ENHANCING THE GRANULARITY OF AMAZON'S DEFORESTATION FOOTPRINT: AGRIFOOD SYSTEMS AND TRADE

Amazon Week 2026

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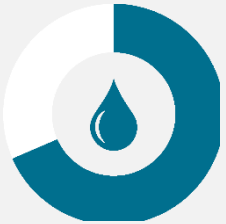
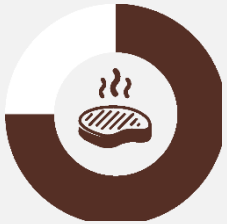
Looking Beyond the Amazon...
...Globally, food systems are the main threat to people and planet

Food systems overexploit and inefficiently use natural resources…

LAND USE
40%
of inhabitable land is used for food production

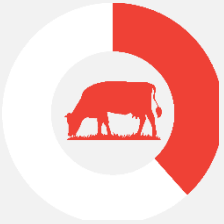


WATER USE
70%
of freshwater withdrawals are used for food produciton



DIVERSITY
75%
of food comes from 12 crops and 5 animals

UNEATEN FOOD
40%
of food produced is lost or wasted

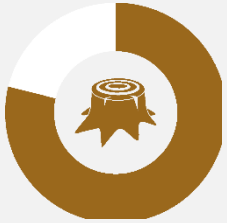


LIVESTOCK
38%
of croplands are used to grow feed for livestock

leading to an unhealthy planet…

BIODIVERSITY LOSS
70%
of terrestrial biodiversity loss is caused by food systems

CLIMATE CHANGE
30%
of greenhouse gas emissions are caused by food systems



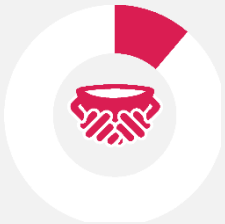
NATURE LOSS
80%
of deforestation is caused by food systems

BIODIVERSITY LOSS
50%
of freshwater biodiversity loss is caused by food systems

and unhealthy people.

