

Understanding species threats in
a globalised world:
Supply Chain assessments in
conservation

Understanding species threats in a globalised world: Supply Chain assessments in conservation

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Insights from research

Supporting decision making

Connecting agricultural supply chains to environmental indicators

Jonathan Green

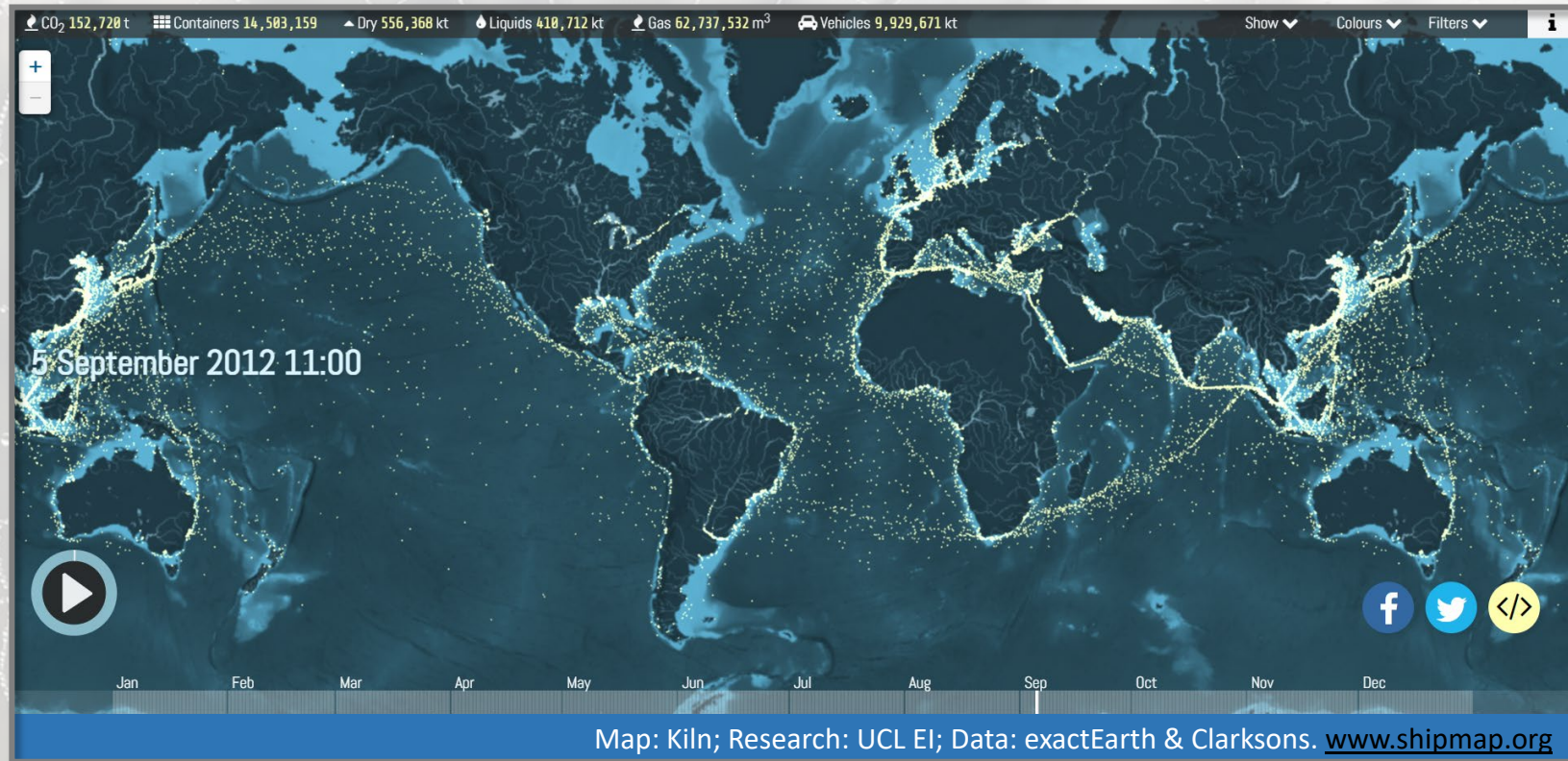
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UNIVERSITY
of York

