Environmental Finance

Bill Gates is right about innovation - but wrong about what drives it

20 November 2025

The climate challenge is not only about what we invent, but about how we behave, and how finance can support that change in behaviour, writes Michael Schlup

Bill Gates's letter ahead of COP30 sets out three truths about climate change. I share his conviction that the challenge can be solved.

He is right that the world will overshoot 1.5°C, that innovation remains essential, and that we should be mindful of keeping human suffering as limited as possible while we work towards solving the climate challenge. These are all sensible points.

But his belief that new technology will ultimately solve the problem misses the harder truth.

The climate challenge is not only about what we invent, but about how we behave – and how finance can support that change in behaviour.

When emissions are divided into neat categories such as energy, transport and agriculture, it is easy to think of each in isolation. In reality, these systems are tightly connected.

Agriculture, forestry and other land use together account for close to a quarter of global greenhouse gas emissions, almost equal to electricity generation. That figure includes the loss of forests, grasslands and soils that store carbon and regulate rainfall.

These natural systems are not peripheral to climate stability; they are at the core of it – and when they degrade, biodiversity declines, ecosystems unravel, and human wellbeing suffers.

Protecting nature and protecting people are not separate goals – they are one and the same.

This is why technology alone cannot deliver. The way land is managed depends on incentives, markets and human decisions. These are not technical systems but behavioural ones.

Nowhere is this clearer than in the Amazon, where COP30 is taking place this week in Belém. The forest regulates rainfall across much of South America and stores around 150 billion tonnes of carbon. Yet it is approaching a tipping point.

Scientists warn that, if roughly a fifth of the Amazon is cleared, vast areas could tip irreversibly into dry savannah. That would release billions of tonnes of carbon, disrupt regional rainfall, and threaten agriculture and water security across the continent – with all the human suffering that goes along with it.

Mr Gates points to innovations such as feed additives that reduce methane. These are useful tools, but they address the smaller part of the equation. In Brazil, 70% of cattle-related emissions come not from methane, but from deforestation and poor land management. If we bet on technology alone, we could end up with lower-emitting cattle and no forest left to absorb carbon.

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There are practical and proven alternatives. Better soil management, restoring degraded areas, integrating crops and livestock, and rotating pastures can all increase productivity while reducing emissions.

Many of these approaches have existed for centuries, refined by generations of farmers, but they have been sidelined by short-term economics and lack of support.

To bring them back into practice, they must be financially viable and easy to adopt.

Behavioural change cannot be mandated. It endures only when it makes sense to those who deliver it. Finance can make that happen by linking business resilience and long-term profitability with sustainability.

Private credit is one tool with real potential. It allows access to capital to be tied directly to measurable sustainability outcomes.

When loan terms depend on verified deforestation-free sourcing, improved traceability, and soil restoration, the incentive to change becomes clear and immediate. This alignment of value creation with environmental performance can drive change far faster than regulation alone.

We have seen this approach work in practice. In Brazil, one of our borrower partners, a major beef producer, is on track to achieve full traceability across its cattle supply chain, the first in its sector to do so.

We structured its financing with sustainability covenants embedded in a comprehensive Sustainable Value Creation Plan, linking continued access to capital to verified progress on land-use, supplier compliance and restoration targets, supported by geospatial intelligence to monitor outcomes.

And in South East Asia, a large agricultural exporter has adopted a loan linked to concrete sustainability transition covenants that support compliance with international deforestation regulations and rewards smallholders who improve soil health and water use. Both provide blueprints for others to follow.

These examples show how large food and agriculture companies, which already work with thousands of farmers and suppliers, can shift entire systems when sustainability is tied to finance.

Credit offers a direct way to influence that change without the scale of ownership private equity requires, making it one of the most effective tools for transition.

Real transformation will come not from building new systems, but from reshaping the ones that already feed the world.

We are not opposed to climate technology – it will remain indispensable. But it is a risky bet to rely on unproven innovations when proven levers can already be deployed in the real economy.

Too little capital still reaches the real-economy transitions needed in emerging markets. The opportunity for impact is greatest in food and land systems, where every dollar invested can reduce emissions, protect biodiversity and improve livelihoods.

Many investors view this area as too risky or too immature, but most of the companies that need to change are well-established, asset-backed businesses – not start-ups. By treating sustainability as part of financial performance, rather than an externality, investors can help create real maturity in these markets.

The structures already exist; what is missing is a shift in mindset about where the most meaningful climate opportunities lie.
Once ecosystems such as the Amazon, the Congo Basin or Southeast Asia's peatlands cross their tipping points, they will not recover within any human timeframe.

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No amount of innovation will recreate a lost rainforest or rebuild its biodiversity.

If we lose those natural systems, we lose the foundation of global food production, water stability and economic resilience. That is not a distant scenario – it is a current financial risk.

Technology will continue to advance, but the decisive factor will be how finance directs incentives and how companies respond. If investors focus capital on behaviour in the real economy – particularly in the food and land sectors that anchor

global supply chains – and if corporates see sustainability as business transformation rather than obligation, we can shift course at scale and fast.

The transition will not be won in laboratories, but through practical, financed transformation in the companies and landscapes that feed the world. Innovation will help us get there. Behaviour – and the finance that shapes it – will decide whether we succeed.

Michael Schlup is Chief Sustainability Officer at SAIL Investments.