FOOD ACCESS
33%
of people lack regular access to adequate food

HEALTH
31%
of people are obese or overweight

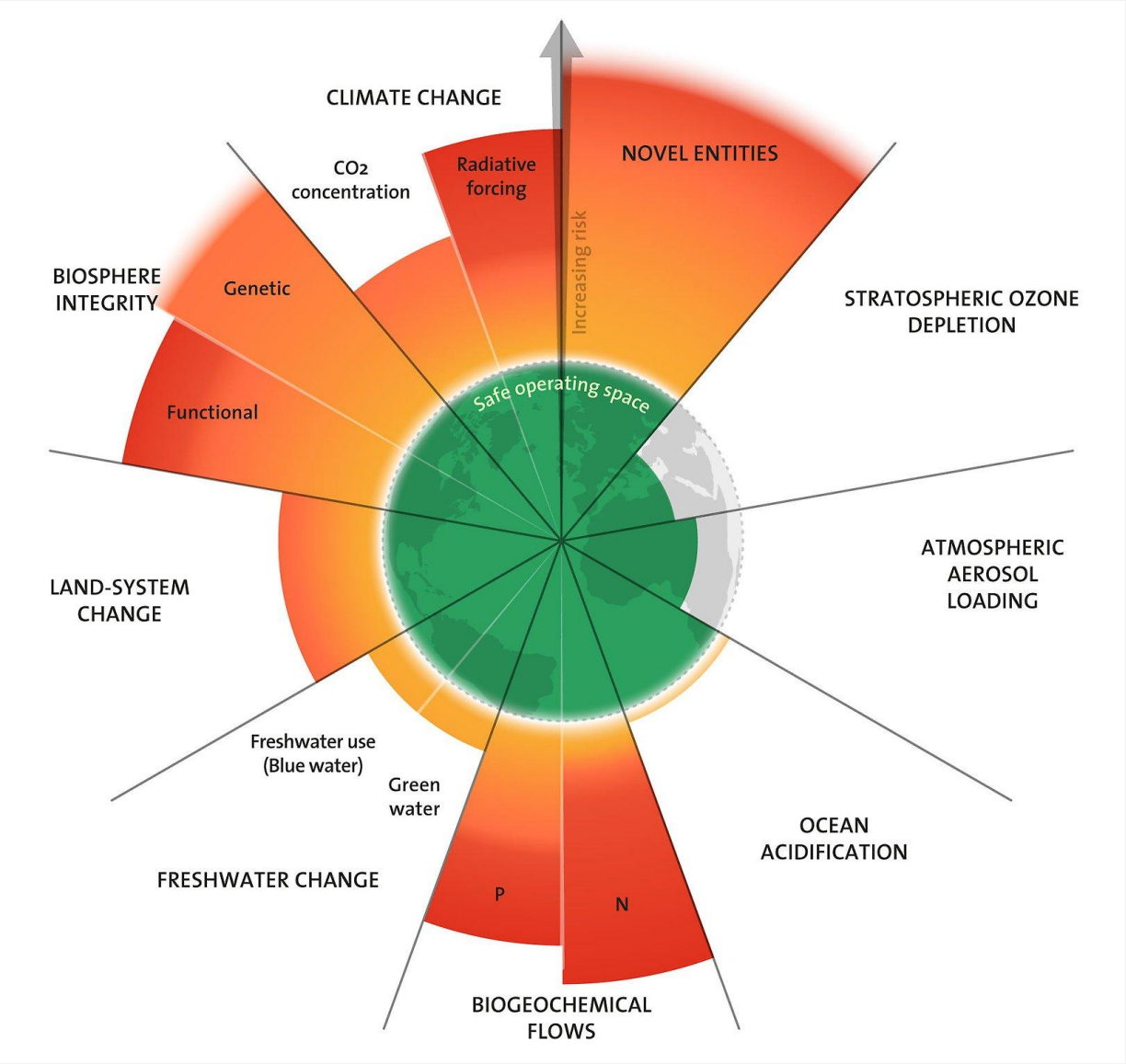


HUNGER
10%
Of people go hungry

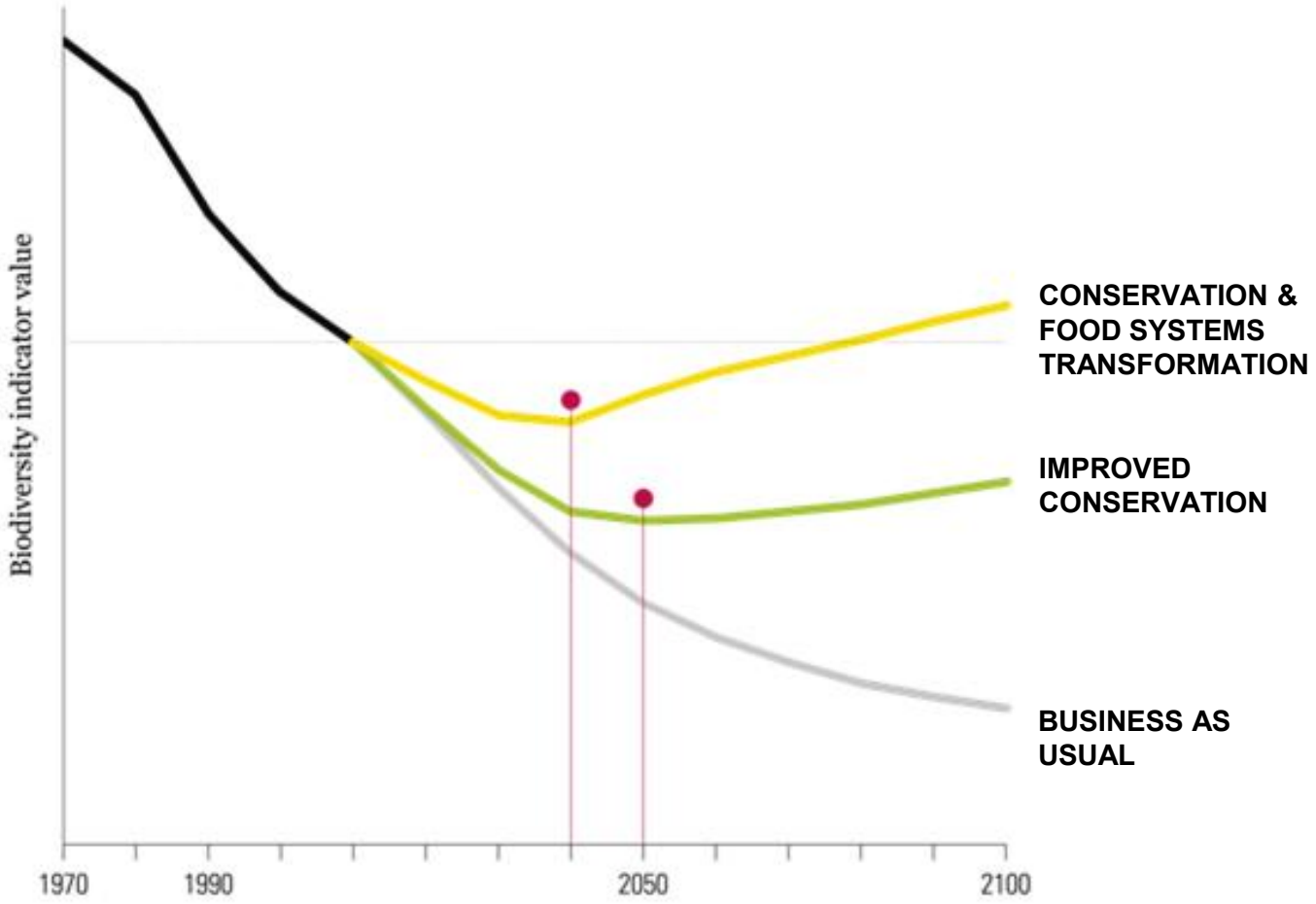
NET VALUE OF FOOD SYSTEMS
NEGATIVE USD11 TRILLION PER YEAR

Sources: (1) WWF Living Planet Report 2020, (2) WWF Driven to Waste 2022, (3) FAO State of Food Security and Nutrition 2023, (4) World Obesity Federation 2023, (5) Crippa et. al 2021 (6) FAO, 1999 (7) Scientific Group of the UN Food Systems Summit.

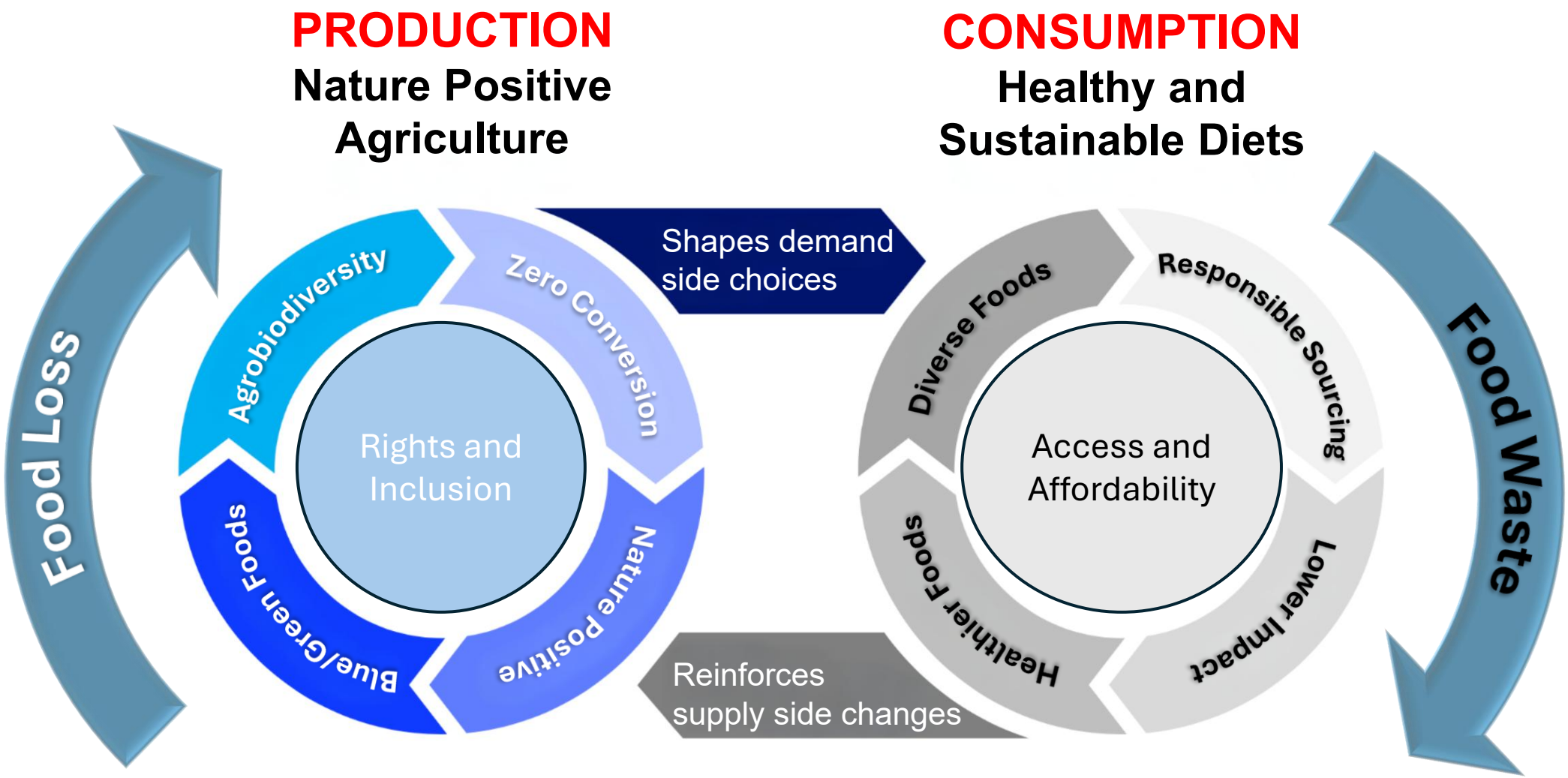
Transgression of planetary boundaries



The 2025 update to the Planetary boundaries. Licensed under CC BY-NC-ND 3.0. Credit: "Azote for Stockholm Resilience Centre, based on analysis in Sakschewski and Caesar et al. 2025".

