



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

Amazon Week 2026

João Campari, Ph. D.
Global Leader, Food & Agriculture
WWF International

Looking Beyond the Amazon...

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

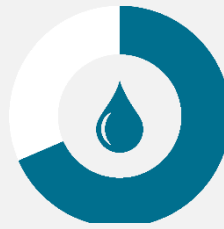


Food systems overexploit and inefficiently use natural resources...



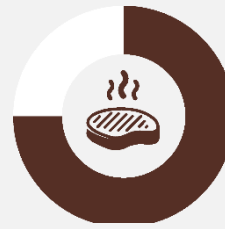
LAND USE
40%

of inhabitable land is used for food production



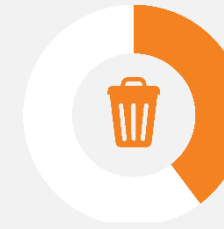
WATER USE
70%

of freshwater withdrawals are used for food production



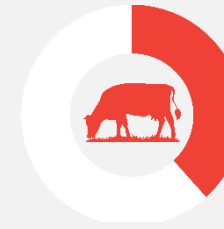
DIVERSITY
75%

of food comes from 12 crops and 5 animals



UNEATEN FOOD
40%

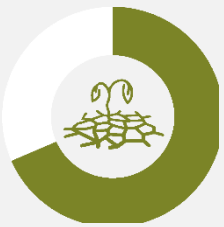
of food produced is lost or wasted



LIVESTOCK
38%

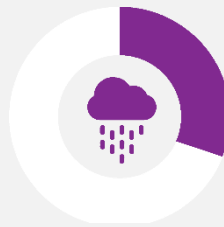
of croplands are used to grow feed for livestock

leading to an unhealthy planet...