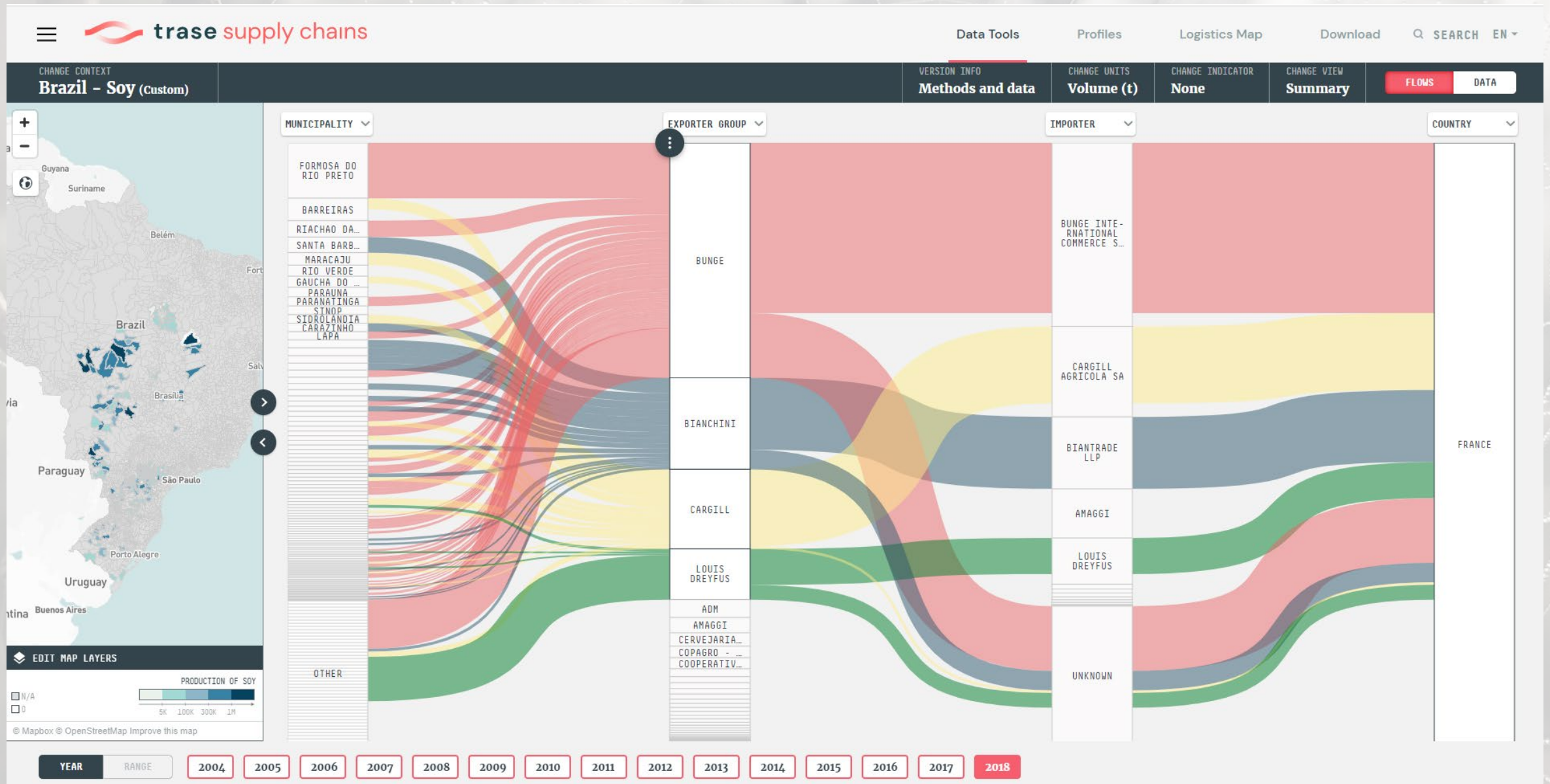
Complex supply chains

- Drivers are global
- Supply chains are opaque
- ...solutions can be difficult to devise
- What, where, who?



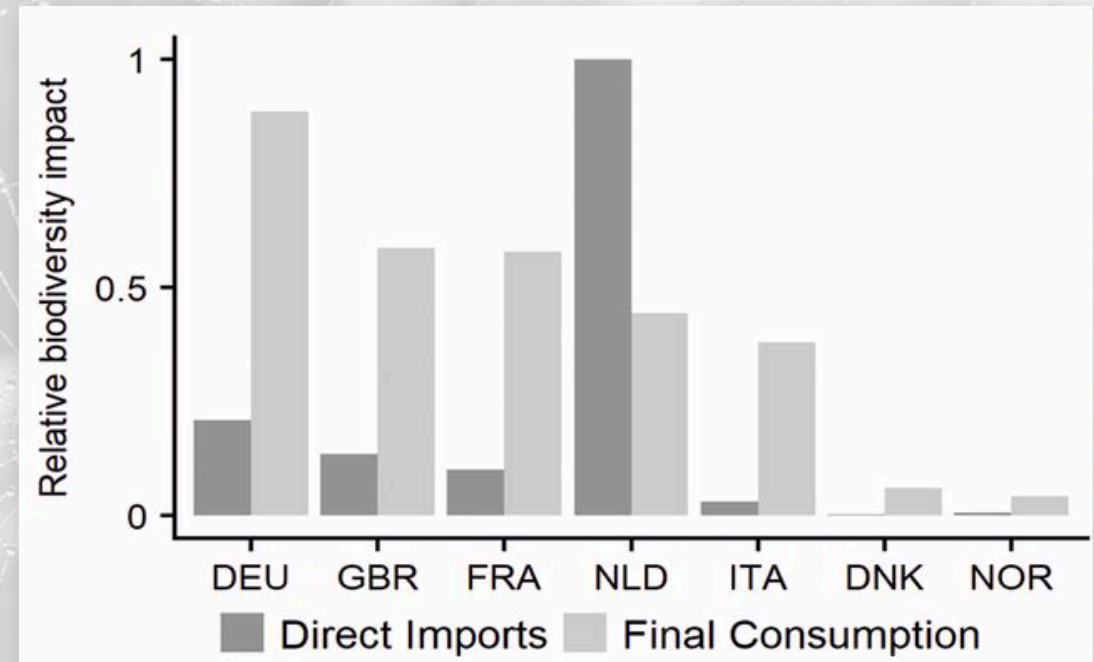
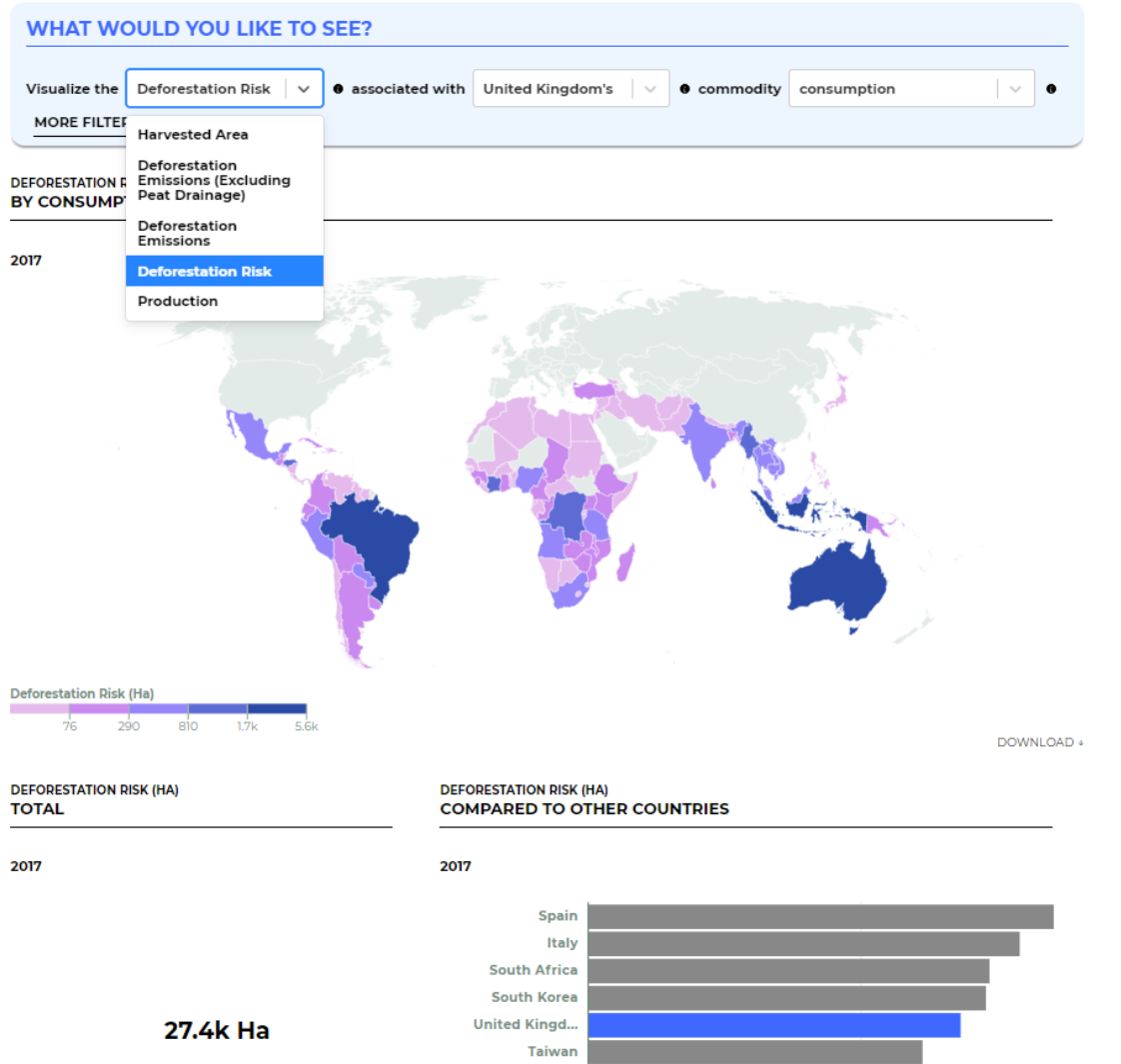
Goals: Insight, monitoring, reporting, and transparency for complex global supply chains