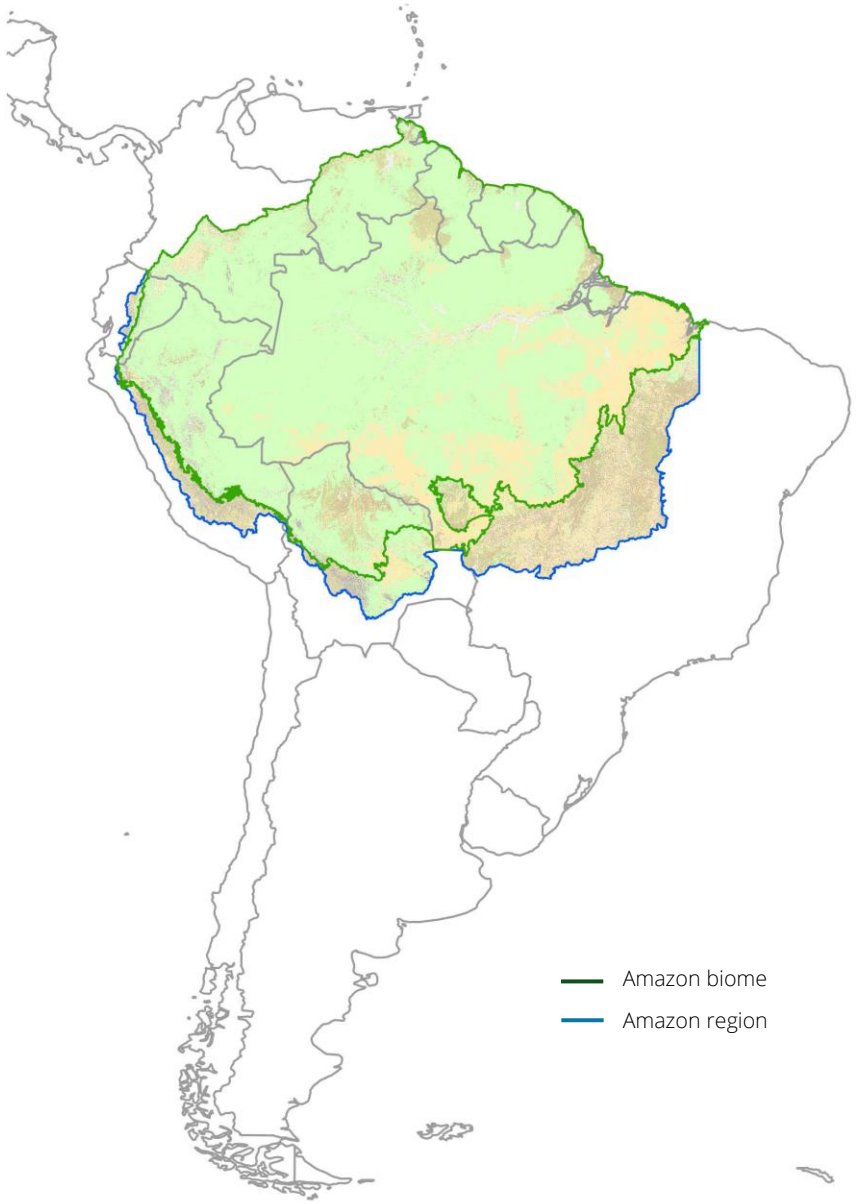


NATURE'S RECOVERY DEPENDS ON FOOD & AGRICULTURAL SYSTEMS TRANSFORMATION


PRODUCTION
Nature Positive Agriculture
CONSUMPTION
Healthy and Sustainable Diets
Food Loss
Agrobiodiversity
Zero Conversion
Nature Positive
Blue/Green Foods
Rights and Inclusion
Shapes demand side choices
Diverse Foods
Responsible Sourcing
Lower Impact
Healthier Foods
Access and Affordability
Reinforces supply side changes
Food Waste

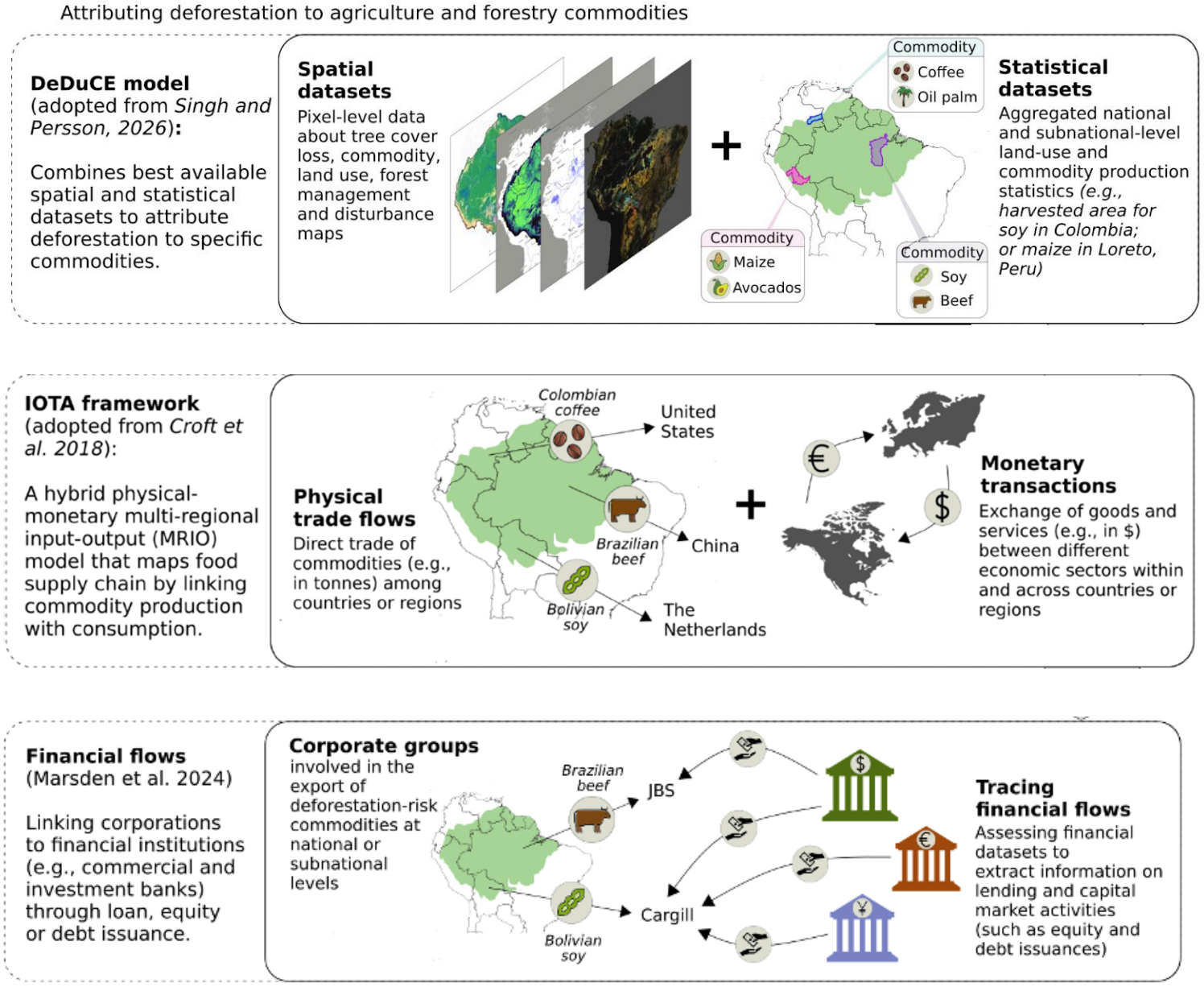
How is this impacting the Amazon?

- As of today, about **17% of the total forest area in the Amazon has been lost**
- With oscillations over time, **deforestation and forest degradation continue**
- Forest loss is primarily **due to agricultural and cattle ranching expansion**
- This in the context of **more complex dynamics driving land occupation**
- If forest loss is not stopped, there is a **risk of a negative tipping point in the Amazon**



Amazon Footprint Report

- Determine the **share in total deforestation attributed to all commodities** in the Amazon region
- **Link deforestation to commodity trade and consumption**. This provides ‘footprints’ of impact or what trade and consumption destinations drive deforestation.
- **Link exporter groups** exposed to deforestation **to financial institutions**

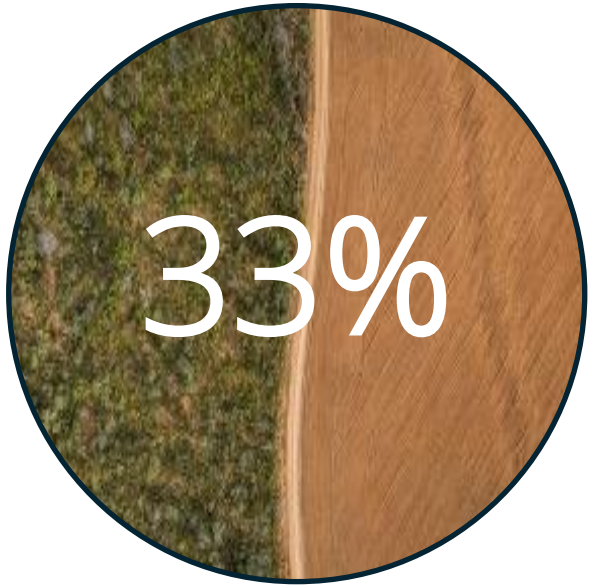


Chandrakant Singh, Simon Croft, Lydia Marsden, U. Martin Persson, Chris West, Victor Galaz, Pablo Pacheco, Toby Gardner, Rafaela Flach et al. (*under review*). **Amazon deforestation footprint across global food and financial systems.**