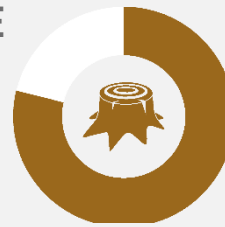
BIODIVERSITY LOSS
70%

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



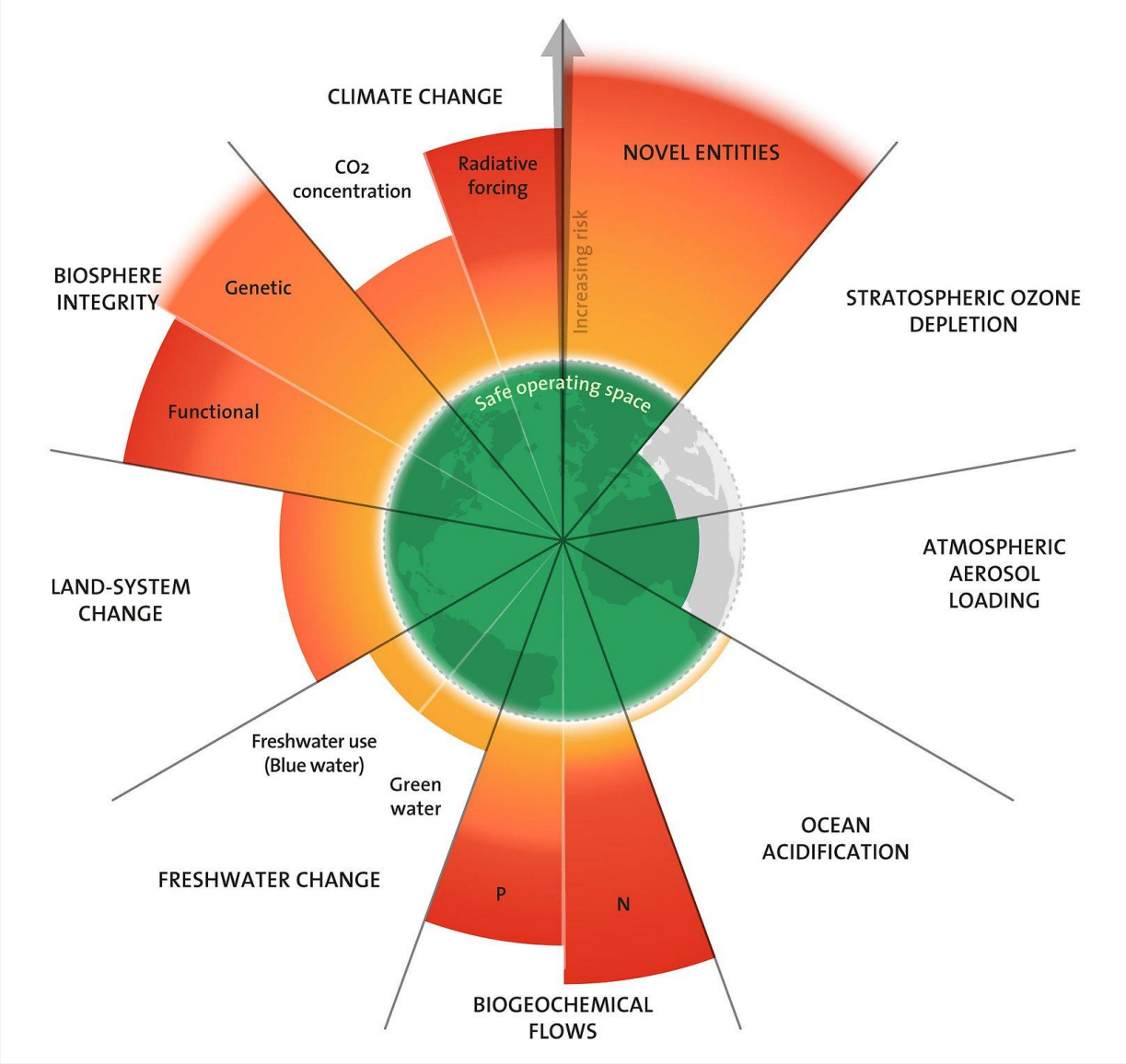
HUNGER
10%

Of people go hungry

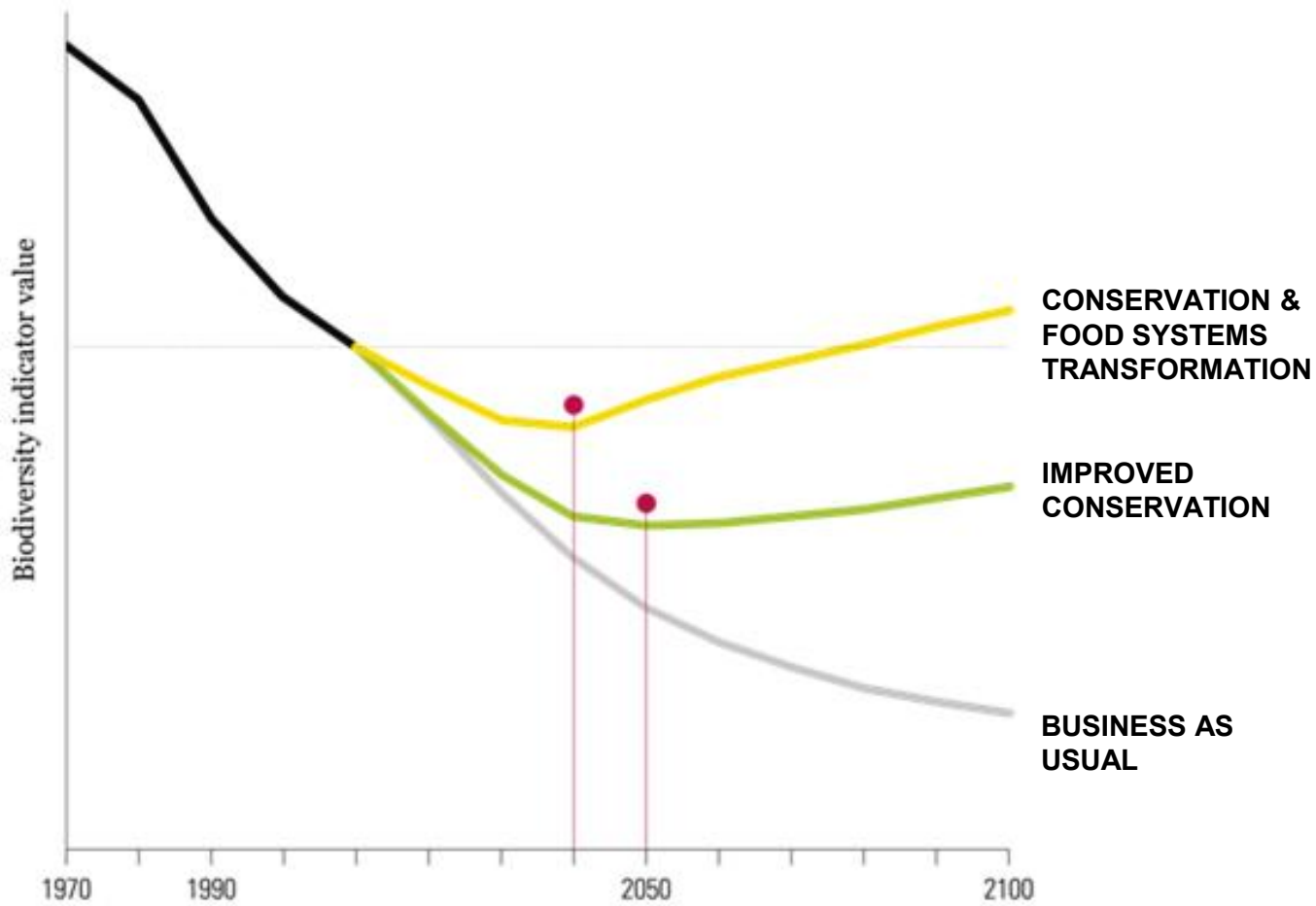
NET VALUE OF FOOD SYSTEMS
NEGATIVE USD11 TRILLION PER YEAR

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



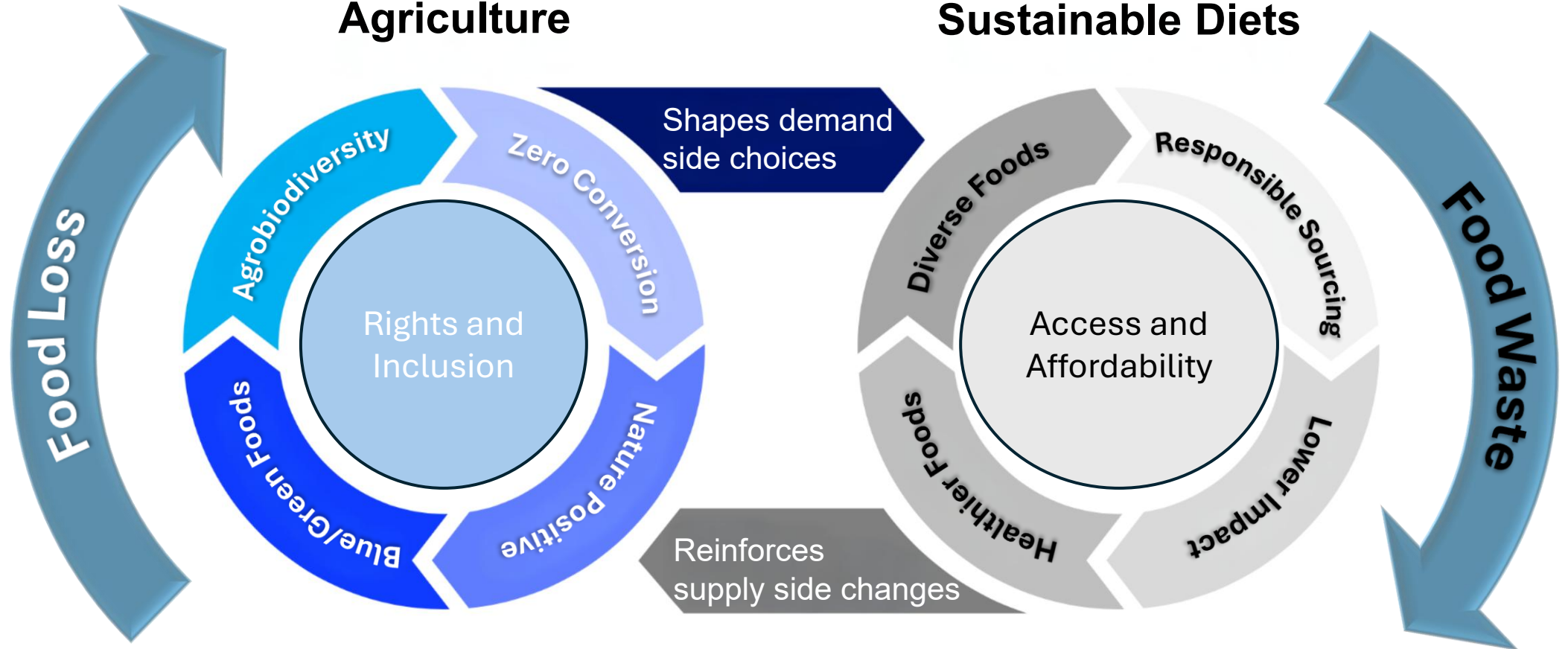
The 2025 update to the Planetary boundaries. Licensed under CC BY-NC-ND 3.0. Credit: "Azote for Stockholm Resilience Centre, based on analysis in Sakschewski and Caesar et al. 2025".