Summary outline of Trase and IOITA



Summary outline of Trase and IOITA

To navigate the dashboard, please use the drop-down menus below to select the focal perspective you are interested in. The charts will adapt automatically to present data associated with your choices.



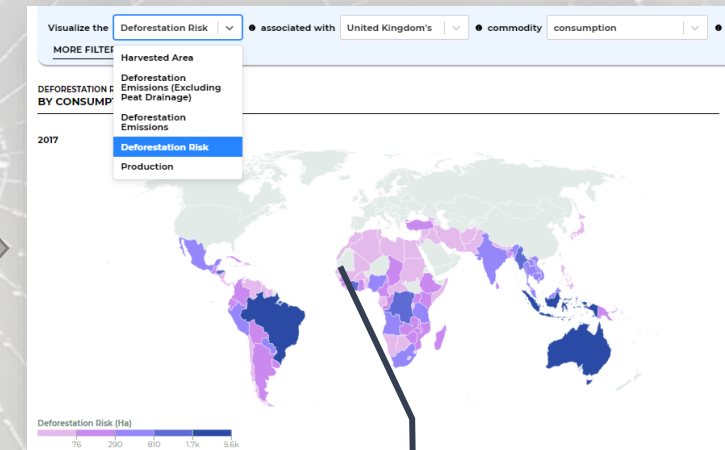
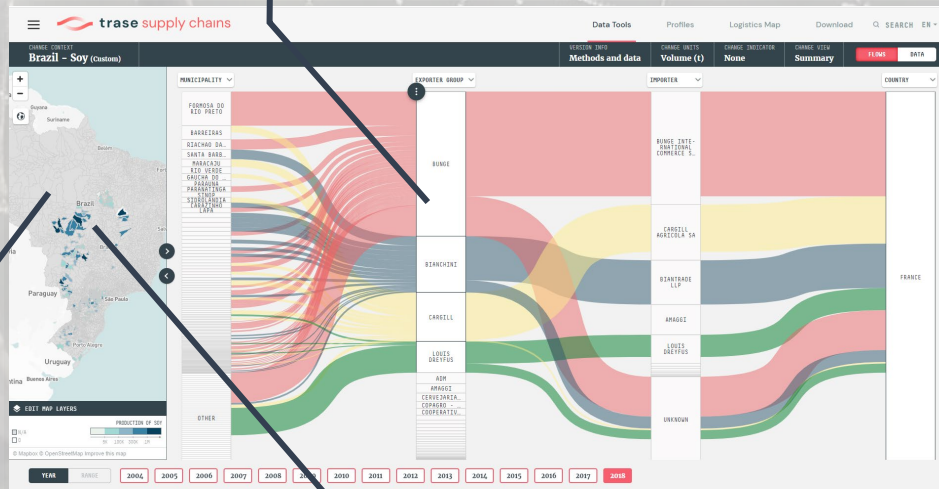
Impact of Cerrado-sourced soy on endemic biodiversity. Comparison of the relative impact that is directly imported and impact that is attributed to final consumption within those countries (i.e., the latter accounts for both reexports and embedded consumption).

