REBOOT DEVELOPMENT

The Economics of a Livable Planet

Richard Damania, Ebad Ebadi, Kentaro Mayr,
Jason Russ, and Esha Zaveri

WORLD BANK GROUP

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A livable planet promotes ***environmental health*** to improve ***lives, livelihoods and living standards, for all.***

Improving Economic Indicators: Poverty, Health, Transport, Energy and Access to WASH

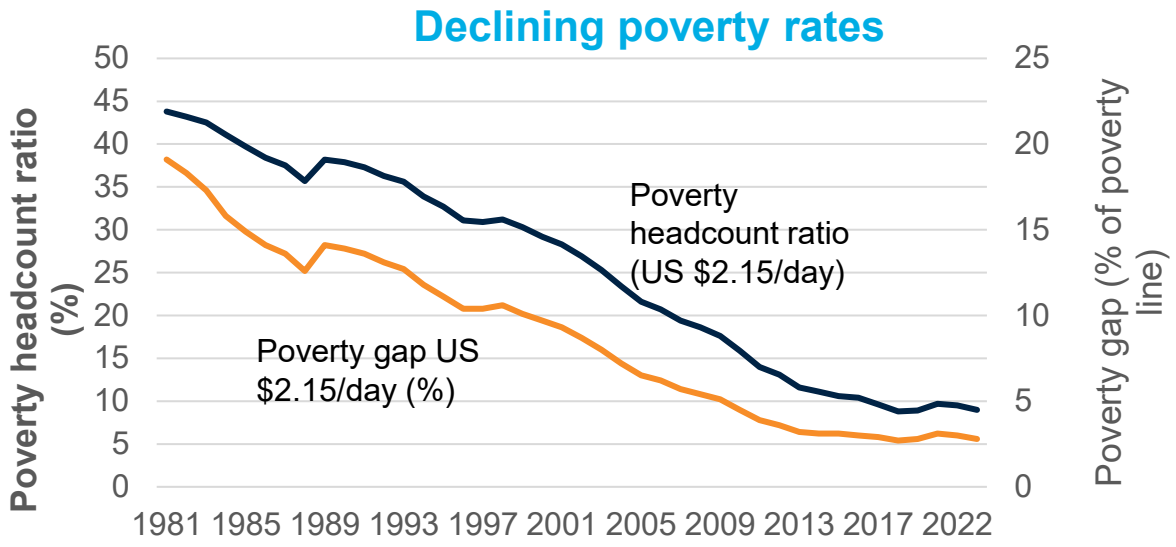
Across most economic indicators over the past 100 years, there has been progress. E.g.

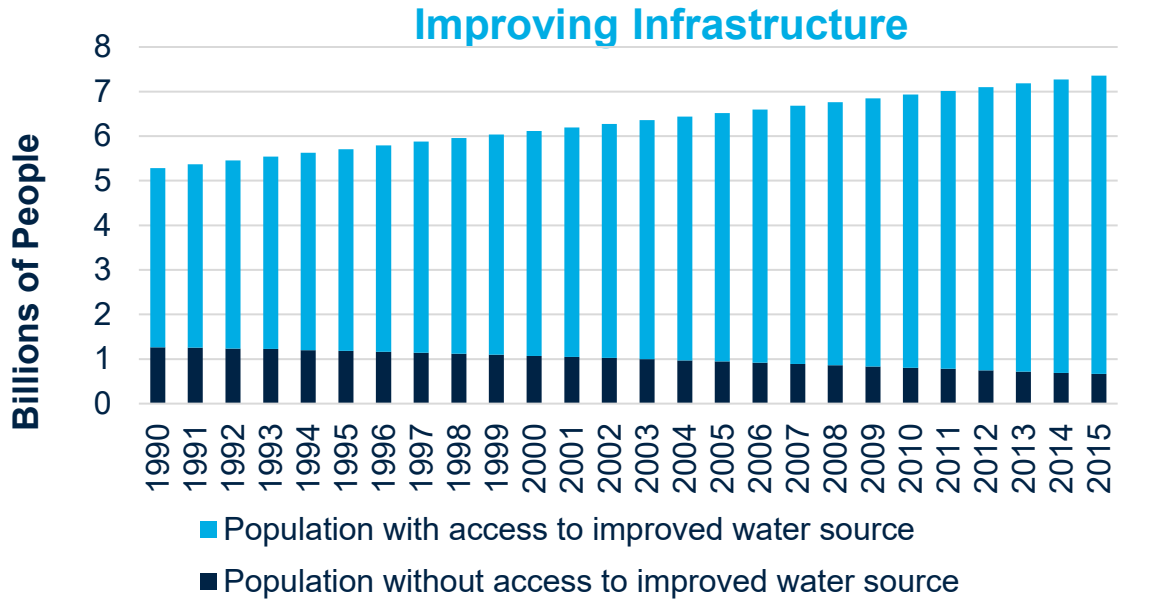
- in 1985, extreme poverty was ~40%; today it is < 10%.
- Infrastructure access has seen massive boost.