NATURE'S RECOVERY DEPENDS ON FOOD & AGRICULTURAL SYSTEMS TRANSFORMATION

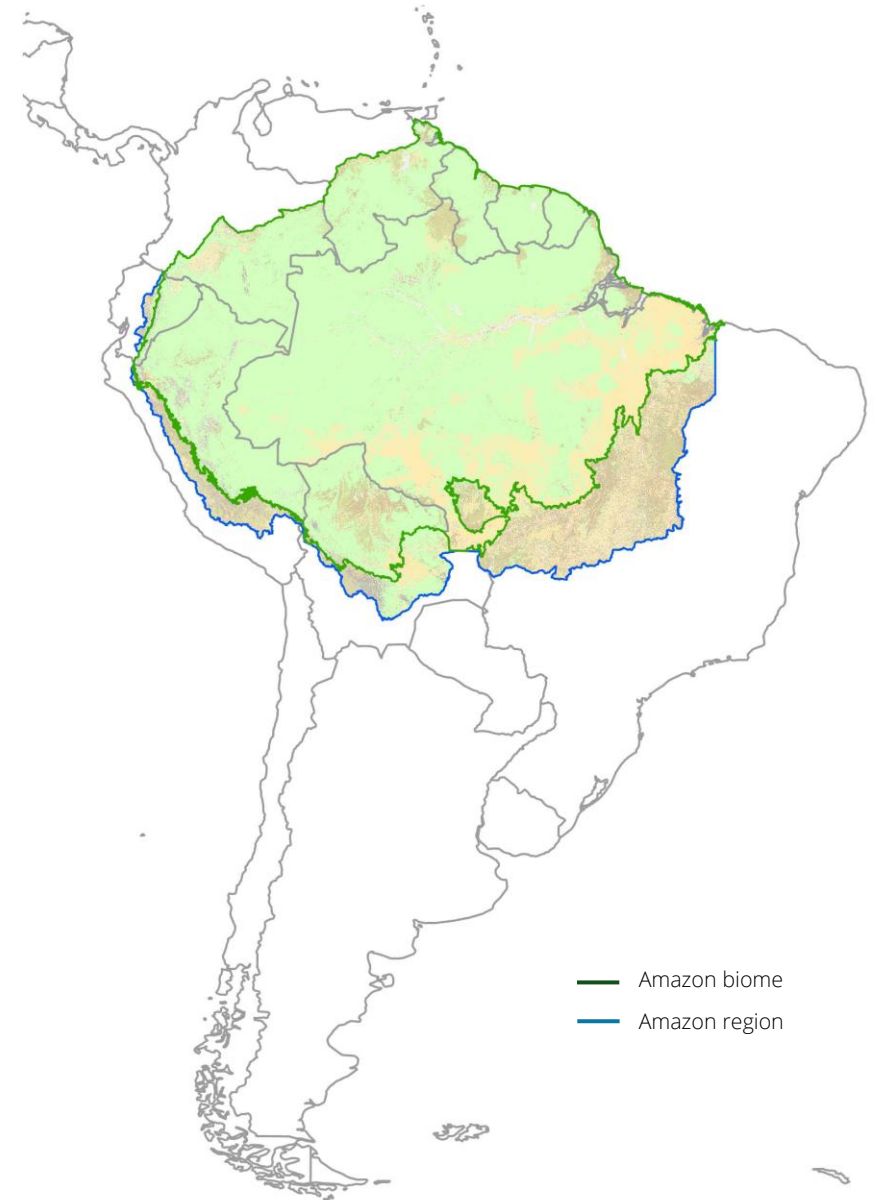
PRODUCTION
Nature Positive
Agriculture

CONSUMPTION
Healthy and
Sustainable Diets



How is this impacting the Amazon?

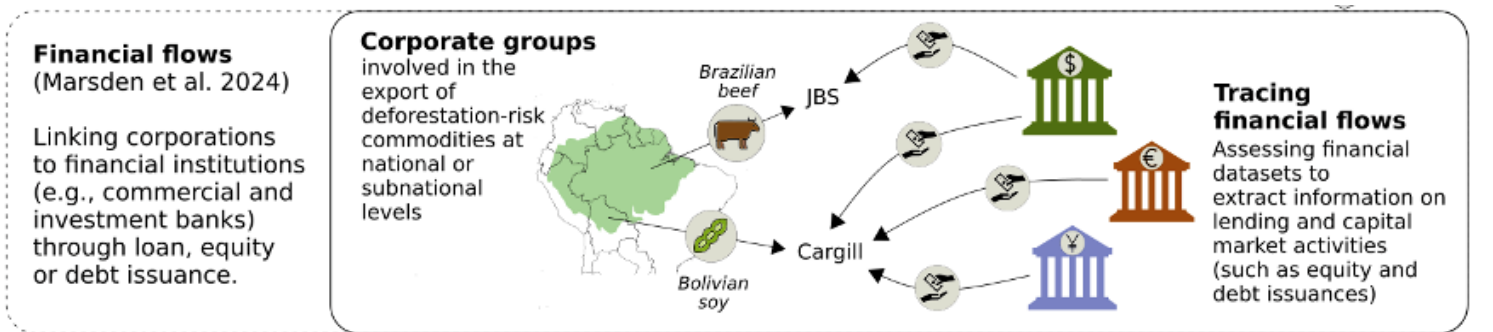
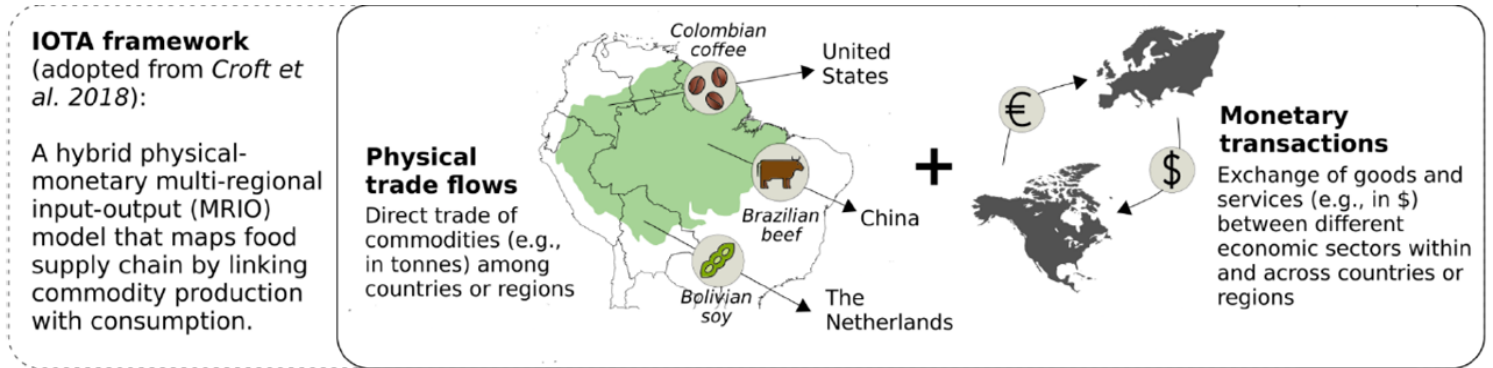
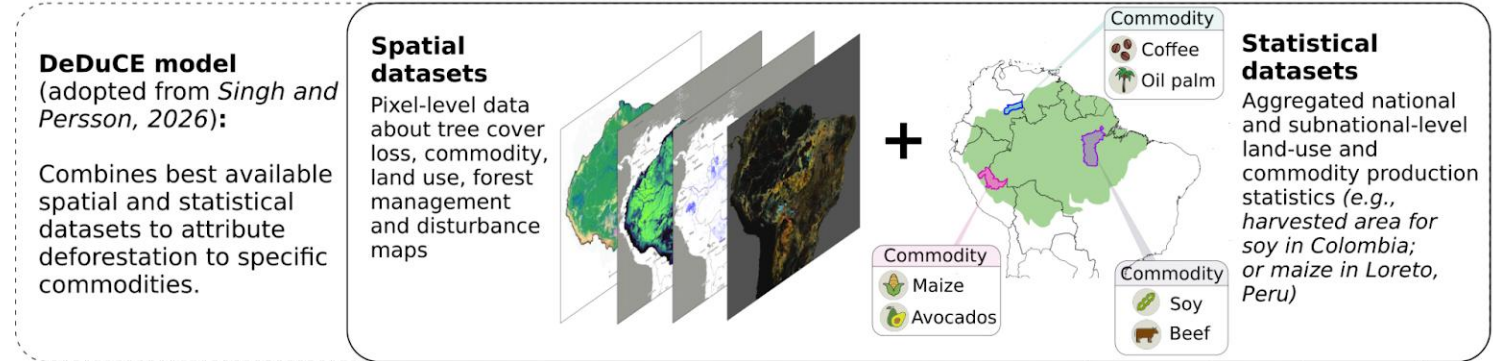
- As of today, about **17% of the total forest area in the Amazon has been lost**
- With oscillations over time, **deforestation and forest degradation continue**
- Forest loss is primarily **due to agricultural and cattle ranching expansion**
- This in the context of **more complex dynamics driving 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**