Amazon deforestation in context: 2020-2022

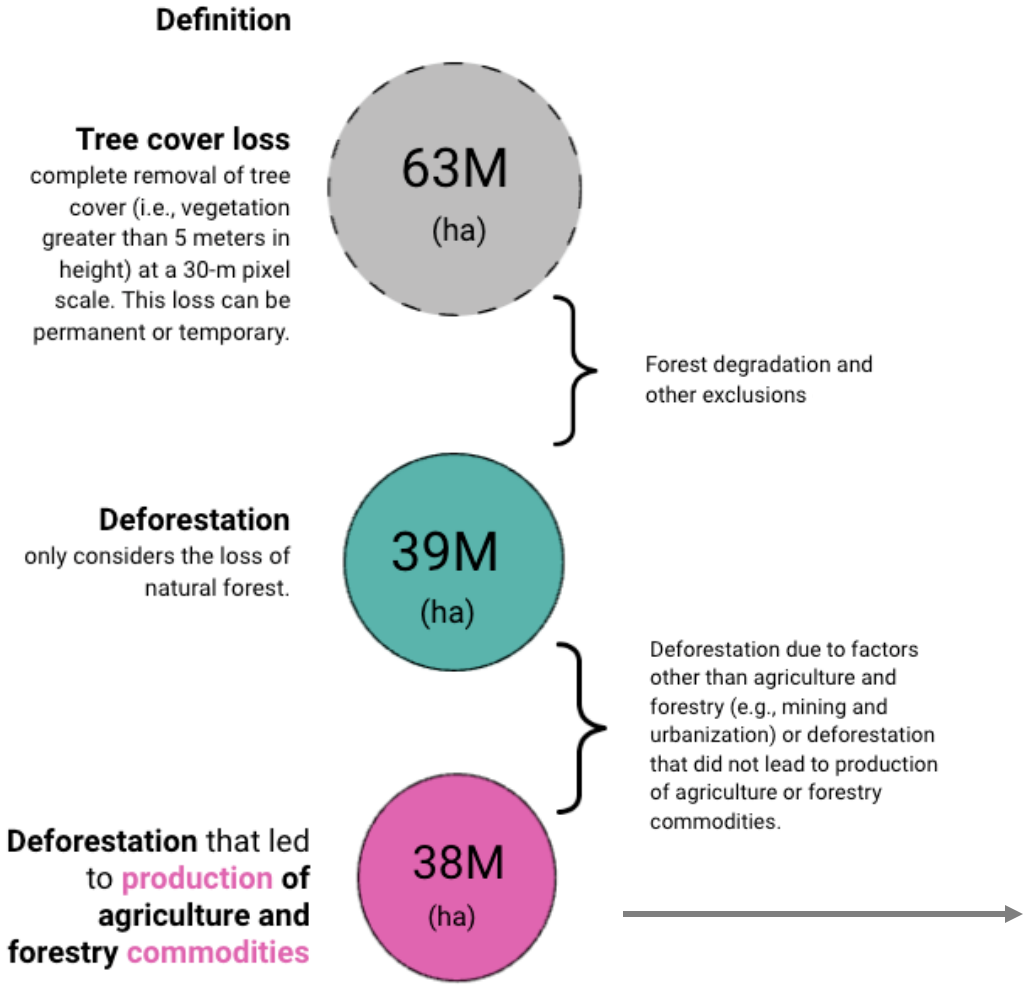
Global deforestation

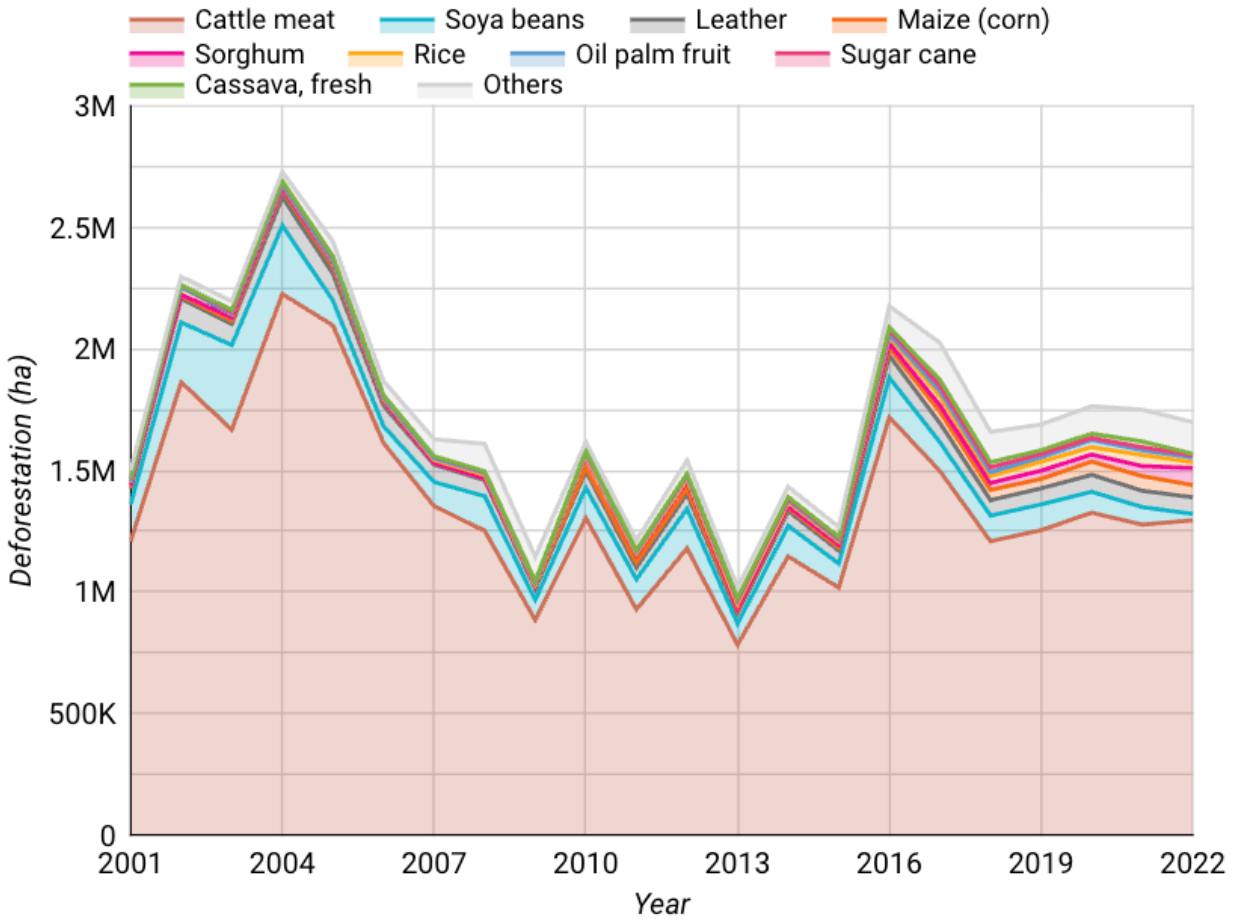
Global cattle deforestation footprint



Global soy deforestation footprint

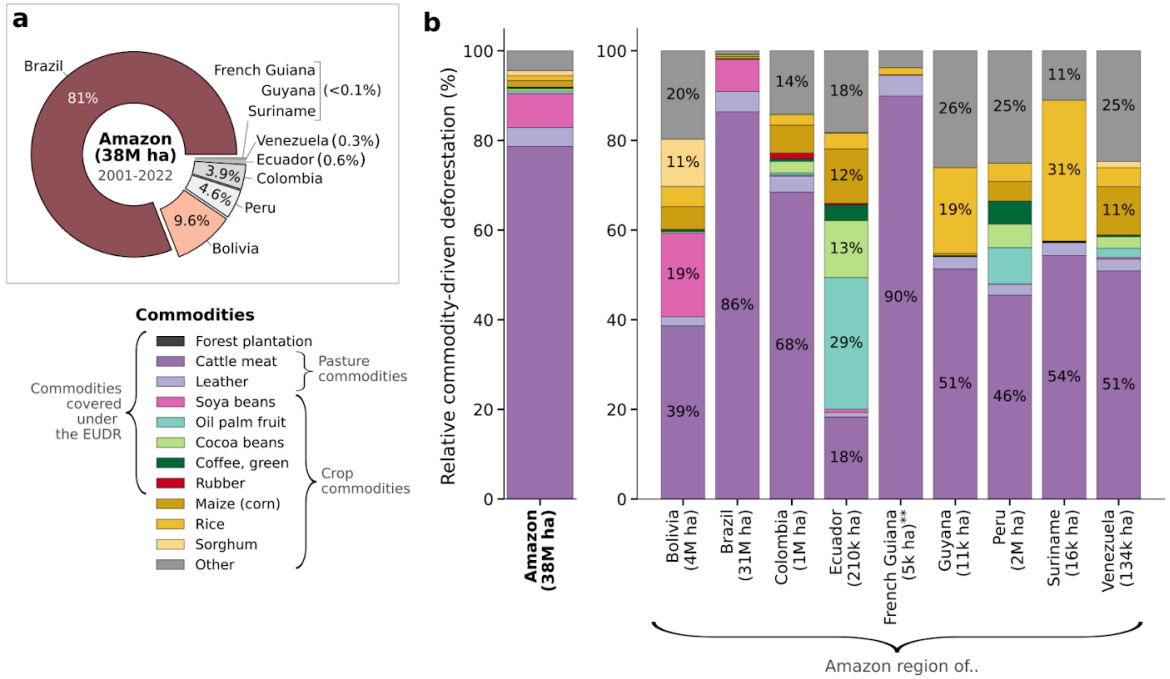
Amazon: Tree cover loss and deforestation by commodity