➢ There remains room for improvement:

- Access is uneven, conflict endures, exclusion persists.

➢ But on standards-of-living measures, progress is hard to deny.

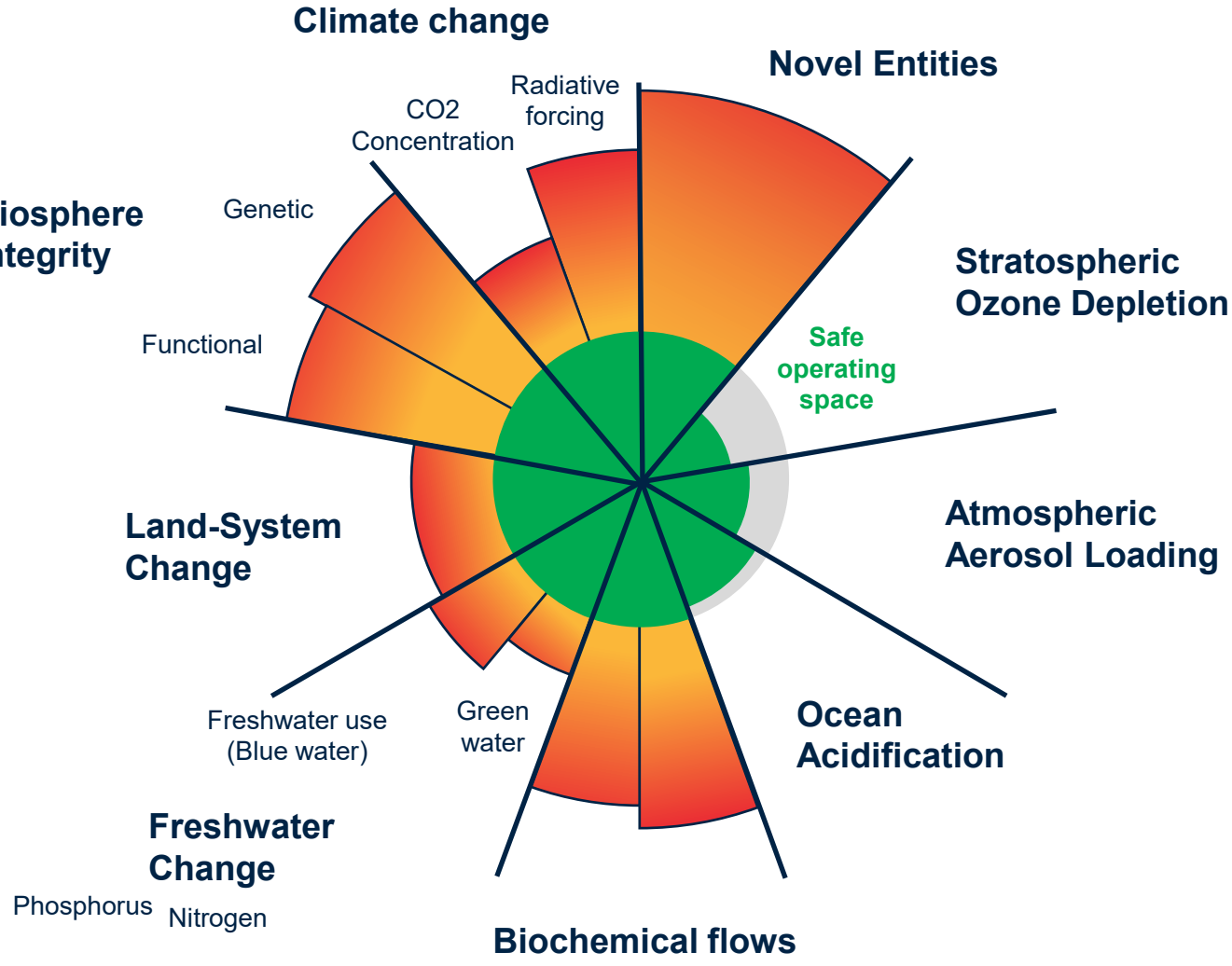




But this progress has come at a price:

The Planetary Boundaries framework is a simplifying synthesis of the “state of nature”.

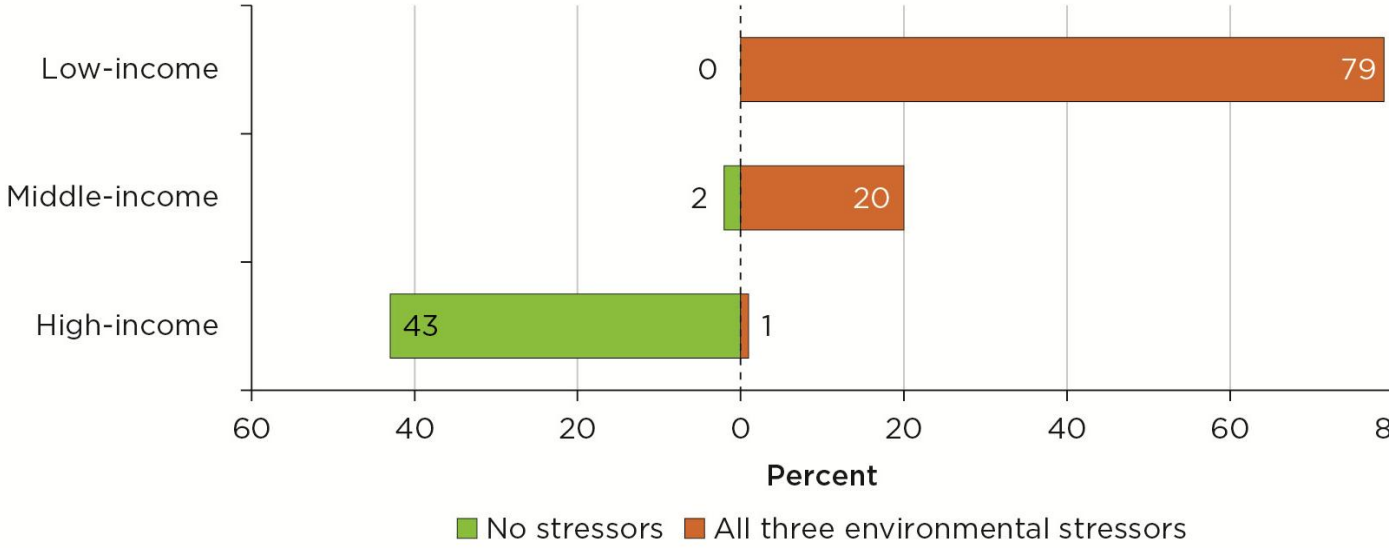
- Six of the nine planetary boundaries, which define the safe operating space, have been transgressed.



Why does this matter for development?

- **Close to 80% of *low-income country* residents are exposed to poor air quality, unsafe water, AND degraded land. But only 1% in HICs.**

- By contrast, in high-income countries 43% of people are not exposed to any of the three stressors.