Attributing deforestation to agriculture and forestry commodities



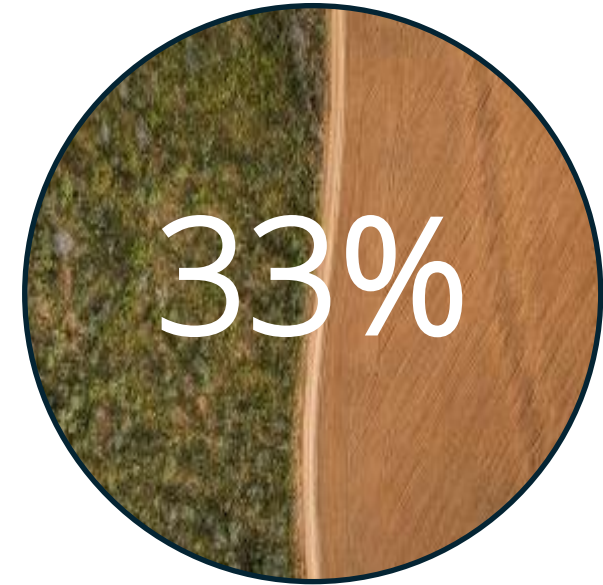
Amazon deforestation in context: 2020-2022



**Global
deforestation**



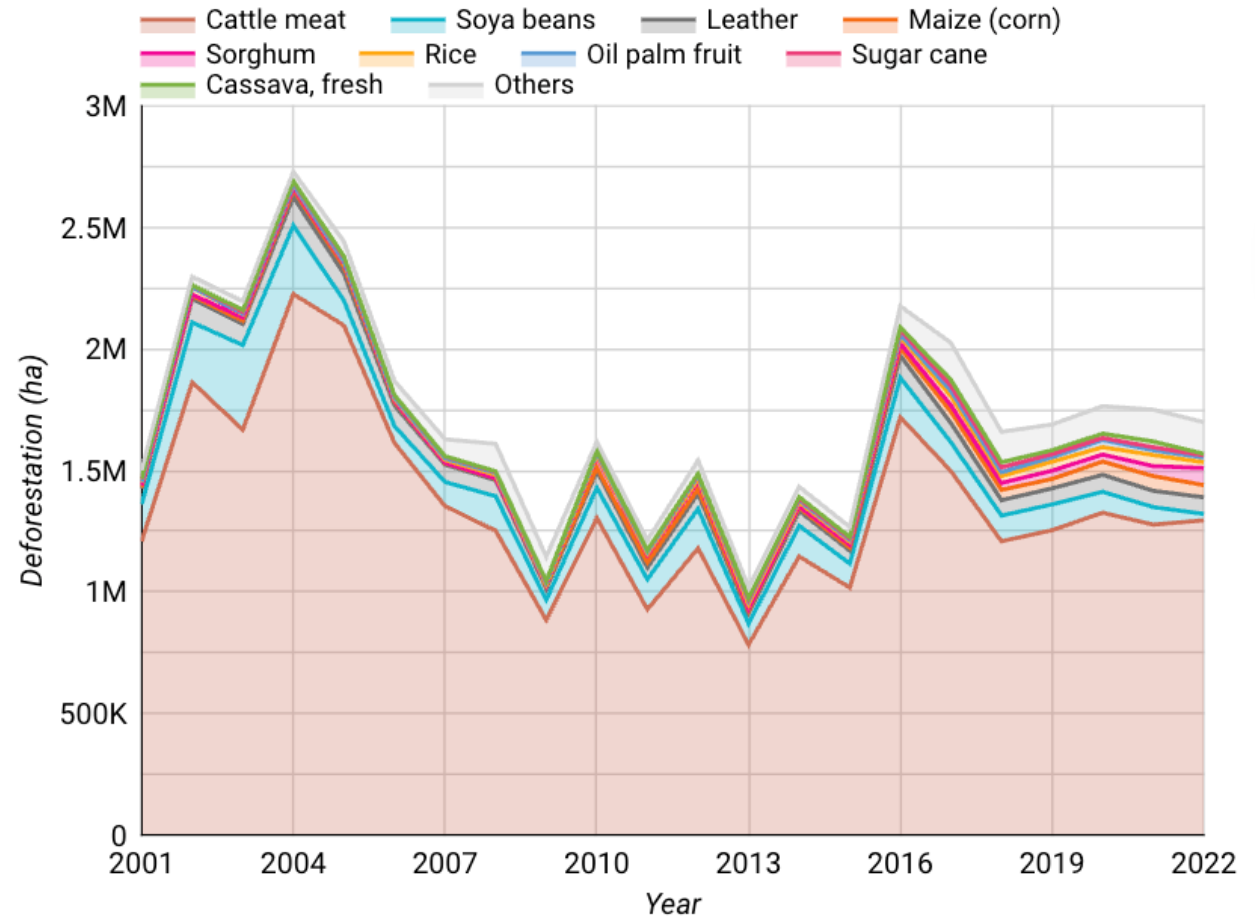
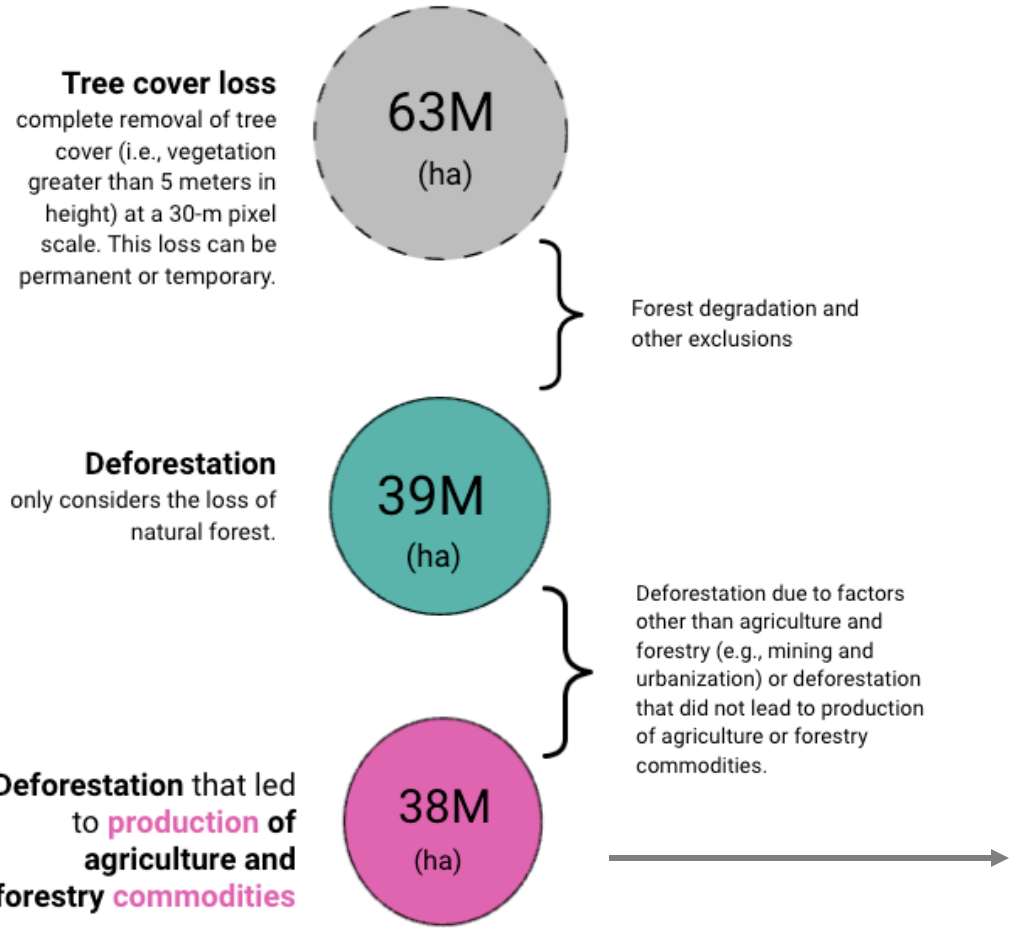
**Global cattle
deforestation
footprint**



