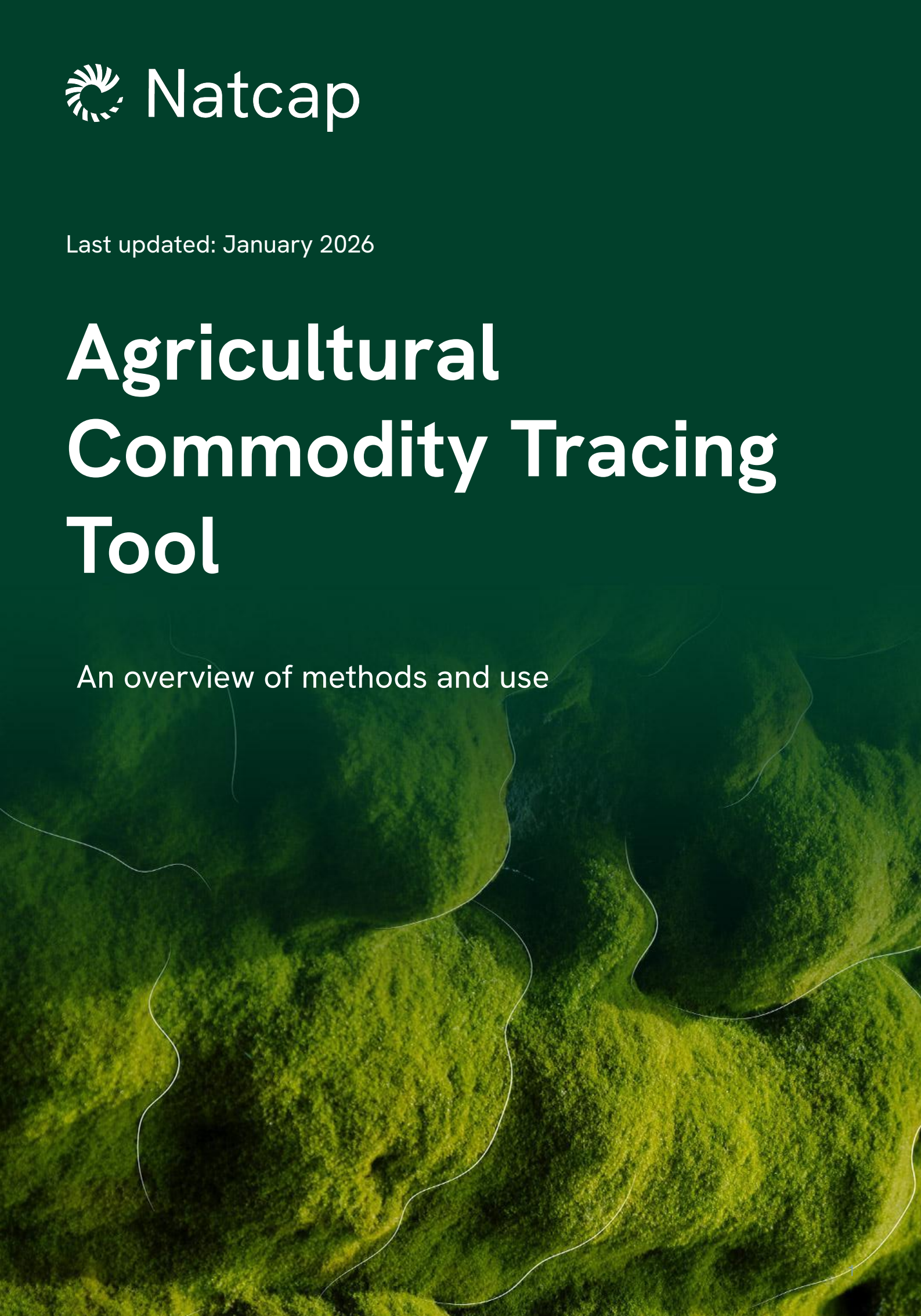
Natcap

Last updated: January 2026

Agricultural Commodity Tracing Tool

An overview of methods and use



Why we made this tool

Traceability along the supply chain can be a difficult task for procurement teams, especially for agricultural commodities.

We made this tool to help you understand the countries and regions from which your **sourced volumes** are likely to come. We do this by using the best available crop production maps to visualise the **leading production regions for key crops**, across the globe.

Using comprehensive geo-referenced data for **173 crops**, we are able to **trace agricultural commodity production to country and subnational regions**. This allows you to explore the **the most likely countries and subnational regions** where your agricultural suppliers may be located.

You can use this information to start a conversation with your procurement team or suppliers, to explore or test blind spots, or identify key regions and commodities where you might want to dig deeper.

Understanding where your agricultural commodities are produced is just the start of assessing the nature dependencies, impacts, risks and opportunities in your supply chain.

Learn more about Natcap's Nature Intelligence Suite for Supply Chains here.

Methods

Our analysis

These results are based on the georeferenced dataset **CROPGRIDS**[1]**,** which brings together the best data for crop production for **173 crops globally** for the year 2020[2].

For each crop, we calculate the total area under cultivation at both the national, and subnational regions scale.

The final outputs represent the total area under cultivation for the selected crop, as well as a ranking, either globally (for country-level queries), or within a country (for subnational queries).

For a more tailored assessment of your supply regions, including higher resolution data and insights, learn more about Natcap's Nature Intelligence Suite for Supply Chains here.