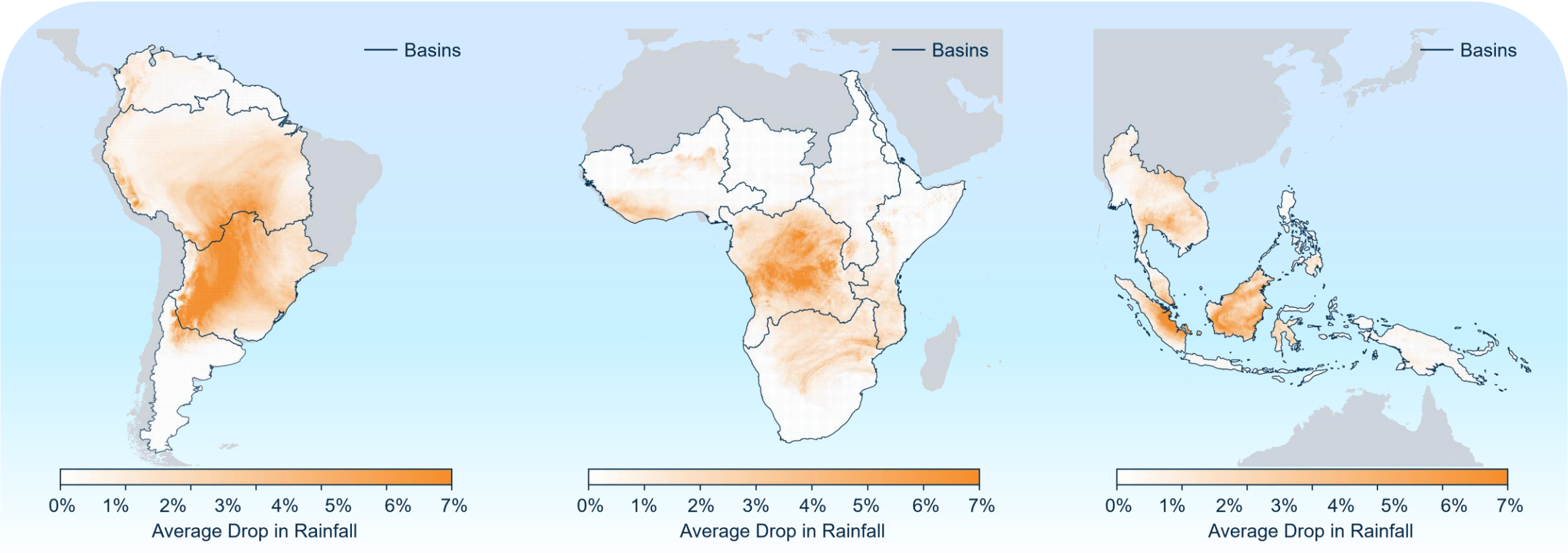
Deteriorating land quality, pollution related labor productivity losses and inadequate water supply are not conducive to development.

A closer look at one aspect: land and water

A large share of global rainfall comes from land (forests and biomass)