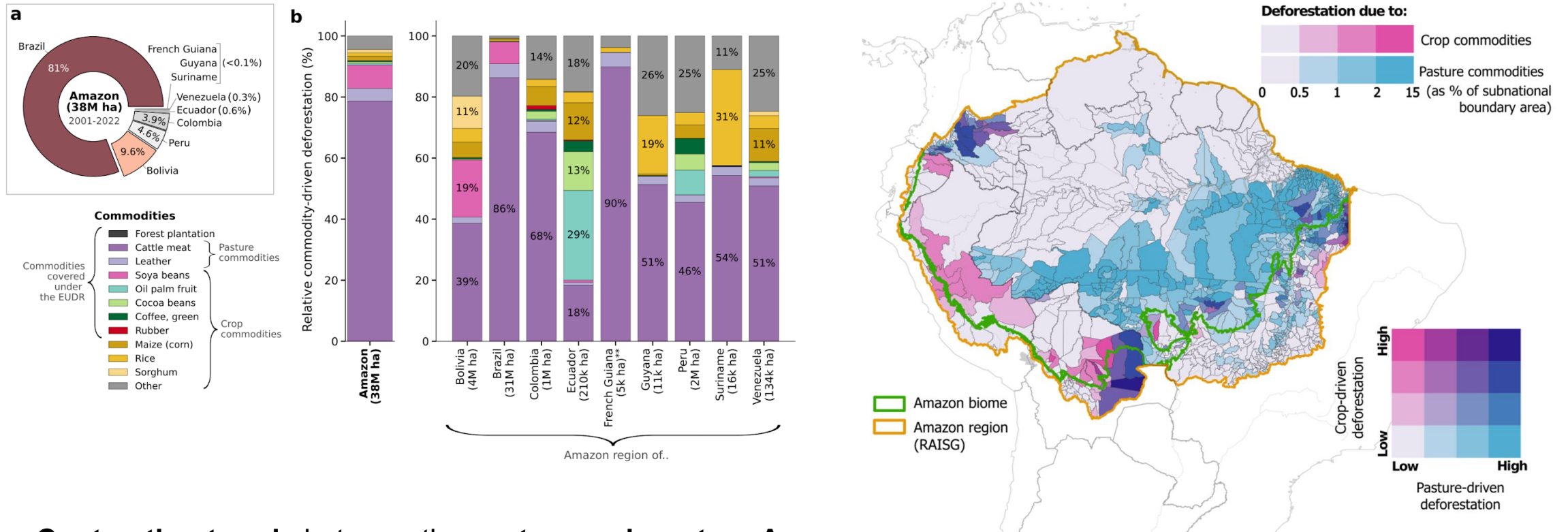
**Global soy
deforestation
footprint**

Amazon: Tree cover loss and deforestation by commodity

Definition



Commodity-driven deforestation in the Amazon



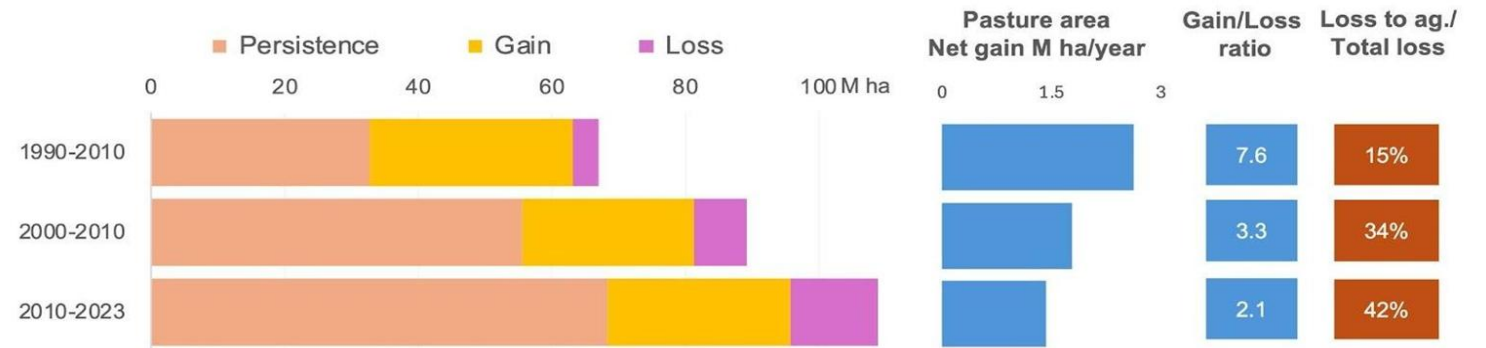
- **Contrasting trends** between the **eastern and western Amazon**
- **Pasture has a dominant role** in triggering deforestation in **Eastern and Central Amazon**
- Deforestation largely driven by **crop expansion** in **Western Amazon**

