



Accountability  
Framework  
initiative

EXTERNAL TOOLS AND RESOURCES

Updated April 2024

# Risk assessment, traceability and monitoring tools

This document provides a list of tools that companies may use for off-site assessment of risk or monitoring of performance related to deforestation, ecosystem conversion, and human rights abuses associated with commodity production.

# The Accountability Framework

The Accountability Framework is a common approach to achieve supply chains that are protective of forests, other natural ecosystems, and human rights. Its principles, definitions, and guidance reflect the consensus of the coalition of leading environmental and social NGOs that is behind the Accountability Framework initiative (AFi). Companies can apply the Accountability Framework as a guide in setting strong supply chain commitments, developing effective implementation systems, and credibly monitor and report on progress in accordance with best practice.

## Risk assessment, traceability, and monitoring tools

Organisations wishing to address issues within their supply chains can use a range of different risk assessment, traceability, and monitoring tools. This document lists tools that companies may use for off-site assessment of risk, traceability or monitoring of performance related to deforestation, ecosystem conversion, and human rights violations associated with commodity production. Tools listed here are free to use unless indicated otherwise.

This list is intended to provide a non-exhaustive library of tools available for risk assessment, traceability, and monitoring. It identifies tools commonly known and used by the AFi Coalition at the time of publication. The tools here generally support best practice around monitoring, risk assessment and traceability in line with the Accountability Framework, though companies are ultimately responsible for making their own assessments to decide on which tool or set of tools are best suited to support them in meeting their responsible supply chain goals.

Criteria used for the selections provided in this table include:

- tool provides geospatial resolution at a scale that supports detection of land use change
- tool provides historical and current data that supports detection of land use change and human rights impacts
- tool provides data that is regularly updated and current
- tool offers alerts, or open-source data resources
- tool is part of a national system and provides key information for actors operating in that context
- tool collates information from multiple data sources to provides an overall picture of risk
- tool provides information on key issues of importance to the rights of Indigenous peoples and local communities, such as land tenure, and/or labour rights
- tool provides risk assessment ratings that can feed directly into company risk assessment processes
- tool represents a resource to support collective action



Guidance on how to select the appropriate tool(s) can be found in the Accountability Framework's [Operational Guidance on Monitoring and Verification](#) (Annex 2) and [Operational Guidance on Supply Chain Management](#). Tools and other resources to support identification and monitoring of impacts to workers' rights can be found in the [Operational Guidance on Workers' Rights](#). Section 3 of that guidance also includes resources for assessing risk as part of broader due diligence processes.

**Core Principle 5: Supply chain assessment and traceability**

Companies know the origins and compliance status of materials in their supply chains. If the company uses risk assessments – for instance to prioritise efforts towards improving traceability, monitoring, and compliance – then these assessments follow good practices for credibility, transparency, and accurate risk characterisations.

**Core Principle 11: Monitoring and verification**

Companies conduct regular monitoring to assess compliance and progress towards eliminating deforestation, conversion, and human rights abuses in their operations, supply chains, and financial investments. Monitoring follows credible and consistent methods for assessing social, environmental, and land-use actions and outcomes.

[Learn more about the Core Principles](#)



## Risk assessment and monitoring tools: Deforestation and ecosystem conversion

Resource Name	Geography	Resolution	Description	Link
Adastr/Orbae	Global	30-meter <sup>2</sup>	High-fidelity land conversion data for traceability and monitoring to farm level. Includes historical data dating 20 years. Works with Trase to directly attribute conversion to commodities. Provides continuous data collection for ESG reporting. Fee for service.	<a href="#">Visit</a>
Forest Data Partnership	Global	---	Consortium led by the World Resources Institute (WRI) to collaboratively strengthen global monitoring of commodity-driven deforestation, forest degradation and restoration efforts; and improve data related to land use and land cover. Welcoming collaboration with companies, governments, technical partners, CSOs/NGOs and communities. Participating companies can get early access to new data solutions. Based on a framework of 5 action steps: engage, align, innovate, deploy, and assess.	<a href="#">Visit</a>
GLAD Alerts	Global	30-meter	Near real-time tree cover loss alerts with confidence levels based on a combination of sensors including the GLAD-L (30-meter optical), GLAD-S2 (10-meter optical), and RADD (10-meter radar) alert systems. Hosted on all Global Forest Watch web applications.	<a href="#">Visit</a>
Global Forest Watch	Global	30-meter	Provides global tree cover gain and loss data, Integrated Alerts, and fire alerts with contextual information on forest loss drivers, tropical primary forests, protected areas, peatlands, and other key landscape features. Hosted by the World Resources Institute (WRI).	<a href="#">Visit</a>
Global Forest Watch Pro	Global	30-meter	Build and manage complex portfolios of sourcing locations to report on annual forest change since 2000 (based on core GFW data) and assess deforestation risk using a global 2020 natural forest baseline (eg, Science Based Target's Network) or using selected country-specific deforestation maps (eg, Brazil's PRODES). Refine risk assessments based on contextual data about protected areas and Indigenous	<a href="#">Visit</a>