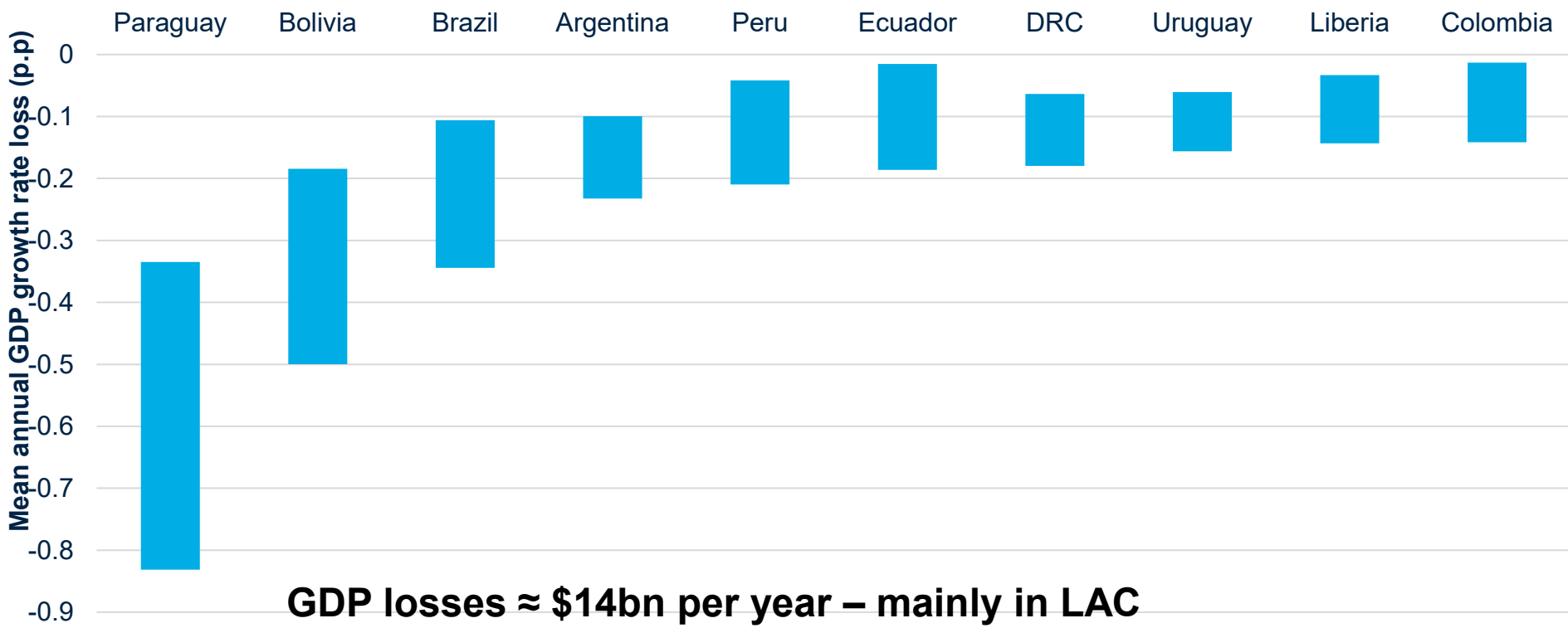
- Hence deforestation leads to loss of rainfall. Map shows losses due to deforestation in some tropical regions

Rainfall loss due to deforestation (2001 – 2020)



The economic impacts:

Upwind deforestation -> rainfall loss -> growth loss



GDP losses ≈ $14bn per year – mainly in LAC

LICs: 40% of areas get most (≈ 75%) of their rainfall from forests/land

HICs: only 2.4%

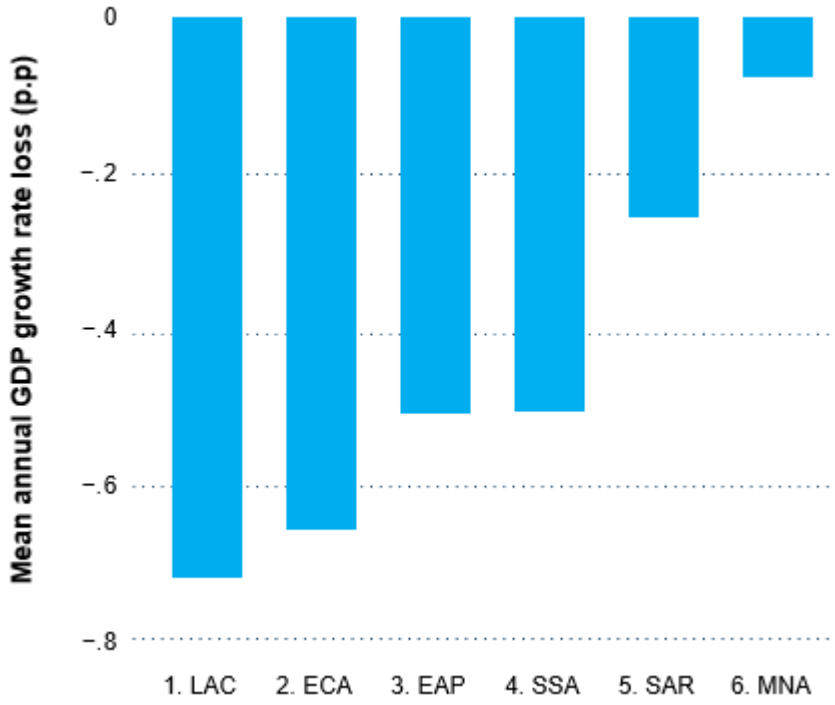
The Hidden Reservoir

Soils hold the bulk of water that falls from rain.