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

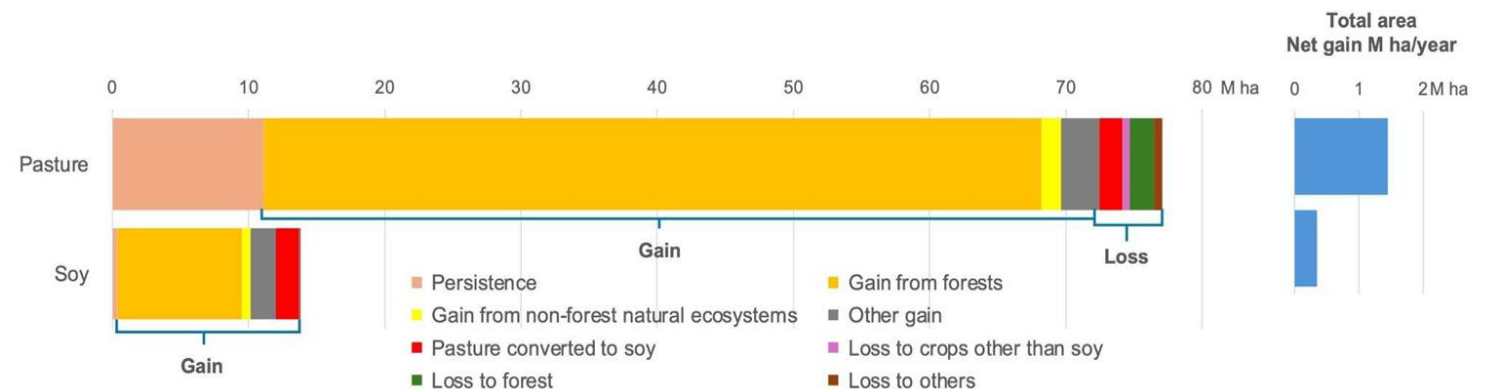
Indirect dynamics

- 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

Pasture persistence, gain and loss in the Amazon region from 1990 to 2023



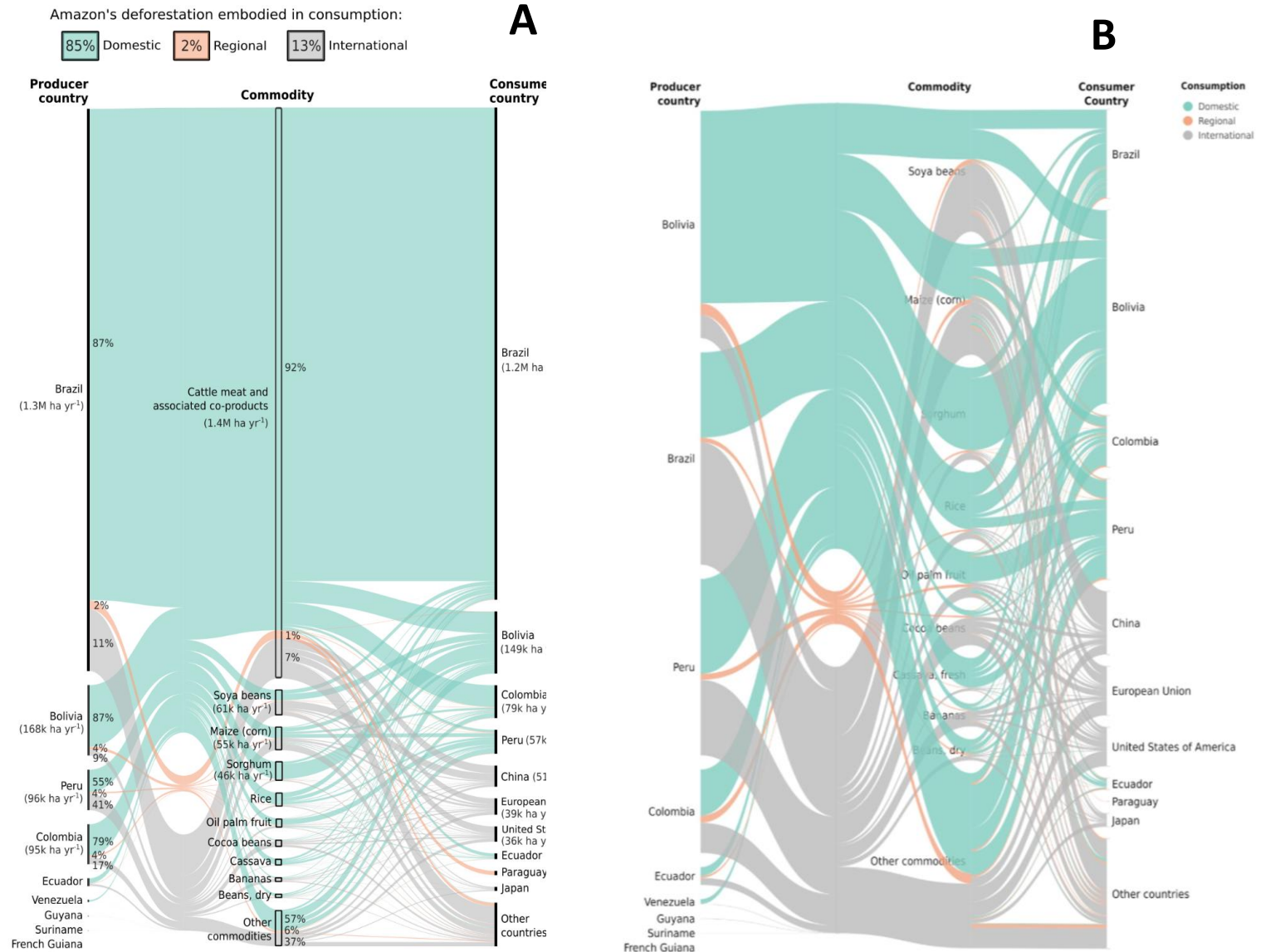
Pasture and soy expansion in the Brazilian Legal Amazon from 1985 to 2024



Deforestation embodied in consumption and trade

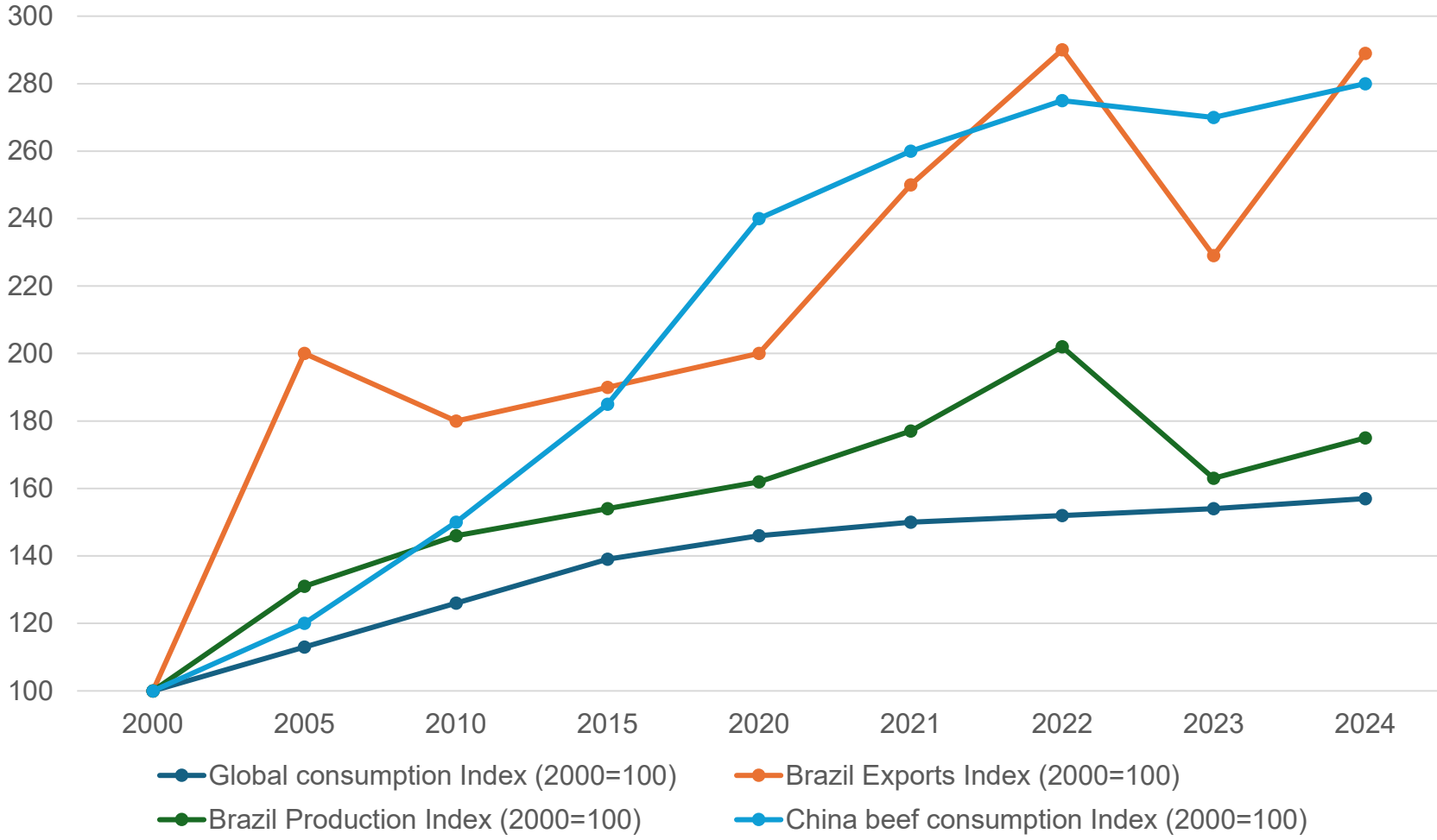
Domestic, regional, and international consumption-linked deforestation footprints for the period 2020-2022.