			territories and respond to recent forest disturbances using Integrated Alerts. Account required. Fees for high volume and API-based use.
Satelligence	Global	10-meter resolution	Provide both real-time (updated daily) and historical insights on carbon, deforestation, and land use change. This is achieved by combining satellite-based insights, field-tested data, and AI-powered predictive modelling with supply chain ownership data. Fee-based. <a href="#">Visit</a>
Starling	Global	1.5-meter	High-resolution maps of forest cover and forest change in real-time (6–12-day frequency), developed in partnership between Earthworm and Airbus. Fee-based. <a href="#">Visit</a>
Trase	Global	30-meter; Jurisdiction level	Combines trade data with land-use change data, including data from GFW, PRODES, and other sources, to assess the deforestation and conversion footprint or risk of commodity traders and financial institutions. Currently provides coverage for high-risk regions for several commodities, including South American beef and soy and Indonesian palm oil. <a href="#">Visit</a>
OpenForests	Global	Multiple	Develops bespoke project monitoring data tailored to needs. Utilises various data sources, including Pleiades, SkySat, TripleSat Constellation, KOMPSAT-2-3-3A, SPOT 6/7, Sentinel 1-2, and Landsat. Combines open and commercial data sources in a monitoring dashboard with e-mail or SMS alerts for deforestation and fire events. Fee-based. <a href="#">Visit</a>
CIATerra-i Alerts	Tropics	250-meter	Produces alerts that detect likely tree cover loss every 16 days. <a href="#">Visit</a>
Agrotools	Brazil	Multiple	Offers packaged monitoring and supply chain management tools, including data and analysis for raw material origin and ESG compliance and sustainability. Fee-based. <a href="#">Visit</a>



Conecta	Brazil	Multiple	The Conecta Platform is a qualification, traceability and transparency tool with full coverage of the beef production chain, developed by Safe Trace to facilitate the secure exchange of data between the different links in the chain using blockchain technology. Fee-based.	<a href="#">Visit</a>
DETER (Sistema de Detecção do Desmatamento em Tempo Real na Amazônia)	Brazil	30-meter; 6.25ha minimum patch size	Identifies and maps deforested areas and degraded areas in real-time (2-week and monthly intervals). Since 2023, non-forest natural ecosystem conversion also mapped.	<a href="#">Visit</a>
ImazonSAD Alerts	Brazil	250-meter	Monthly deforestation alert dataset for the Brazilian Amazon, hosted on Global Forest Watch web applications.	<a href="#">Visit</a>
MapBiomias (Brazilian Annual Land Use and Land Cover Mapping Project)	Brazil (Amazon); Paraguay and Argentina (Chaco)	30-meter	Uses the Google Earth Engine to produce annual maps and calculations of land use change across all of Brazil. The project covers all parts of the Amazon (the Mapbiomas Amazonia project) and Chaco (Mapbiomas Chaco project) biomes in surrounding countries. Land use and land cover maps, mosaics of cloud-free satellite images and public web platform freely available to the public. Additional products for specialists or developers available through request. Weekly deforestation <a href="#">alerts</a> also available.	<a href="#">Visit</a>
PRODES	Brazil	30m pixels with a minimum patch size of 6.25ha	Brazilian government's satellite monitoring program for deforestation and ecosystem conversion in the Legal Amazon and non-Amazon biomes. Identifies and maps deforested and converted areas annually. Deforestation is only distinguished from conversion in the Legal Amazon region for which non-forest conversion data is available separately since 2023.	<a href="#">Visit</a>
SMGeo (Niceplanet)	Brazil; Paraguay, Colombia; Argentina	Multiple	Platform developed for registration, analyses and socio-environmental monitoring of suppliers in the livestock production chain. Offers services for monitoring of direct suppliers, indirect suppliers, and integration of data into sales invoices. Fee-based.	<a href="#">Visit</a>