Green et al. 2019, Linking global drivers of agricultural trade to on-the-ground impacts on biodiversity, PNAS <https://doi.org/10.1073/pnas.1905618116>

Complex supply chains

What are the relative roles of different traders?

How do government and private commitments overlap?



What are the impacts on biodiversity?

And where are impacts most acute?

Which countries are driving impacts?

Multiple perspectives, *provided by different approaches and measures*, offer insight into the complexity of the issue.

Decision maker contexts

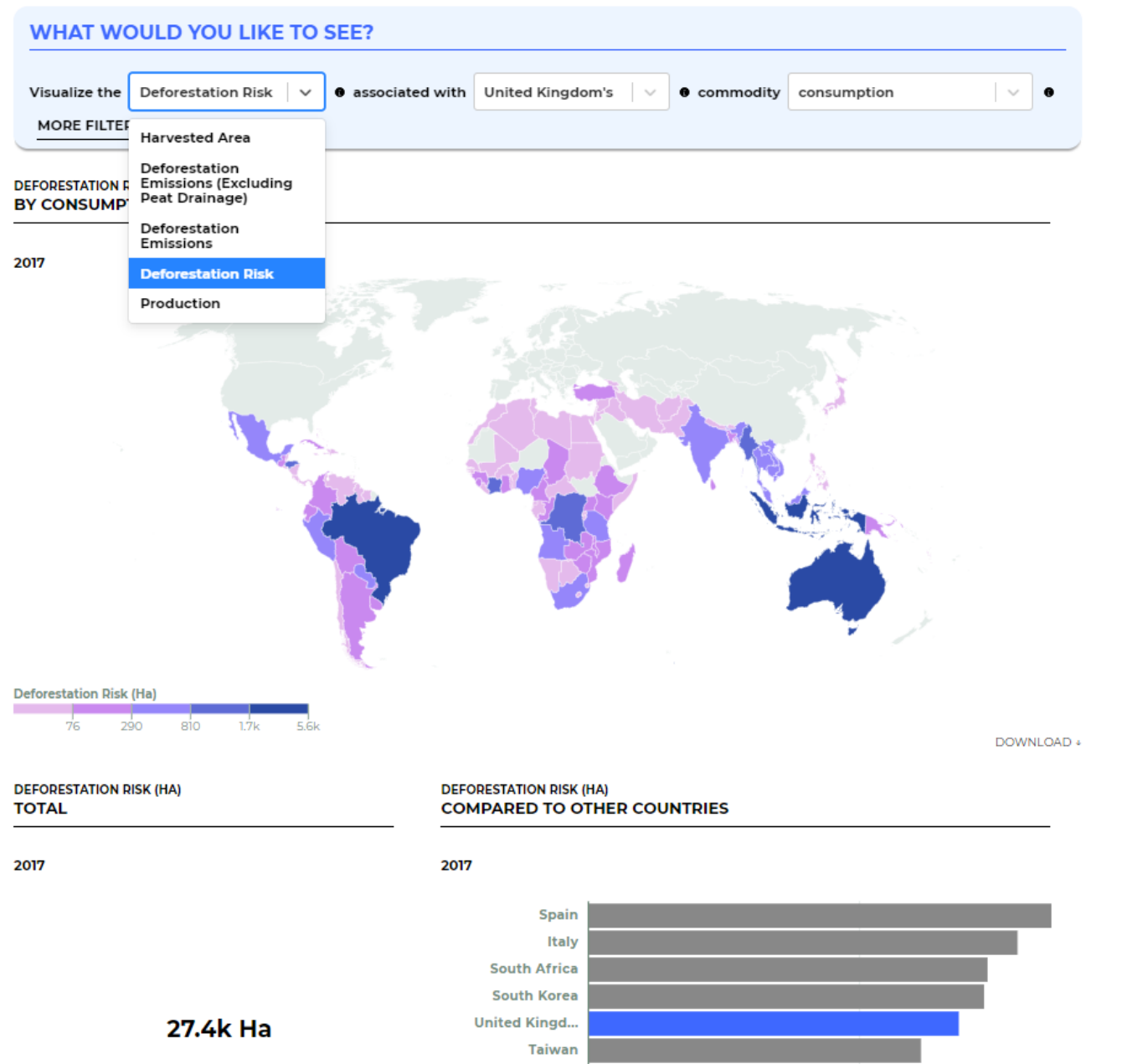
Insights for multiple users and, especially, highlighting the need or value of alignment between stakeholders in a shared landscape or supply chain

- Government and private sector
- Government to government (producer-consumer as well as coalitions of consumers or producers)
- Stakeholders within a landscape (need subnational).

Use cases

- Government
 - e.g. national statistics and monitoring
- Private sector
 - Industry consortiums
- Others...