A. All commodities
B. Excludes cattle



Export demand as a key driver of increased production

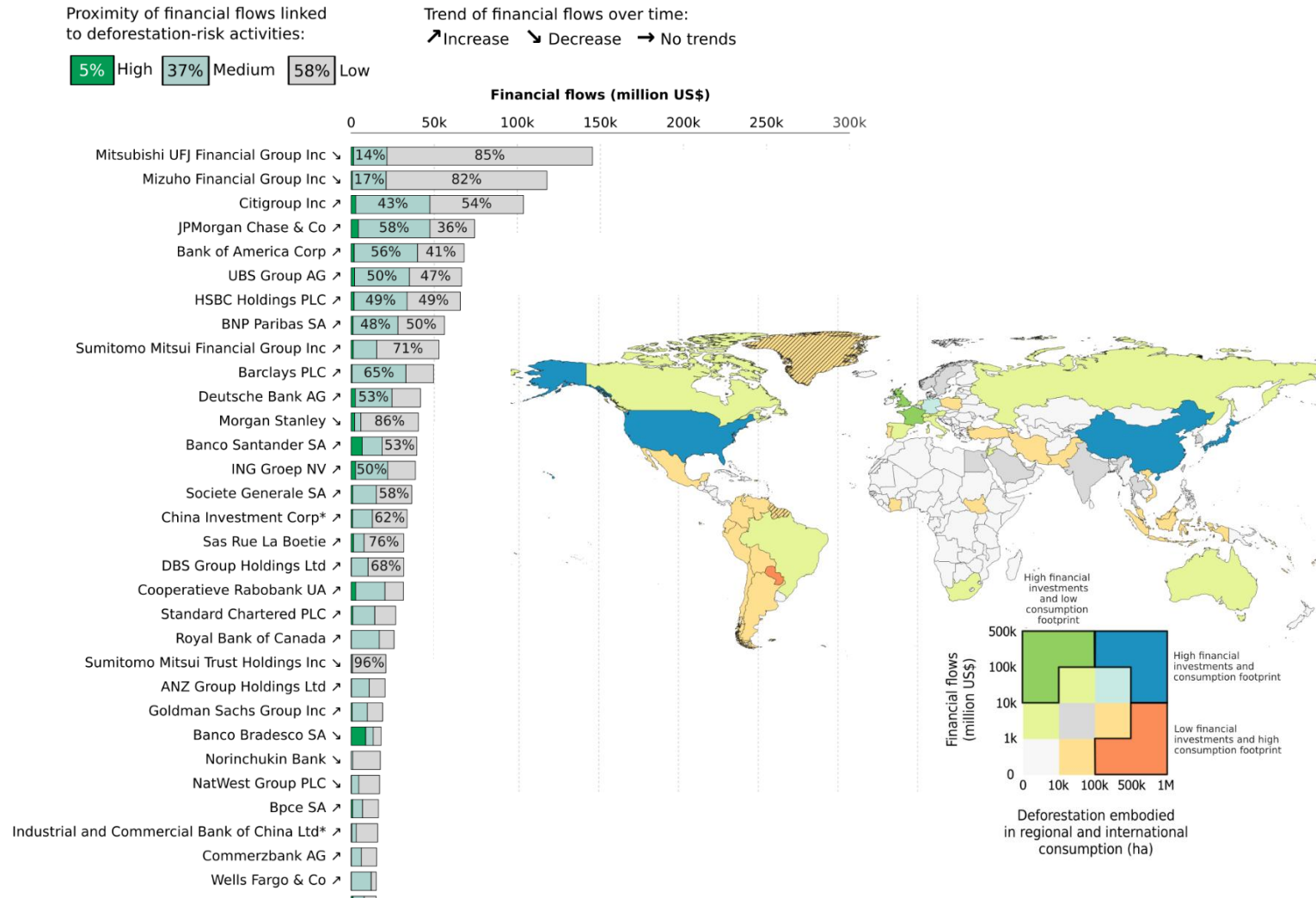
Global meat consumption vs Brazil beef exports & Production



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)



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

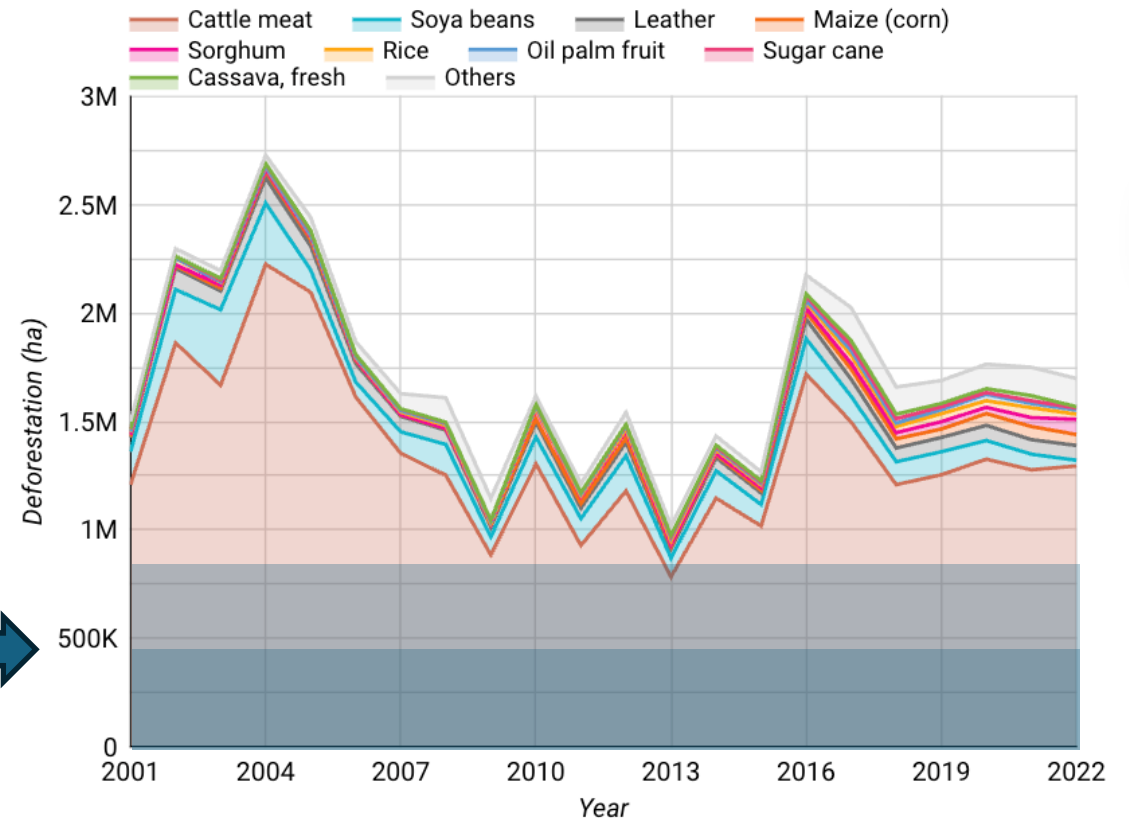
and

430,000 – 870,000 ha

of land is 'wasted' every year



Reducing soy losses can ease deforestation pressure



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.