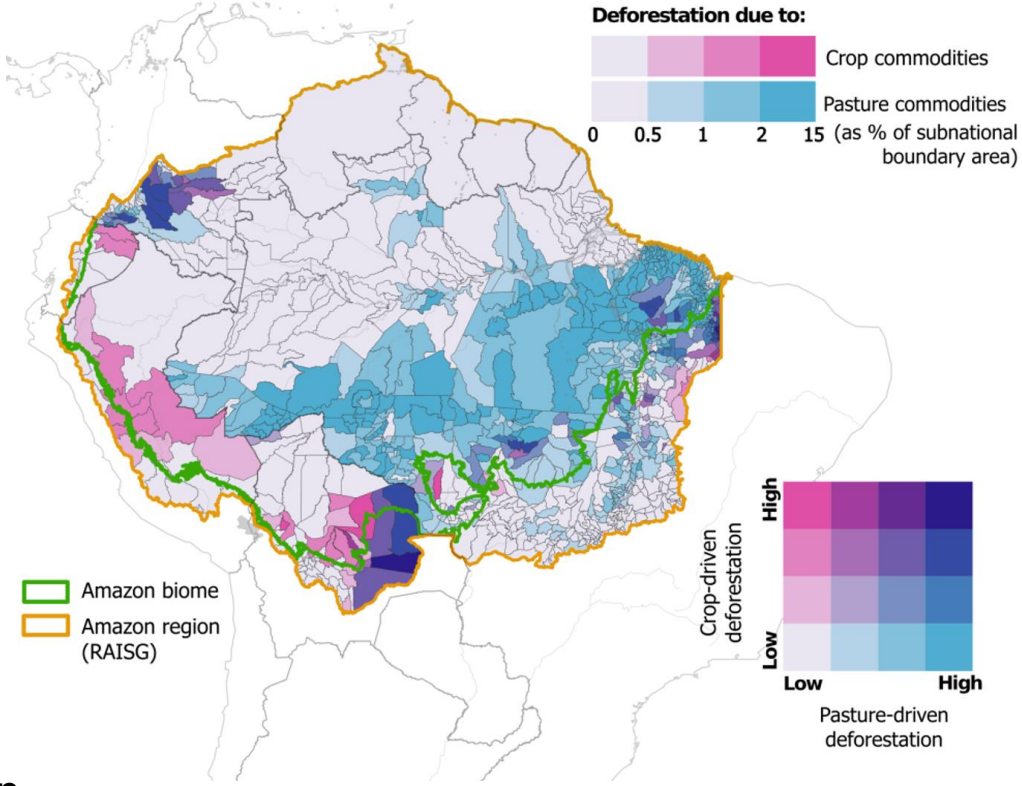




Uncovering Sub-Regional Drivers of Deforestation in the Amazon: A Tool for Targeted Solutions. https://wwfint.awsassets.panda.org/downloads/uncovering-sub-regional-drivers-of-deforestation-in-the-amazon.pdf

Commodity-driven deforestation in the Amazon



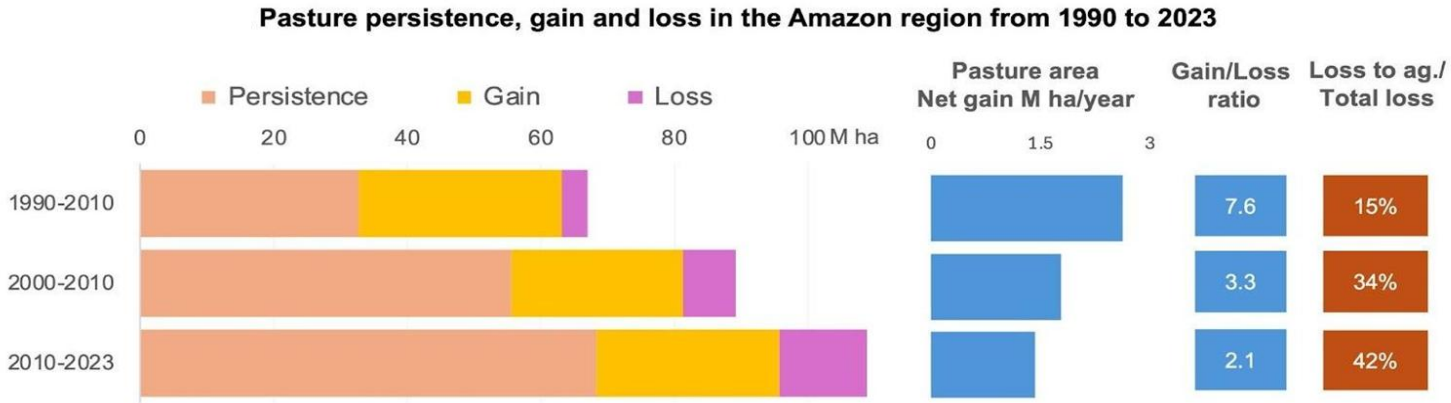


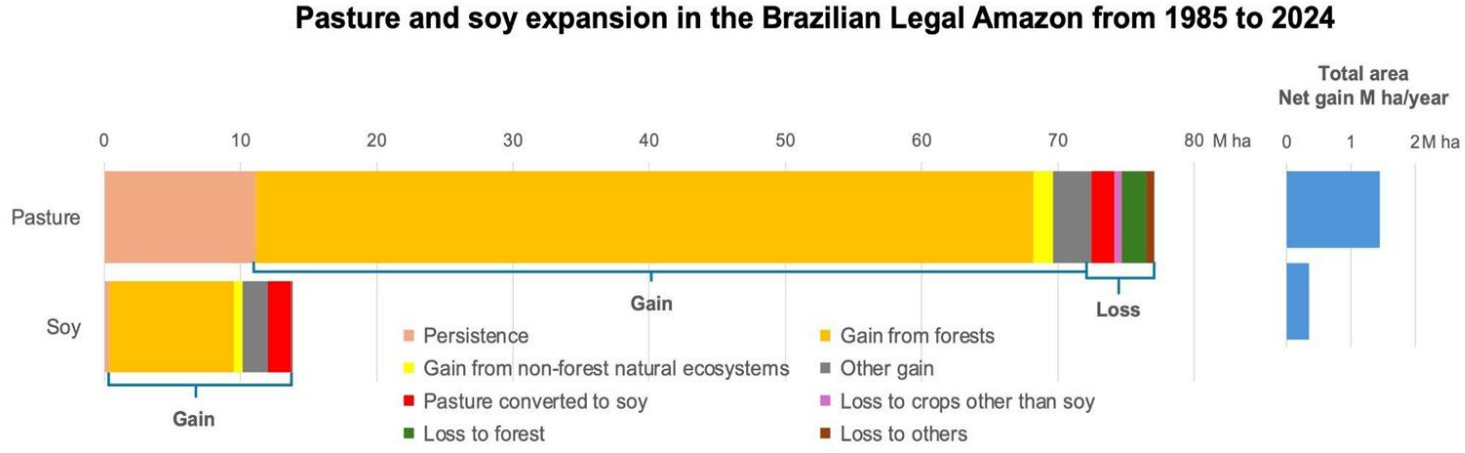
- **Contrasting trends** between the **eastern and western Amazon**
- **Pasture has a dominant role** in triggering deforestation in **Eastern and Central Amazon**
- Deforestation largely driven by **crop expansion in Western Amazon**