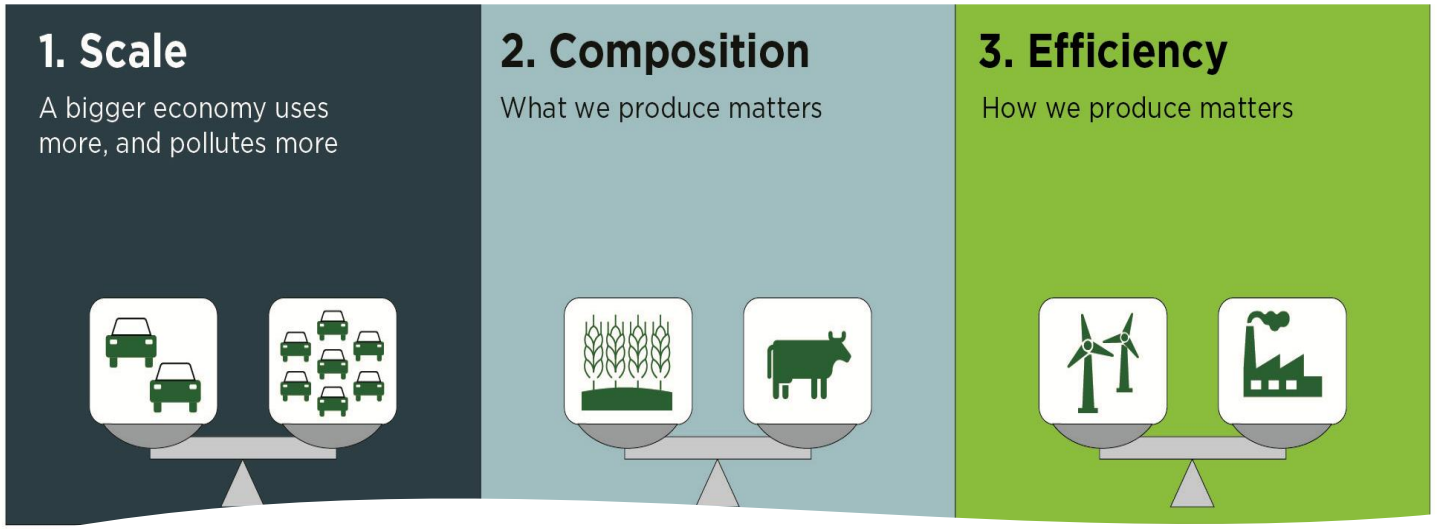
Upstream land-use determines, soil moisture conditions downstream

Upstream forests enhance soil moisture retention (act as a sponge)

- Forest loss -> loss of soil moisture, amplifying the effects of drought and triggering economic losses.
- The loss of soil moisture due to deforestation costs around US$370 billion per year, equivalent to nearly 8 percent of global agricultural GDP.

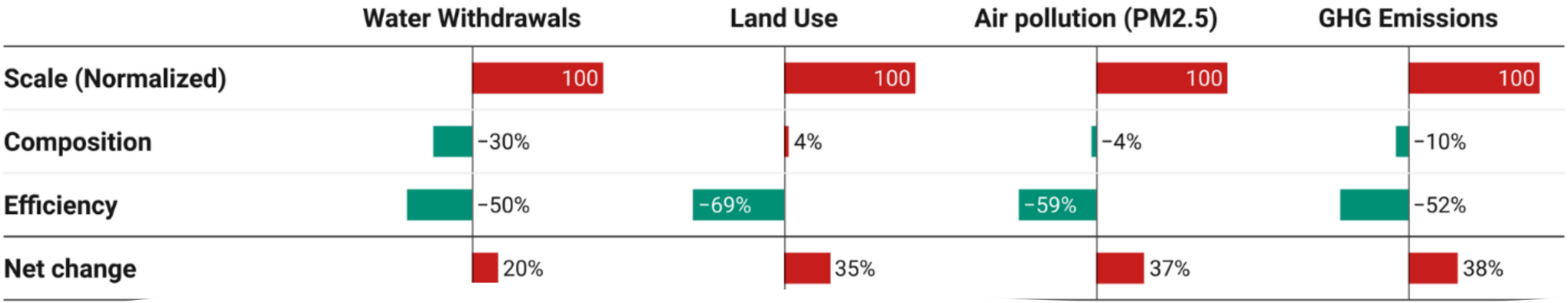


Is it possible to decouple growth from environmental damage?