PRODUCTION

CONSUMPTION

LOSS AND WASTE

ON-FARM

POLICY

MARKETS

FINANCE

POINT OF SALE AND CONSUMPTION

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.



Uncovering Sub-Regional Drivers of Deforestation in the Amazon: A Tool for Targeted Solutions

CONTRIBUTORS

Authors: Vivian Ribeiro¹, Chandrakant Singh^{1,2}, Pablo Pacheco³, U. Martin Persson^{1,2}, Analiz Vergara⁴, Kurt Holle⁵, Rafaela Flach^{1,4}

Reviewers: Chris West^{1,6}, Maria Inés Rivadeneira⁷, Veronica Robledo Vallejo⁸, Stephanie Roe⁹, Daniel Silva¹⁰, Toby Gardner¹⁰, Mark Wright¹⁰, Anke Schummeier-Oldenhove¹⁰, Oliver Liao¹⁰

¹ Trase - Intelligence for Sustainable Trade - www.trase.earth
² Department of Space, Earth and Environment, Chalmers University of Technology, Gothenburg, Sweden
³ WWF Amazon Coordination Unit, WWF Global Science, WWF United Kingdom, WWF European Policy Office, WWF Forests Practice, WWF Brazil, WWF Ecuador, WWF Peru and WWF Latin America and the Caribbean
⁴ Stockholm Environment Institute, Stockholm, Sweden
⁵ Stockholm Environment Institute, University of York, United Kingdom
 October, 2024



Technical brief: Drivers of Amazon deforestation in agricultural supply chains

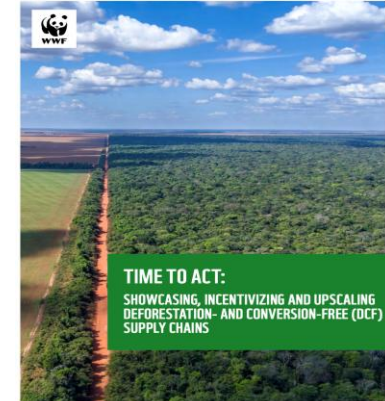
Authors: Chandrakant Singh^{1,2}, Chris West^{2,3}, Pablo Pacheco⁴, Simon Croft^{2,3}, Jo Cook^{2,3}, U. Martin Persson^{1,2}

1 Department of Space, Earth and Environment, Chalmers University of Technology, Gothenburg, Sweden
2 Trase - Intelligence for Sustainable Trade - www.trase.earth
3 Stockholm Environment Institute, University of York, United Kingdom
4 World Wildlife Fund (WWF), WWF Amazon Coordination Unit, WWF Global Science

Reviewers: Stephanie Roe (WWF International), Kate Frolley (WWF UK), Toby Gardner (SEI), Xin Yu (WWF China), Emily Moberg (WWF US), Daniel Silva (WWF Brazil), Jean-François Timmers (WWF Brazil), Mike Barrett (WWF UK), Brent Loken (WWF International), Henne Kleyman (WWF International), Nicola Brennan (WWF UK), César Suarez (WWF Colombia), Oscar Lazo (WWF Peru), Cristina Garcia (WWF Ecuador), Christine Scholl (WWF Germany), Roberto Maldonado (WWF Germany), Kurt Holle (WWF Amazon Coordination Unit A. Peru), Selma Mejer (WWF Netherlands), Maria Fernanda Cortez (WWF Switzerland), Jessica Villaverde (WWF International), Victoria Mena (WWF Ecuador), Jordi Sanja (WWF Bolivia), Analiz Vergara (WWF Amazon Coordination Unit), Amy Smith (WWF US)
 November, 2025



PHASING OUT DEFORESTATION AND CONVERSION FROM SUPPLY CHAINS IN THE AMAZON



TIME TO ACT: SHOWCASING, INCENTIVIZING AND UPSCALING DEFORESTATION- AND CONVERSION-FREE (DCF) SUPPLY CHAINS



COP16
TECHNICAL
BRIEF



COP30
TECHNICAL
BRIEF



DCF
POLICY
BRIEF



DCF
SUPPLY
CHAINS
REPORT

This paper is a non-peer reviewed preprint submitted to EarthArXiv

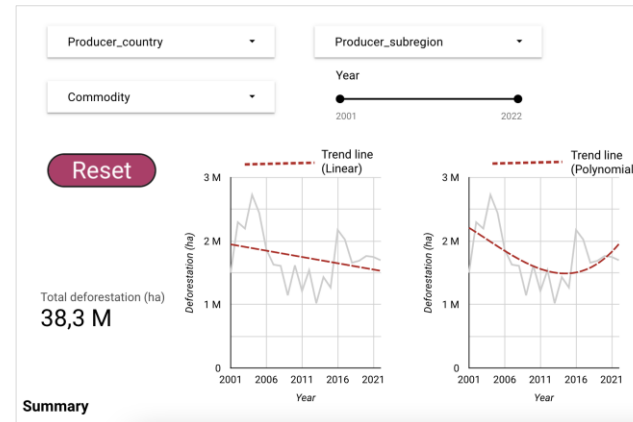
Amazon deforestation footprint across global food and financial systems

Chandrakant Singh^{1†}, Simon Croft², Lydia Marsden³, U. Martin Persson¹, Chris West², Victor Galaz⁴, Pablo Pacheco⁵, Toby Gardner⁶, Rafaela Flach⁶, Jo Cook², Vivian Ribeiro⁶, André Vasconcelos⁷, Mark Tittle⁸, Julia Arieira⁹, Diego Oliveira Brandão⁹, Carlos A. Nobre⁹, Britaldo Soares-Filho¹⁰

¹ Department of Environmental and Energy Sciences, Chalmers University of Technology, Gothenburg, Sweden
² Stockholm Environment Institute (SEI), University of York, York, United Kingdom
³ Institute for Innovation and Public Purpose, University College London (UCL), London, United Kingdom
⁴ Stockholm Resilience Centre, Stockholm University, Sweden
⁵ World Wildlife Fund (WWF), WWF Amazon Coordination Unit; WWF Global Science
⁶ Stockholm Environment Institute (SEI), Stockholm, Sweden
⁷ Global Canopy, Oxford, United Kingdom
⁸ Science Panel for the Amazon (SPA) Technical-Scientific Secretariat, São José dos Campos, Brazil
⁹ Institute of Advanced Studies, University of São Paulo, São Paulo, Brazil
¹⁰ Centre for Remote Sensing (CSR), Federal University of Minas Gerais (UFMG), Belo Horizonte, Brazil

† Corresponding author (Email: chandrakant.singh@chalmers.se)

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