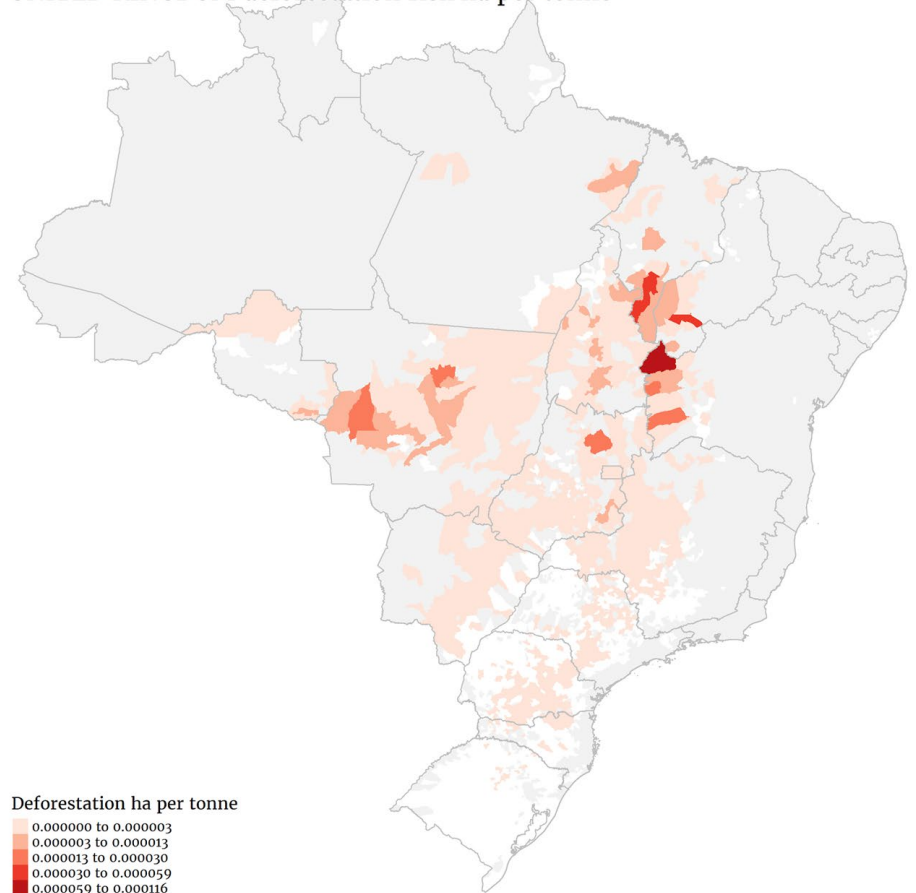
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Use cases

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UNITED KINGDOM deforestation risk ha per tonne



Direct and re-exported soy

CHINA (MAINLAND)
2.4%

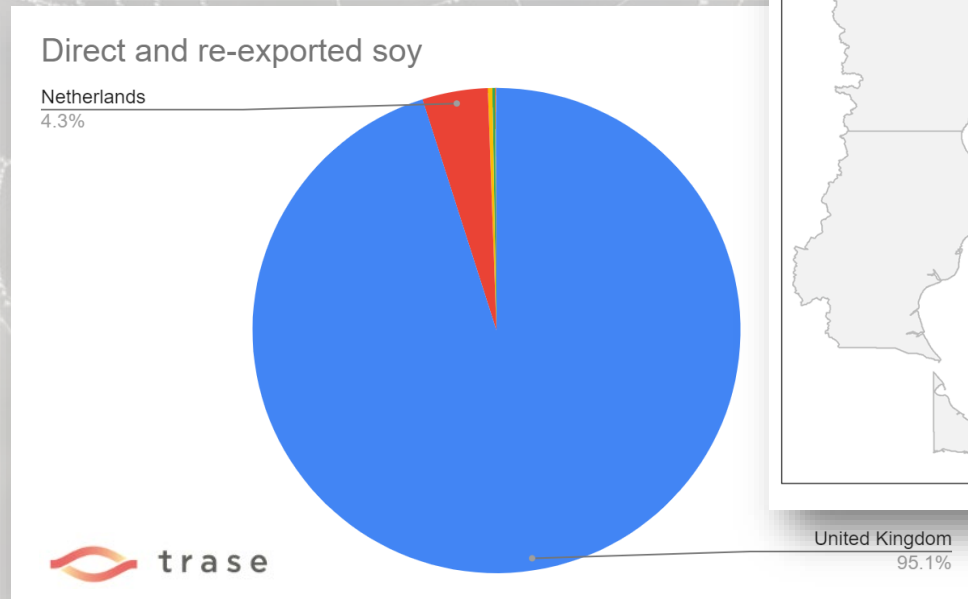
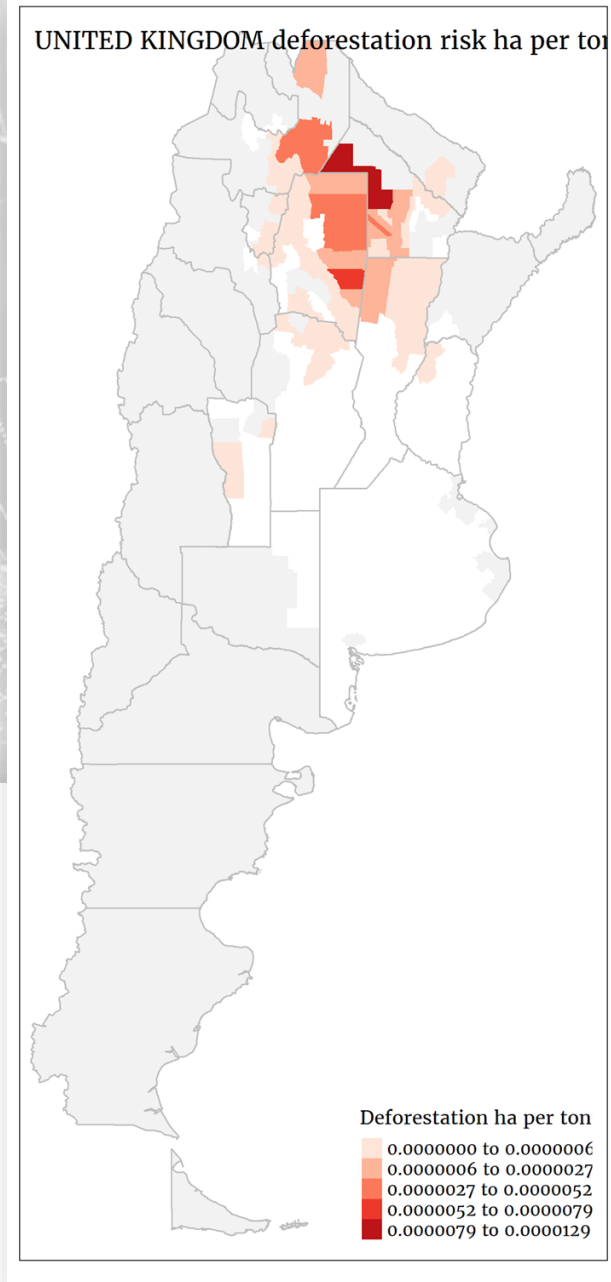
Netherlands
32.8%