About the datasets

CROPGRIDS is a highly cited dataset developed in collaboration with the UN Food and Agriculture Organisation (FAO) and has been extensively validated against national and subnational agricultural statistics. We chose this dataset because it combines both high quality standards and the largest crop coverage to date.

CROPGRIDS creates global crop maps using 27 published spatial datasets, ranging from highly region-specific to global, as well as national and regional agricultural statistics.

To be included, map inputs pass rigorous quality checks, are then harmonised to a common spatial resolution of ~ 5.6 km, and finally, integrated with agricultural statistics.

For more information on the dataset, review the journal article published in Nature.

As boundary datasets, we use the Natural Earth geographic boundaries[3] on administrative level 1 for subnational regions, as well as the country-level information contained within this dataset.

Limitations

Using datasets like CROPGRIDS only allows the identification of the top production regions by area. It does not account for differences in yields, or for trade dynamics, such as the proportion of production that is exported versus consumed domestically. This may lead to an overestimation of crop volumes that can be sourced from a given area.

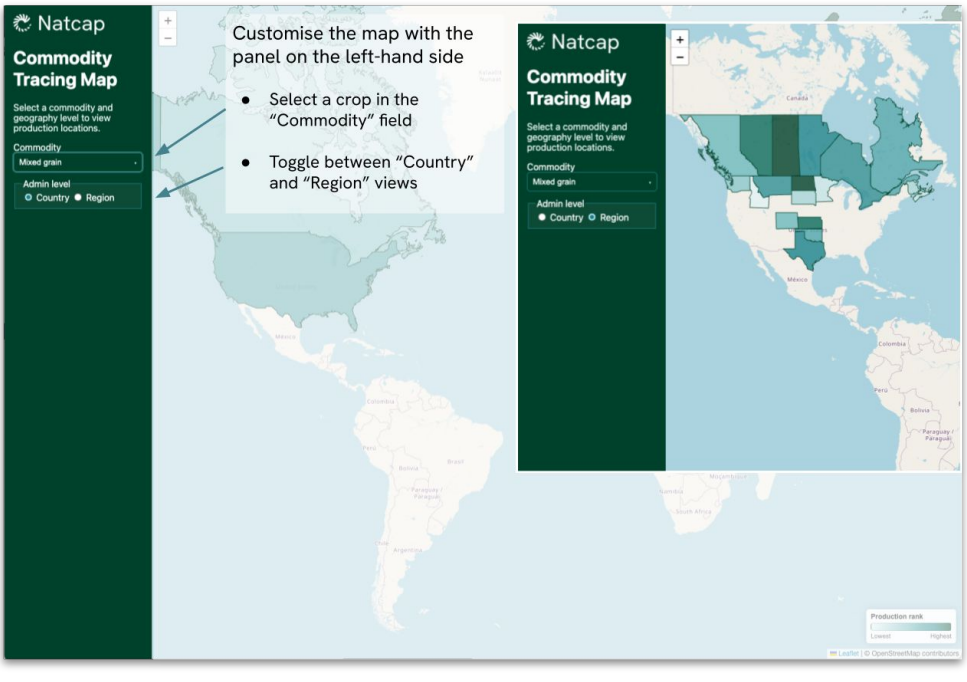
For example: While rice production is high in Japan, the country is not a major exporter. Consequently, it is less likely to feature prominently in an organisation's upstream supply chain where sourcing is import-based.

[1] CROPGRIDS is an open-source dataset produced by Tang et al. (2023) and is available for use under the CC-BY 4.0 license. The data is available for download here.
[2] CROPGRIDS data are typically derived from data for 2020, but may include data between 2000 and 2020.
[3] Natural Earth administrative level 1 data for States & Provinces is publicly available here. Country-level totals are sums over all administrative level 1 regions in a country.

How to use this tool

To access the Agricultural Commodity Tracing Tool, click on the link shared in the original email. You'll be taken to an interactive map, which shows the dominant production areas for your selected crops on both a country and regional level.

The left-hand side panel allows you to change your pre-selected crops, and toggle between a country and subnational region view.



The map will show the leaders in production by country or region, indicating the global (or within country) rank of the top ten country or regions for your selected crop. Hover over a country or region to see the total area under cultivation for the selected crop, as well as its rank.

In the country-level view, rank reflects the position among other producing countries. In the region-level view, rank reflects the position among other regions within a given country.

Important note: To improve visual clarity we only present subnational rankings for the top ten producing countries, and within these countries, the top ten producing regions. As such, the total area shown for a country in country-level view may exceed the sum of areas shown in the region-level view.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by Natcap.

What comes next

Our tool can help you talk to your procurement team or your suppliers explore blind spots or start conversations about supply chain risks.

Understanding where your agricultural commodities are produced is just the start of assessing the dependencies, impacts, risks, and opportunities in your supply chain.

To go further, learn more about Natcap's Nature Intelligence Suite for Supply Chains here.

About Natcap

Your long-term nature intelligence partner

Natcap is the world's leading nature intelligence provider, helping global companies measure, report, and act on nature and biodiversity risks and opportunities. Our science-based data capabilities and advisory services unlock supply chain resilience, ensure regulatory compliance, and drive sustainable growth. Founded in 2018 by leading scientists at the University of Oxford, Natcap combines scientific rigour with practical solutions to help companies make the business case for nature, quantify the value at stake, and integrate nature into business strategy. Visit www.natcapresearch.com to learn more.

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