Detailed results at subnational level are available at: https://www.deforestationfootprint.earth/Amazon

Indirect dynamics

- In the Brazilian Legal Amazon, 66% of soy expansion between 1985 and 2024 occurred on former forest land, while 12% occurred on established pasture.
- While the **Soy Moratorium successfully reduced direct soy expansion into forests**, it may have **pushed soy onto pasture lands**, triggering "indirect" pasture expansion further into the forest



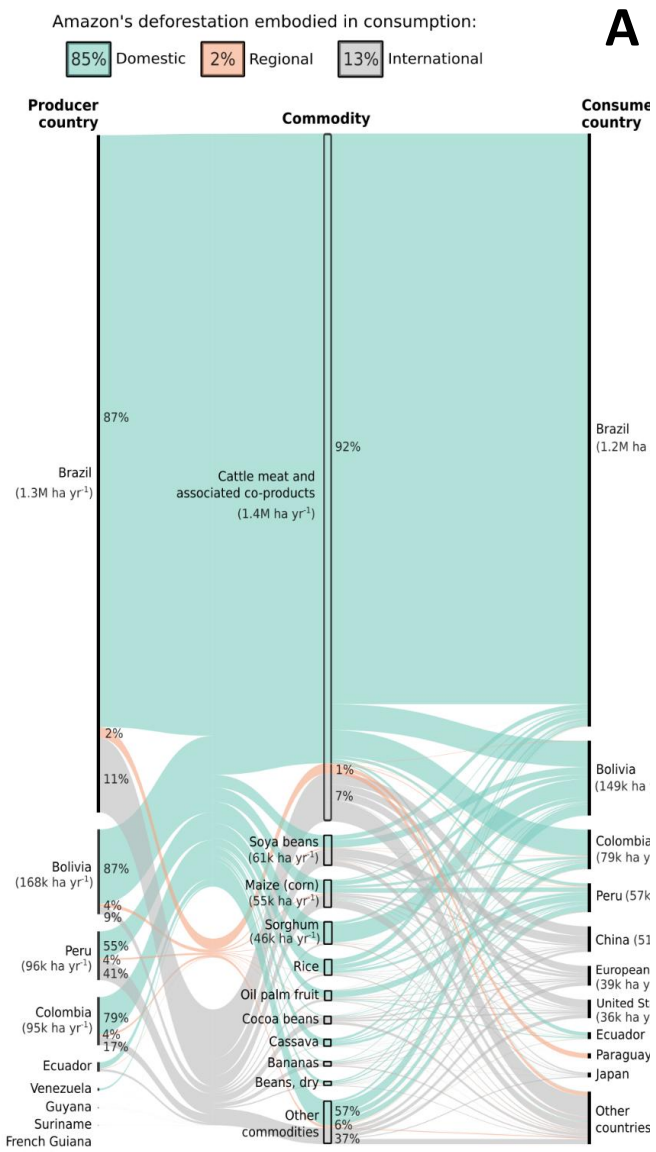


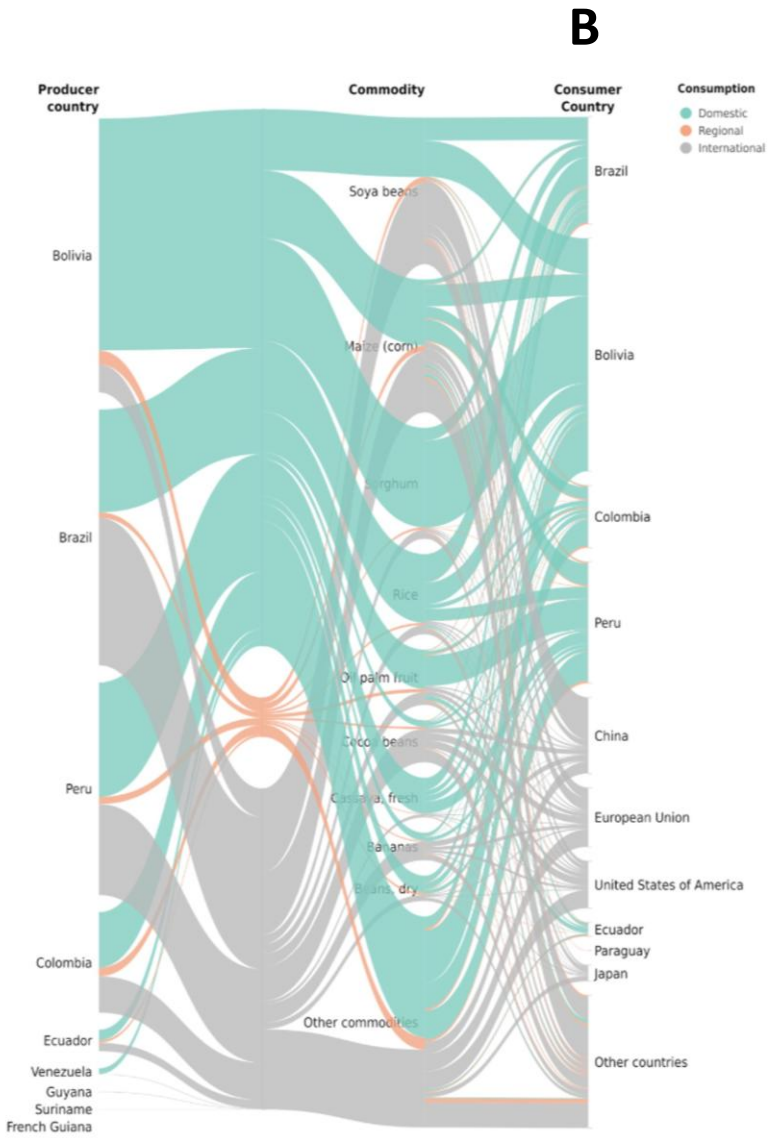
https://wwfint.awsassets.panda.org/downloads/technical-brief--amazon-footprint-report--en-.pdf

Deforestation embodied in consumption and trade

Domestic, regional, and international consumption-linked deforestation footprints for the period 2020-2022.

