also for the first time identified as a crucial element during the [UNFCCC COP26 at Glasgow](#).
- **In addition to a much-needed energy transition, preventing deforestation and conversion, and investing in sustainable and restorative land use are critical to combat climate change.** Decarbonizing land use is critical for companies with exposure to FLAG emissions to achieve [net-zero, nature-positive targets](#). For others, investing in credible land-based natural climate solutions such as [forest conservation and reforestation](#) can reduce emissions and enhance corporate climate ambition.
- **A nature-positive transition in food, land and ocean use system system creates business opportunities** of almost [\\$3.6 trillion](#) of annual value and 191 million jobs by 2030. Every \$1 invested in restoring degraded forests can yield [\\$7-\\$30](#) in economic benefits. [Regenerative practices](#) in support of [soil health have multiple business cases](#) by improving agricultural production, resilience and climate change mitigation and biodiversity protection.

NOW is the moment for businesses to lead the land-use transition

- **Land is at the heart of all three Rio conventions** – [UN Framework Convention on Climate Change COP26](#); [UN Convention on Biological Diversity COP15](#); and [UN Convention to Combat Desertification COP15](#) – as well as the [Food Systems Summit](#). The post-2020 Global Biodiversity Framework (GBF) is crucial to marshal government and business commitments for the sustainable management and conservation of land and oceans.
- **Businesses have a key role to play** by adopting nature-positive business models, advocating for much-needed policy reforms such as reforming, redirecting, repurposing and eliminating harmful agricultural subsidies, incentivizing deforestation-free activities and inspiring other companies to lead broader systemic change.

1. Land-based natural climate solutions (NCS) is often cited as 30% of the cost effective and feasible mitigation needed for 1.5 degrees. But consider the actions that humankind can take to protect and maintain the existing natural carbon sink, the role of the land system in the fight against climate change is far greater than 30% ([FOLU](#))



How business can lead the transition

Businesses in the forestry, land use and agriculture (FLAG) sector can lead the transition to sustainable and restorative food and agricultural systems

- **Work with farmers and adopt productive and regenerative agricultural practices:** Combine traditional techniques, such as crop rotation, controlled livestock grazing systems and agroforestry, with advanced precision-farming technologies that support more judicious use of inputs including land, water and synthetic and bio-based fertilisers and pesticides.
- **Minimize food loss and waste:** Set goals, measure and use technology across the supply chain to reduce food loss and waste; improve storage and supply chain infrastructure (especially cold chain) and reduce supply chain inefficiencies; improve date labelling and portion-size data, driving consistency and clarity for consumer behaviour change.
- **Shape demand to be healthier, more nutritious and sustainable:** Shift R&D and marketing resources towards healthier food options; shape demand through product formulations and distribution and effective marketing.
- **Mitigate FLAG sector emissions and address deforestation and conversion:** According to the new SBTi Corporate Net-Zero Standard, companies need to reduce land-based emissions by [at least 80% by 2050](#). Near-term targets are proposed in the [draft FLAG Science-Based Target Setting Guidance](#), including a requirement to publicly commit to zero deforestation covering all scopes of emissions.
- **Ensure equitable distribution of value for farmer livelihoods and rural communities:** Put farmers and practitioners at the centre of the transition; support the development of new financial products and instruments; help farmers de-risk and lower initial cost; provide patient capital with long pay-back periods to encourage adoption of regenerative farming practices.
- **Commit to transparent supply chains:** Develop technology-enabled, end-to-end traceability to track comprehensive and consistent data across the supply chain.
- **Engage Indigenous peoples and local communities (IPLCs) and strengthen land governance:** Nearly [a quarter](#) of the Earth's surface and vast ocean areas and [80%](#) of the Earth's biodiversity are managed by IPLCs and they can be [equally or more successful](#) at safeguarding biodiversity than governments or protected areas. Local knowledge and commitment are essential to effectively locate and implement land-use transition initiatives; and strengthening land tenure and rights is a core component.





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All businesses need to commit to data transparency and disclosure, and advocate for the right economic incentives, regulatory frameworks and policy reforms

- **Assess and set Science-Based Targets:** Start assessing companies' material impacts and dependencies on land in operations and value chains; support the development of and commit to setting Science-Based Targets (SBTs) for [climate](#) and [nature](#) when the methodologies are available.
- **Strengthen and standardize disclosure:** Support the development of and prepare to commit to standards such as [Nature-related Financial Disclosures](#) and [Global Reporting Initiative](#); publicly disclose and report on progress made.
- **Invest in high-quality, land-based natural climate solutions:** Companies without direct exposure should also invest in [high-quality natural climate solutions](#) for hard-to-abate emissions within their operations and beyond the reach of value chains, in conjunction with the GHG emissions [mitigation hierarchy](#).
- **Call on governments to support and require businesses to embed the value of land in all decision making:** Companies and financial organizations would make better decisions if the value of land for people and the economy is visible and considered. Governments must support and require companies to pilot, scale up and mainstream [natural capital accounting](#). Schemes such as [REDD+](#) and payments for ecosystem services such as [soil carbon financing](#) can help overcome the financial barriers that many smaller, rural communities face.
- **Ask governments to ensure policy coherence in aid, development finance, COVID-19 recovery funds and national budgets, including reforming, redirecting, repurposing and eliminating all harmful agricultural subsidies:** The world is spending at least [\\$1.8 trillion](#) (about 2%) of global GDP, on the destruction of nature through environmentally harmful subsidies, with [agricultural subsidies making up \\$520 billion](#). Only [10% of the \\$17 trillion](#) global bailouts is currently directed at cutting GHG emissions or restoring nature.
- **Build partnerships:** Share best practices and build collaboration along the value chain; place-based coalitions, jurisdictional approaches and public-private partnerships are key to driving sustainable land-use transition.
- **Advocate for ambitious global goals:** Engage with governments to raise ambitions on land conservation, restoration and sustainable use; call on the [UN Convention on Biological Diversity \(CBD\)](#) to adopt a global goal to halt and reverse nature loss by 2030, supported by targets on sustainable production and consumptions, sustainable use, and pesticide impact, etc.

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