# INFORM

*International Forest
Risk Model*

GCP
GLOBAL CANOPY PROGRAMME

EU**REDD**
Facility

Oxford
e-Research
Centre

UNIVERSITY OF
OXFORD

## What is INFORM?

The International Forest Risk Model (INFORM) is a platform to enable businesses, public procurers, and financial institutions to assess risk of exposure to deforestation through their purchases and supply chains.

## The Need to Reduce Deforestation Risks

### Deforestation in Supply Chains

Over 70% of tropical deforestation in the last decade has been driven by agricultural expansion to produce a small number of globally-traded commodities: soya, beef, leather, palm oil, pulp and paper, and timber.

The equivalent of fifty football fields of forest is lost every minute. This is responsible for 15% of global carbon emissions, destroys precious habitats and ecosystem services that underpin regional water, food, and energy security, and is harmful to the rights and livelihoods of local people.

### This Poses Risks to Businesses and Financial Institutions

Forest risk commodities (see below) move along complex and opaque supply chains, exposing tens of thousands of institutions worldwide to business risk.

- **Reputational risk:** the reputations of consumer-facing companies can be significantly damaged by links to deforestation in supply chains. Recent environmental campaigns have successfully targeted major brands and banks on this issue.
- **Legislative risk:** new and emerging regulations at local, national, and international levels pose a compliance risk to businesses, companies, and financial institutions exposed to illegal deforestation.
- **Operational risk:** securing early access to sustainable supply, which remains limited, is increasingly important as attitudes and practices change.

## Forest Risk Commodities

The term 'forest risk commodities' describes goods whose production drives the majority of tropical forest loss and degradation. Below is a list of four of the most prevalent. Others include rubber, cocoa, rice, and coffee.

### Palm oil
Palm oil is found in over 50% of packaged goods. It is the main driver of deforestation in Indonesia, which is responsible for about 40% of the country's carbon emissions.

### Soya
Together the USA, Brazil, and Argentina produce 80% of the world's soya. Soya bean meal is predominantly used as an ingredient in animal feed for livestock.

### Beef and leather
Cattle-ranching expansion is the key driver of deforestation in Latin America, accounting for 80% of Amazonian deforestation.

### Timber products
The European Union and the USA lead global timber and pulp consumption. 87% of all certified forests are in the northern hemisphere, while only 2% of tropical forests are currently certified.

## The Benefits of INFORM

INFORM is a decision-support platform that aims to help private and public institutions across sectors worldwide to reduce the deforestation risks associated with their supply chains and investments.

Through criteria-based assessments and probability calculations using a wide range of global data sets, INFORM will assess the risk that a product or commodity is linked to deforestation (see case study below).

Users will be provided with a simple risk assessment related to their procurement or investment, as well as guidance on how to reduce business risk.

### For Businesses

Some of the world's largest companies are able to comprehensively understand and audit their supply chains to mitigate potential environmental risks. However, many mid-sized companies with less integrated supply chains do not yet have this capacity.

INFORM will address the lack of transparency on global supply chains that is the source of this problem without undermining commercial sensitivity. By assigning risk ratings to specific supply chains, it will allow companies to avoid the costs of internal supply chain assessments and to focus their supply chain audits in the areas that carry the highest risks.

By improving corporate understanding of supply chain risk, INFORM will enable companies to avoid unknowingly investing in unsustainable timber and other forest risk commodities. This will help them to comply with relevant regulations and to meet their own sustainability commitments.

"Businesses globally have a huge opportunity to help avert climate catastrophe by partnering with governments and civil society to drive transformational change. Working together to end unsustainable deforestation from supply chains has the potential to be a game changer, and makes good business sense by building more resilient and equitable supply chains."

**Jeff Seabright**
Chief Sustainability Officer at Unilever

### For Financial Institutions

INFORM will help financial institutions improve environmental due diligence processes that are increasingly used in lending, investment, and insurance decisions.

It will also enable them to bypass the prohibitive costs of supply chain assessments, and will rapidly and efficiently identify high-risk supply chains that ought to be avoided.

"Deutsche Bank is committed to using its financial expertise to help consumer goods companies reduce deforestation rates and establish environmentally sustainable ways of producing soft commodities."

**Daniel Schmand**
Head of Trade Finance & Cash Management
Corporates, EMEA, Deutsche Bank

### For the Public Sector

INFORM will provide information to governments to enable better environmental policymaking and to improve public procurement, helping them to achieve their commitments on sustainability and zero deforestation.

"Unfortunately, we are all complicit in this 'embodied deforestation' as a result of our collective and ever increasing demand for more meat, cosmetics and leather... particularly troubling is growing deforestation induced by forest conversion into palm oil plantations which subsequently supply the EU biofuels market."

**Paul Brannen,** MEP

# CASE STUDY:
## Designing a Conceptual Risk Model Platform Using Illustrative Data for Soya

A practical application of the INFORM platform was designed using supply chain data for soya, given the current gap in solutions addressing this commodity, and the high level of imports into major gateway ports.

In the following example, a European retailer will be able to calculate the deforestation impact of sourcing meat, poultry, and fish products fed with soya from different regions of Brazil. The methodology described below will provide companies with a deforestation risk rating.

The risk model platform under development calculates what we have termed the deforestation ratio of a certain commodity during a particular year in a given region, and how this commodity is fed into export and import pipelines. This ratio focuses on the proportion of a commodity at different points within the supply chain that has made a contribution to deforestation. To ensure we cover the possibility for land use change we consider both short and long term deforestation, depending on data availability.