United Kingdom
64.0%



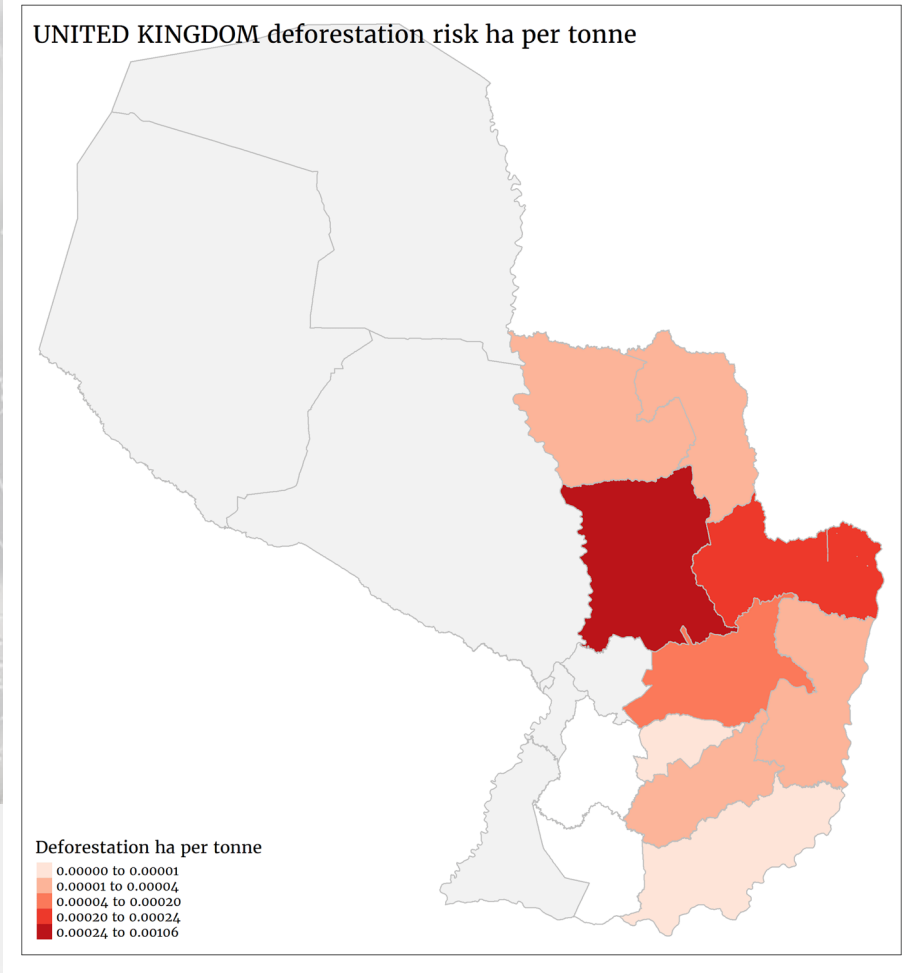
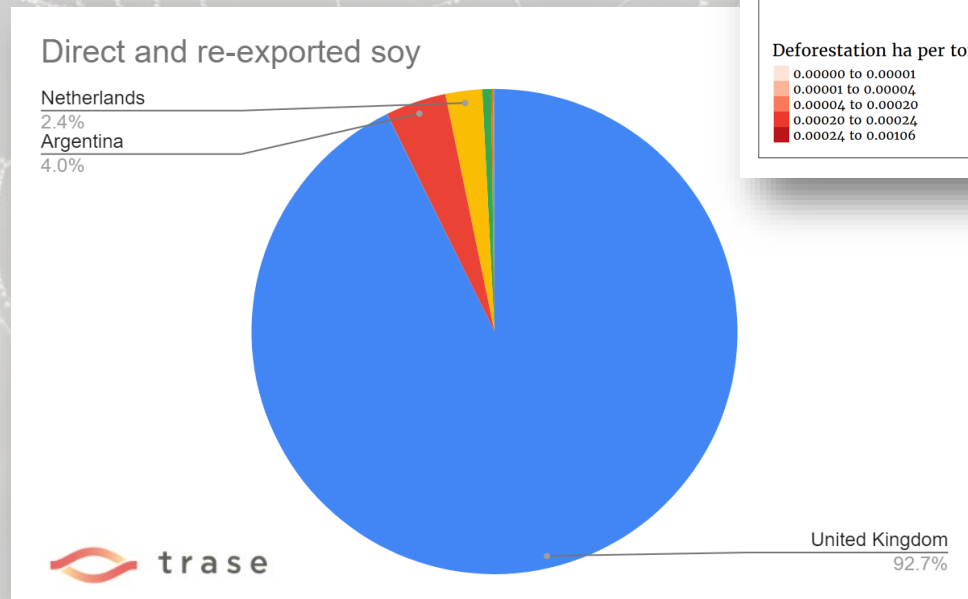
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Use cases

- Government
 - e.g. national statistics and monitoring
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Country-level risk

United Kingdom summary

Deforestation risk summary:

Brazil
7.39 m²

Argentina
0.61 m²

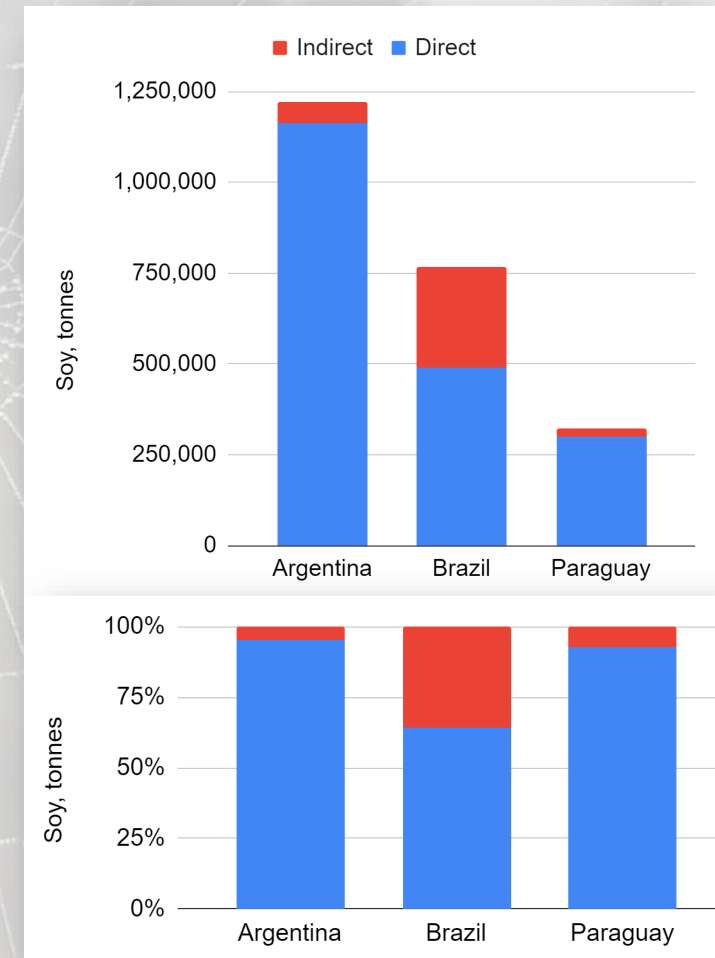
Paraguay
16.55 m²

Brazil
average
6.6 m²

Argentina
average
0.58 m²

Paraguay
average
11.7 m²

Soy tonnes imported - direct and indirect



Ongoing research

- How to capture 'response' to mitigate threats?
- In terms of quality and availability of data, what are the weakest links in biodiversity footprinting?

Insights from research

Incorporating biodiversity considerations into environment and development decisions

Neil Burgess

Overarching policy framing:

First Draft of Global Biodiversity Framework, July 2021

Target 14. Fully integrate biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies, accounts, and assessments of environmental impacts at all levels of government and across all sectors of the economy, ensuring that all activities and financial flows are aligned with biodiversity values.

Target 15. All businesses (public and private, large, medium and small) assess and report on their dependencies and impacts on biodiversity, from local to global, and progressively reduce negative impacts, by at least half and increase positive impacts, reducing biodiversity-related risks to businesses and moving towards the full sustainability of extraction and production practices, sourcing and supply chains, and use and disposal.

Business focused tools – what's available to understand supply chain impacts



<https://tradehub.earth/wp-content/uploads/2020/10/Global-Soybean-Trade-The-Geopolitics-of-a-Bean-1.pdf>

Available Tools to support business action

TradeHub Navigator

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Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat id est laborum.

Lead organisation ▼ Typology ▼ Theme ▼  LEGEND

DOWNLOAD CSV

Name	Resource	Lead organisation	Typology	Theme
AGRICTRADE	https://agrictrade.net/trade-data/	Agricultural Market and Trade Department of the Permanent Interstate Committee for Drought Control in the Sahel (CILSS)		Lorem ipsum 

Integrated Biodiversity Assessment Tool



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<https://www.ibat-alliance.org/>

About Us

Mount Fuji
Protected Landscape
World Database on Protected Areas



IBAT Briefing Note

Species Threat Abatement and Restoration (STAR)

**A Global Metric Supporting
Nature-Positive Action**

**STAR is a published global layer
based on the IUCN red list**

[nature.com/articles/s41559-021-01432-0?utm_source=other&utm_medium=other&utm_content=null&utm_campaign=JRCN_1_DD01_CN_NatureRJ_article_paid_XMOL](https://www.nature.com/articles/s41559-021-01432-0?utm_source=other&utm_medium=other&utm_content=null&utm_campaign=JRCN_1_DD01_CN_NatureRJ_article_paid_XMOL)

ENCORE TOOL

ENCORE

ENCORE

encore.naturalcapital.finance/en

Main NCFA website

English

ENCORE

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Exploring Natural Capital Opportunities, Risks and Exposure

Select from a Sector or Sub-industry (based on the Global Industry Classification Standard) to explore dependencies and impacts on natural capital.