A. All commodities
B. Excludes cattle





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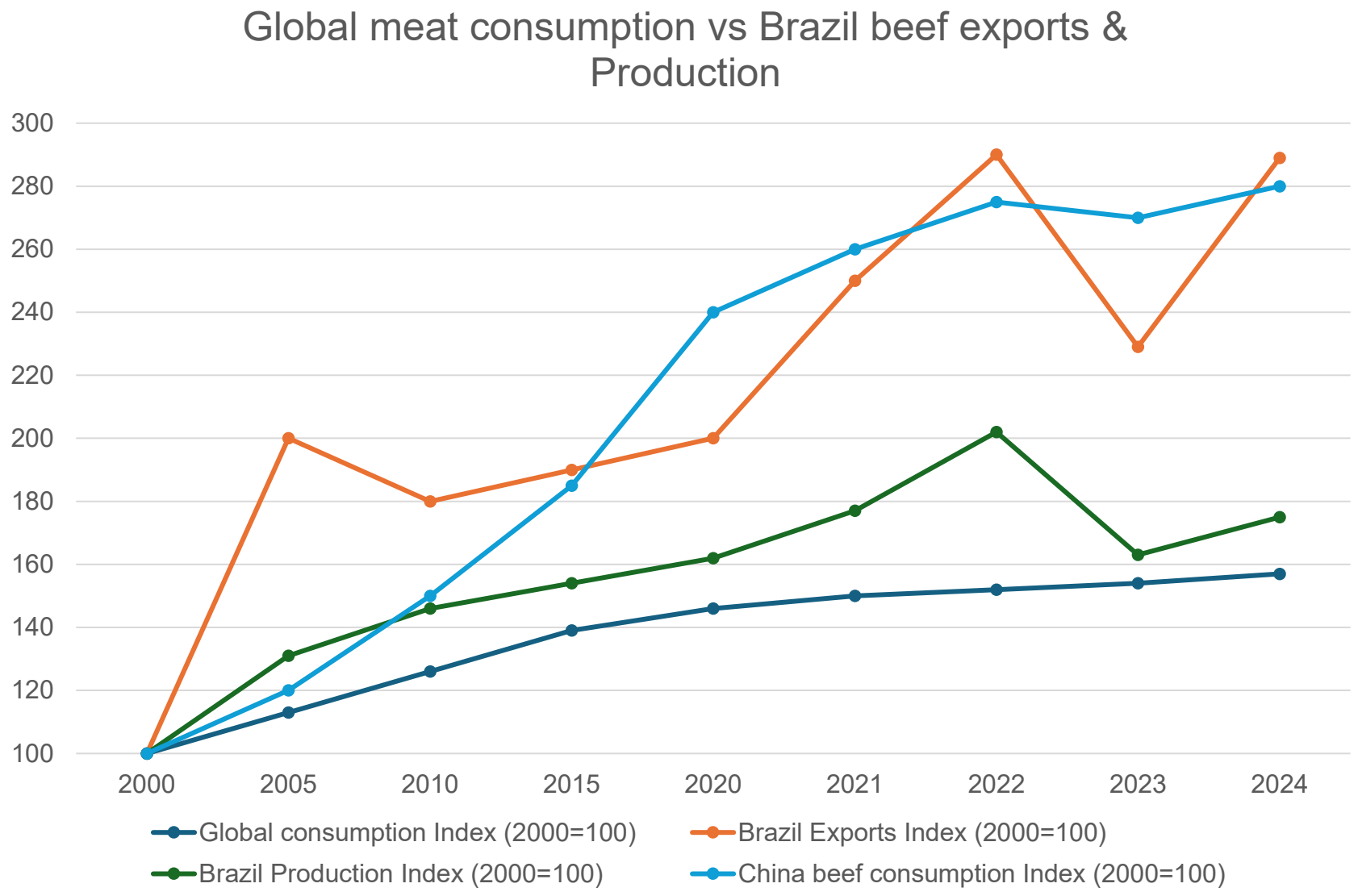
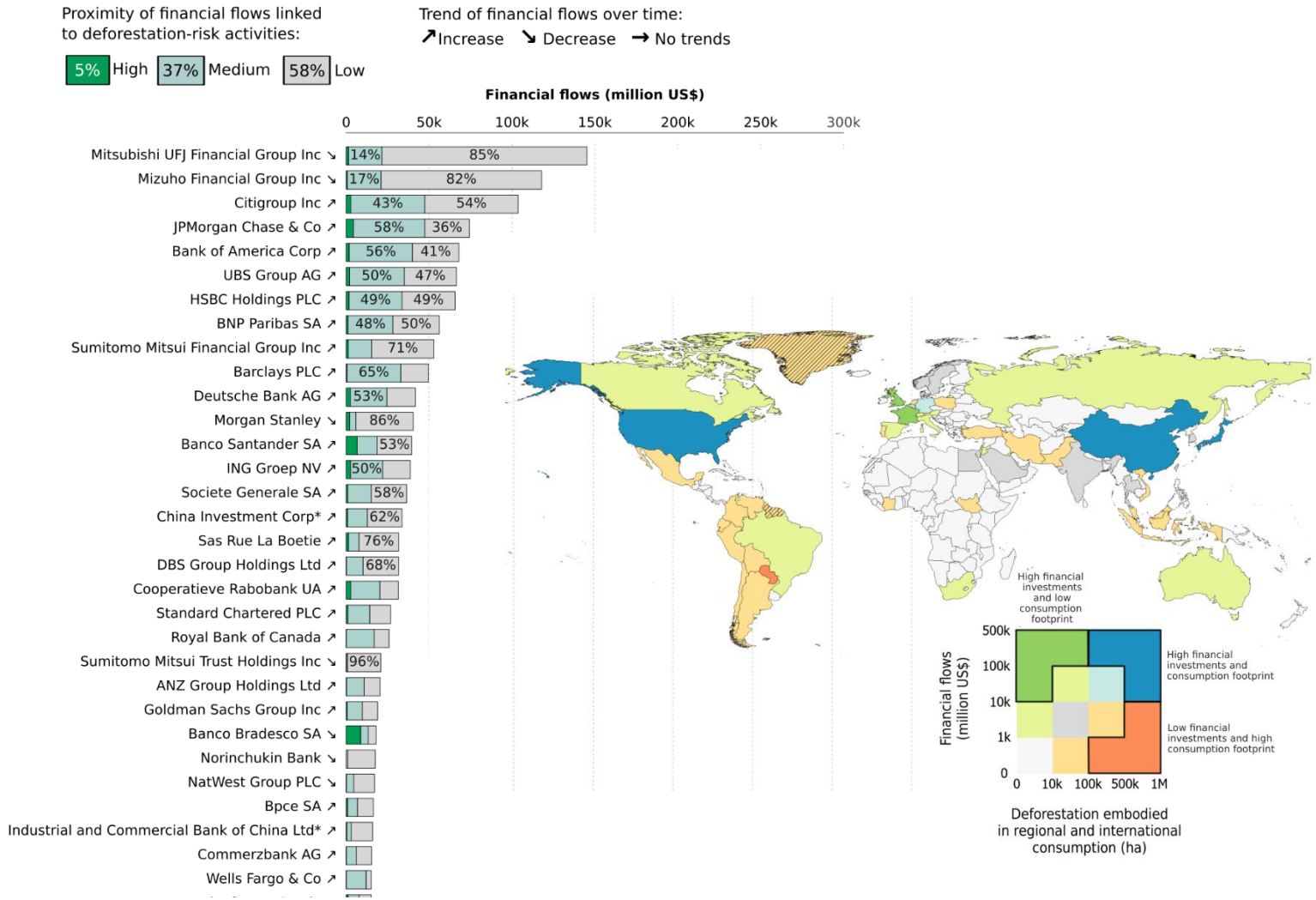
Export demand as a key driver of increased production



Sources: FAO, Our World In Data, ABIEC, USDA, OECD

Linking commodity exporters to financial flows

- **533 financial institutions** collectively channeled US$1.9 trillion to identified commodity exporters to Amazon deforestation
- **95% of flows are low proximity flows** (i.e., finance directed to entities within the same corporate group but headquartered in more distant geographies and operating in sectors with minimal direct relation to deforestation)



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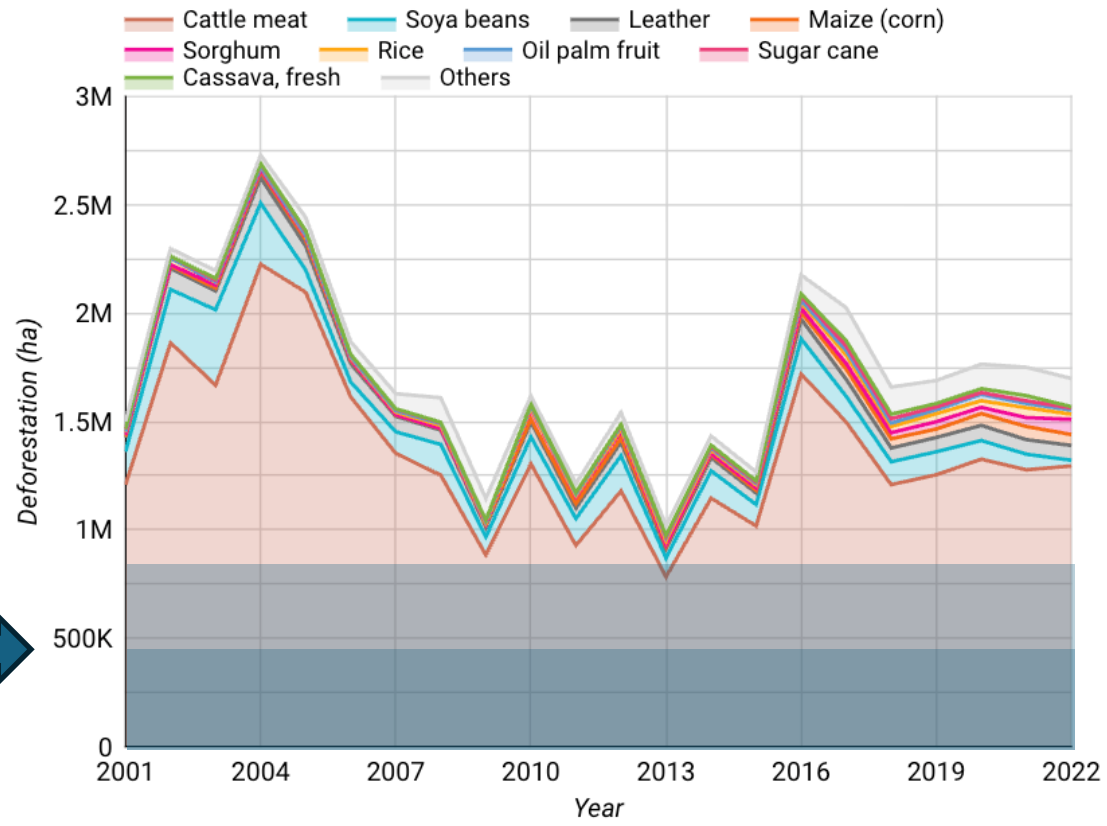
Food losses result in significant areas of land being ‘wasted’