We calculate the municipality's deforestation ratio as the ratio of soya produced from deforested land to registered land, multiplied by a deforestation factor that accounts for historical deforestation within the municipality.

To calculate the deforestation ratio for the exporting port, we use a weighted sum of the deforestation ratio of each supplying municipality. Since the data for soya transportation from municipality to port is currently unknown, we have to create a proxy. We first take a cost estimation for transporting soya from a municipality to a destination port. This figure is then weighted against the volume of soya produced in the state in which the municipality is located.

The deforestation ratio of soya for the import port is calculated as a sum of all contributing export ports.
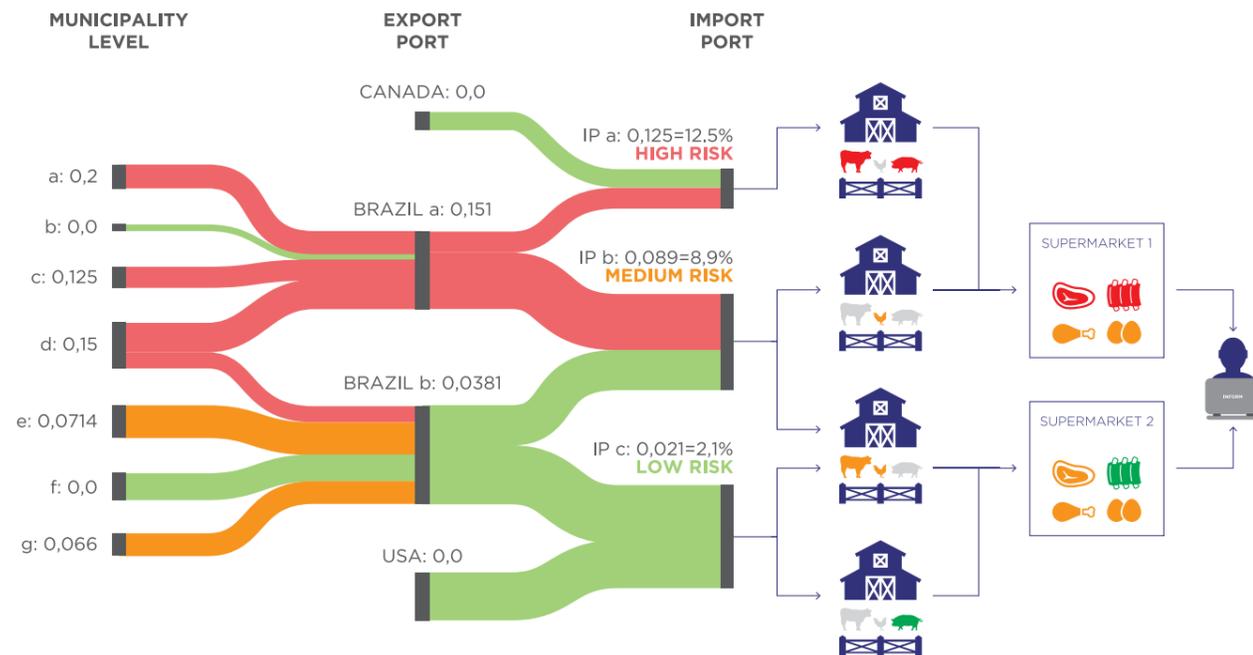


*Stakeholders quantify risks in different ways and their acceptable tolerance might vary from those used in the illustration.*

## Related Initiatives and Further Reading

A number of tools and initiatives already exist in this space, and the INFORM platform is developing partnerships with other leaders in data provision and modelling to maximise utility and impact.

**Relevant initiatives:**

- The **SEI Initiative on Producer to Consumer Sustainability** (P2CS) is a systems-based approach identifying opportunities for a more sustainable trade system.
www.sei-international.org/mediamanager/documents/Publications/SEI-Initiative-2015-Producer-consumer-sustainability.pdf

- The **Forest 500** identifies, ranks, and tracks the governments, companies, and financial institutions worldwide that together could virtually eradicate tropical deforestation.
forest500.org/

- **CDP** use measurement and information disclosure to improve the management of environmental risk.
www.cdp.net/en-US/Pages/HomePage.aspx

### Global Canopy Programme (GCP)

GCP is a tropical forest think tank working since 2001 to accelerate the transition to a deforestation free global economy.
www.globalcanopy.org

**Contact:** Cécile Lachaux, Head of Drivers, Global Canopy Programme, c.lachaux@globalcanopy.org

### The Oxford e-Research Centre (OeRC)

OeRC is a department within the University of Oxford. It works with academic and industrial collaborators to enable the use and development of innovative computational and information technology in multidisciplinary collaborations.
www.oerc.ox.ac.uk

**Contact:** David Wallom, Associate Professor, University of Oxford e-Research Centre, david.wallom@oerc.ox.ac.uk

### The EU REDD Facility

The EU REDD Facility, hosted by the European Forest institute, provides flexible and demand-based expertise to support partner countries in improving land use governance as part of their effort to slow,halt and reverse deforestation. The EU REDD Facility is funded by the European Union and the Governments of France, Germany, Ireland, Spain and the United Kingdom.
www.euredd.efi.int

**Contacts:** Alessandro Trevisan, EU REDD Facility, alessandro.trevisan@efi.int
Thomas Sembres, EU REDD Facility, thomas.sembres@efi.int