Sector Sub-industry

View: Dependencies Impacts

- Enter a Sector -

EXPLORE

UN environment programme WCMC FINANCE UNEP INITIATIVE global canopy

Type here to search

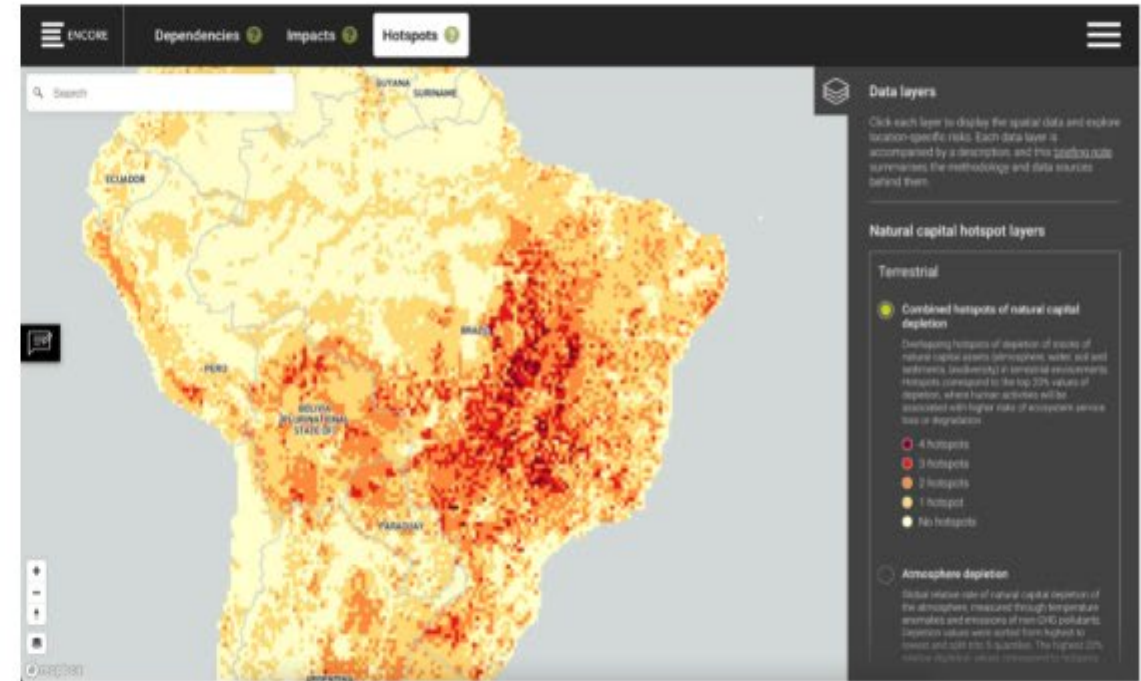
20:58 30/05/2021

New: Explore hotspots of natural capital depletion using the map

Understand risks arising from the depletion of natural capital, and the dependencies and impacts of business activities, by exploring spatial data.



MAP



ENCORE - English

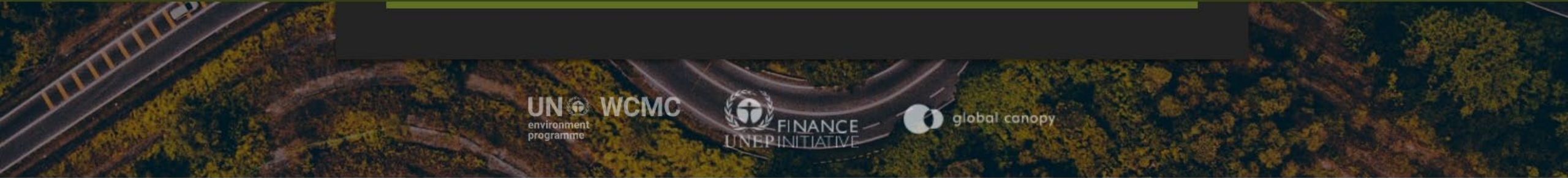


Watch later



Share

ENCORE helps you understand how the economy is exposed to natural capital



Main NCA website English

ENCORE Dashboard Portfolios About Explore Data & Methodology Contact Name Surname

My Mining Portfolio

Applied filters: [view list](#) EDIT SAVE DOWNLOAD

My current portfolio exposure results

Potential to reduce species' extinction risk

'STAR units' reflect the potential contribution of your portfolio toward reducing global extinction risk. This highlights the extent of opportunities for reducing global extinctions within your portfolio, which can be achieved by reducing impacts on species.

Your portfolio score is below average for the number of mines and represents 0.41% of the total sector score.

Mining threats: 14.44 STAR
Other threats: 397.60 STAR

Total STAR: 412.05

How is the average calculated?
The average is determined by calculating the average mine value at global level and relating this to the size of the input portfolio. For example, if the average mine's STAR score is 20 and there are 10 mines in the portfolio, the average would be 200. Results are listed as roughly equal to average if they are within 5% of the average value.

- High
- Medium
- Low

Ecological integrity risk

'Ecological integrity risk' reflects the potential impact of your portfolio on the integrity of selected habitats. This highlights extent of opportunities to increase the overall intactness of ecological communities within your portfolio, which can be achieved through appropriate biodiversity management and restoration.

Your portfolio score is below average for the number of mines and represents 0.36% of the total sector score.

Total ecological integrity risk: 1,491,018

What do the ecoregion alignment categories mean?
[View details](#)

Ecoregion alignment

- (A) On track to meet target: 21.9%
- (B) Protected and integrity stable or improving: 0%
- (C) Stable or improving but insufficiently protected: 55.7%
- (D) Integrity declining but protection increasing: 3.1%
- (E) Integrity declining and insufficiently protected: 19.2%

New biodiversity module available!

Sign up to access new features of ENCORE, including a module that helps financial institutions understand how they can move towards potential portfolio alignment with global biodiversity goals.

LOGIN/REGISTER

SCIENCE BASED TARGETS NETWORK

ENCORE

The Science Based Targets Network

sciencebasedtargets.org/about-us/sbtn#:~:text=The%20Science%20Based%20Targets%20Network%20(SBTN)%20is%20a%20collaboration%20of,for%20all%20of%2...

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SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

How it works Set a target Companies taking action Sector guidance Resources Net-zero

THE SCIENCE BASED TARGETS NETWORK (SBTN)

We must transform the way we live and do business in a way that protects our shared natural resources. Building on the momentum of the SBTi, the SBTN is working to enable companies and cities to set targets for climate *and* nature. Learn more below.

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SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

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Members-Only Corporate Engagement

SBTN planning to use STAR and an Ecosystem Intactness Index in work with companies

<https://sciencebasedtargetsnetwork.org/earth-systems/biodiversity/>

Biodiversity

Why set science-based targets for species and ecosystems?

Summary

- Large number of available tools
- Nothing fully 'fit for purpose' for business supply chains
- But this is changing fast
- Biodiversity metrics in use based around
 - IUCN red list for biodiversity importance and threat (e.g. STAR)
 - Biodiversity intactness measures (MSA, BII, EII, others)
 - Are we reaching a consensus?

Work with example companies

- A large Swedish furniture company
- A large Danish clothing company
- Lessons learned
 - Strong willingness to include biodiversity footprint / nature-positive type tools and metrics in their work
 - Critical to be able to understand supply chains down to smallest possible spatial scale
 - Complex supply chains hinders progress
 - Challenges of how embed different tools into corporate work flows
 - Intention remains to address these challenges and be 'leaders'

Discussion

Arne Geschke & Juha Siikamaki