Estimated volume of soy lost on farm **6-7%** and in supply chains (transport & handling) **1-5%**

Meaning (based on a yield of ~3 t/ha) **1.3 – 2.6 million tonnes** of soy produced in the Brazilian Amazon is lost every year

and **430,000 – 870,000 ha** of land is ‘wasted’ every year

Reducing soy losses can ease deforestation pressure



Sources: FAO, Our World In Data, ABIEC, USDA, OECD

A systemic approach to benefit people and nature

HEALTHY AND SUSTAINABLE FOOD AND AGRICULTURAL SYSTEMS THAT PROTECT NATURE AND PROVIDE ENOUGH NUTRITIOUS FOOD FOR EVERYONE

PLANET

Food and agricultural systems deliver food and nutrition security, while avoiding negative tipping points and triggering positive ones.

PLACES

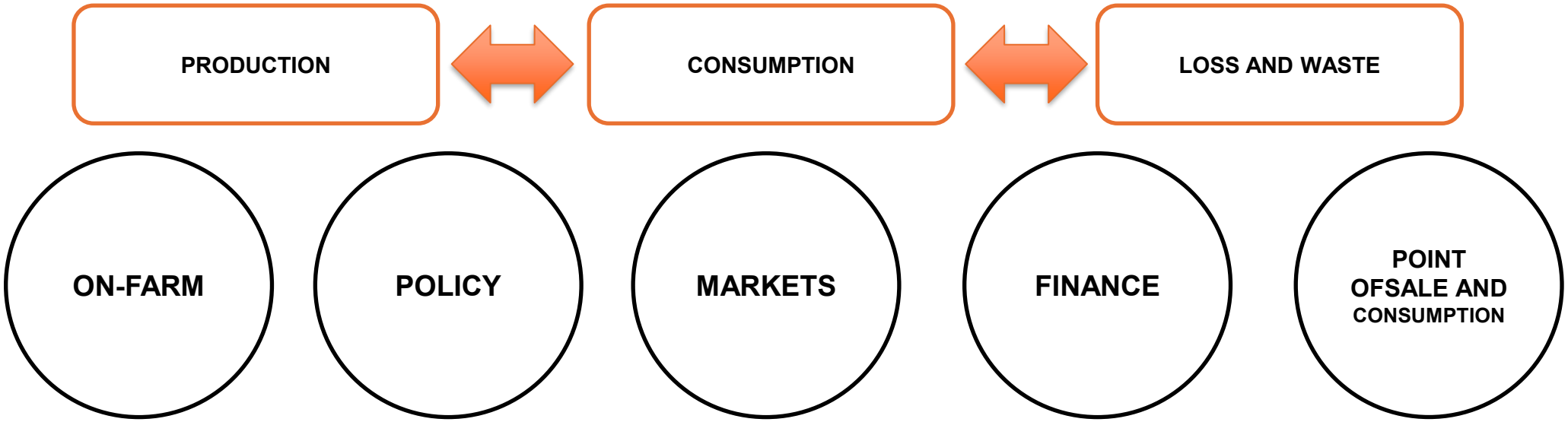
Nature-positive production protects nature from deforestation and conversion, sustainably manages land and water, and restores degraded ecosystem health.

PEOPLE

Voices of under-represented groups in global and local food and agricultural systems decision-making are included, while everyone's right to sustainable, healthy and nutritious food is met.

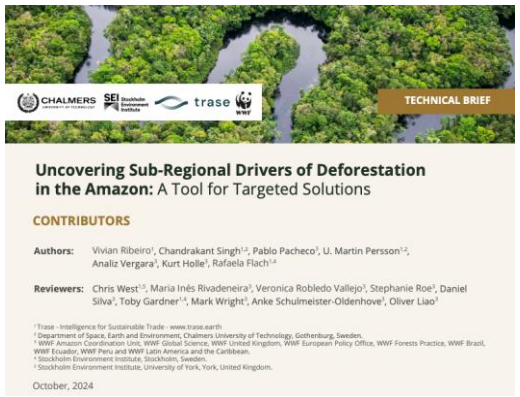
PROSPERITY

The economic and social benefits of nature-positive food and agricultural systems generate and fairly distribute wealth and well-being for nations and their people.

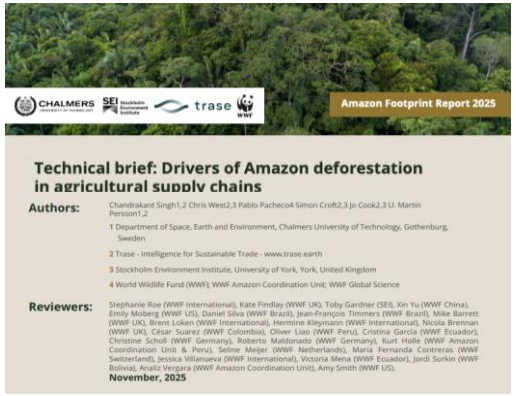


Policy implications

- Some **land-use trends and trade dynamics are common** to the whole region, yet these **co-exist with growing place-based heterogeneity.**
- It is **critical to integrate binding DCF (Deforestation and Conversion-Free) targets into global and national frameworks** with clear timelines.
- **Ensure full traceability and transparency across supply chains** through robust monitoring, reporting, and verification (MRV) systems.
- **Guarantee Indigenous Peoples' and Local Communities' (IPLCs) rights and participation**, securing land tenure, and recognizing local governance systems.
- **Strengthen effective monitoring systems and enforcement,** and deploy integrated satellite and field-based monitoring to address illegal activities.

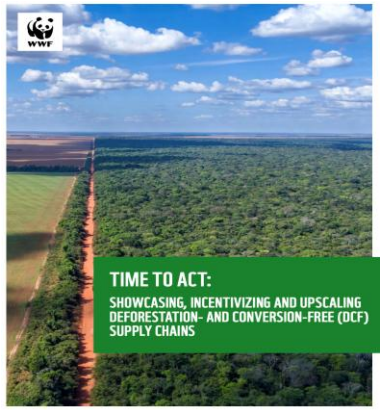


COP16 TECHNICAL BRIEF



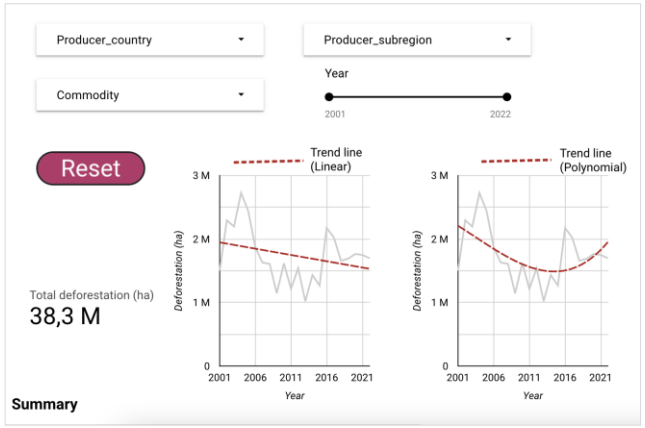
COP30 TECHNICAL BRIEF

DCF POLICY BRIEF



DCF SUPPLY CHAINS REPORT

ARTICLE PRE-PRINT



DASHBOARD