- All else equal as an economy grows it pollutes more and uses more resources - the "**scale effect".**
- With growth will also come a change in what is produced and consumed – the "**composition effect"**. For instance, it is possible that wealthier economies produce more (or less) polluting goods and consume more (or less) water intensive foods.
- The efficiency of production matters – producing more with less can offset some of the scale effects. In fact, the "**efficiency effect"** has mitigated most of the environmental damage associated with growth.

Evidence across water, land and air



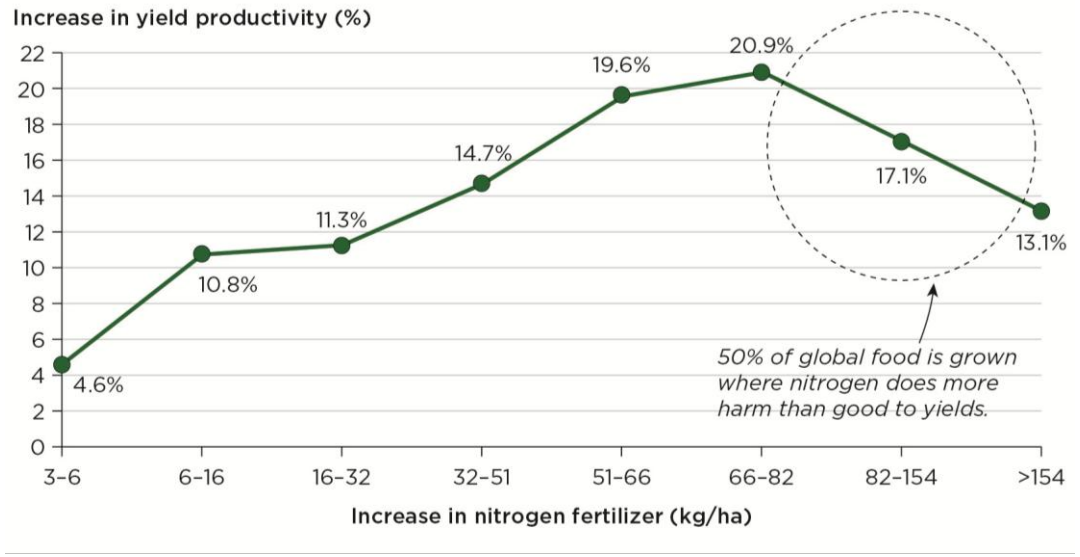
New evidence suggests that **composition effects have played a limited role** in mitigating environmental degradation (and occasionally exacerbates it).

In contrast, **efficiency improvements emerge as the main factor reducing the environmental impacts** associated with scale effects across all domains.

- ✓ Highlights the crucial role played by technological advancements, process improvements, and better resource governance in decoupling economic growth from environmental degradation.

Efficiency improvements – often low hanging opportunities

- Nitrogen fertilizer is essential but heavy subsidy drives overuse - harms soils chemistry, reduces productivity. Around 50% global calories produced where *diminishing returns to* fertilizer use (mainly EAP and SAR).
- Around 30% of electricity generated is lost
- Around 40% of water in some cities is lost to leakage
- More than enough calories are produced to feed the world (3000 kcal/pp/pd) and around 30% wasted/lost
- Harmful and wasteful subsidies that promote inefficiency and misallocation of resources **at least** $1 trillion



Subsequent presentations will address how these and other challenges are tackled

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Reboot Development Report

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https://www.worldbank.org/en/publication/the-economics-of-a-livable-planet

Link to the *StoryMap*:
https://storymaps.arcgis.com/stories/2c6ae4e418ba47608bc3d71c8a7b490c

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