SMFaz (Agrosatélite)	Brazil	Multiple	Farm monitoring system to assess compliance with social and environmental KPIs. Time series of satellite images are used to analyse historical agricultural production, and the land use and land cover changes of the property to check compliance with the Forest Code. Generates non-compliance alerts. Fee-based.	<a href="#">Visit</a>
SeloVerde	Brazil (Pará and Mato Grosso only)	Multiple	Provides data on agricultural production and environmental suitability for rural properties registered in the Rural Environmental Registry (CAR). Integrates public data from state and federal agencies aiming to combat illegal deforestation, promote environmental and land regularisation and provide transparent traceability of agricultural production. Updated daily.	<a href="#">Visit</a>
Terras	Brazil	Property boundaries	Repository of national rural registry data repository, including data on environmental and production characteristics of rural properties.	<a href="#">Visit</a>
Visipeç	Brazil (Mato Grosso, Pará, Rondônia states only)	Multiple	Cloud-based traceability tool for meatpackers that uses information from public databases to track cattle between ranches and suppliers, allowing for more effective monitoring of indirect suppliers.	<a href="#">Visit</a>
Mighty Earth Cocoa Accountability Map	Côte d'Ivoire	Farm; Multiple	Uses Vivid Economics' IMAGES platform to assess real-time deforestation, overlaid with locations of cocoa farms and cooperatives provided by certification organisations and companies that source cocoa products. Works in partnership with Maphubs.	<a href="#">Visit</a>
Forest Atlases Central Africa and Liberia	Central Africa and Liberia	Multiple	Interactive web mapping application hosted by WRI and co-developed with national agencies using Global Forest Watch data on tree cover together with data on land use allocation (forest concessions, protected areas, mining permits, etc.) within national forest estates. Atlases are currently available for nine countries.	<a href="#">Visit</a>



Eyes on the Forest Sumatra	Indonesia	Multiple	Publicly available mapping tool that draws on a database of land cover, land use, and biodiversity data in the Riau Province of Sumatra, Indonesia. Collaboration between WWF-Indonesia, Eyes on the Forest and Google Earth Outreach.	<a href="#">Visit</a>
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## Risk assessment and monitoring tools: Human rights

Resource Name	Geography	Topics	Description	Link
Children's Rights Atlas	Global	Child Labour	Provides risk profiles and guidance to inform due diligence on a range of aspects of children's rights, including children in the workplace. Developed by the Global Child Forum and UNICEF.	<a href="#">Visit</a>
International Trade Union Confederation (ITUC) Global Rights Index	Global	Freedom of Association and Collective Bargaining	Annually updated country-level information and ratings of the laws related to freedom of association and collective bargaining rights.	<a href="#">Visit</a>
Land Matrix	Global	Land Acquisition	Database of large-scale land acquisitions in low- and middle-income countries that includes information on location, deal size, nature of deal, intention of investment, investor, year, and status. Crowd-sourced information is verified.	<a href="#">Visit</a>
Landmark	Global	Land Tenure	Provides maps and other information on lands that are collectively held and used by Indigenous Peoples and local communities. Designed for use by Indigenous Peoples and communities.	<a href="#">Visit</a>
Landscape by TMP Public	Global	Land Tenure	Assesses tenure risk using multiple indices (eg, corruption, armed conflict, social conflict, water quality/quantity, poverty) based on user-provided location data.	<a href="#">Visit</a>
New Earth B Social Hotspots Database	Global	Human Rights	The risk mapping tool provides social risk information on the 30 sub-categories and 132 underlying social indicators of the SHDB (V5) for 57 sectors in countries worldwide. Services to address ethical compliance, human rights due diligence, and social life cycle assessments. Strategy and implementation services available. Paid licence required to access database.	<a href="#">Visit</a>
Prindex	Global	Land Tenure	Open source national level data on public perceptions of land tenure security around the world. Developed as a joint initiative of the Global Land Alliance and Overseas Development Institute.	<a href="#">Visit</a>



UNDP Human Development Reports	Global	Human Development	Reports that provide country-level statistical data on five indices addressing development and human rights: human development index, inequality-adjusted human development index, gender development index, gender inequality index, multi-dimensional poverty index.	<a href="#">Visit</a>
United States Department of Labour Child Labour and Forced Labour Reports	Global	Child and Forced Labour	Provides country-level information and risk ratings on the prevalence and sectoral distribution of the worst forms of child labour and on goods believed to be linked to child labour or forced labour.	<a href="#">Visit</a>
Verite Commodities Atlas	Global	Child and Forced Labour	Categorised by commodity, provides information on country-level risk of forced and/or child labour.	<a href="#">Visit</a>
Walk Free Foundation Global Slavery Index	Global	Forced Labour	Provides country-level information on the number of people in modern slavery, indicators of vulnerability, and the actions being taken by governments to respond.	<a href="#">Visit</a>
World Bank Worldwide Governance Indicators	Global	Governance	Provides aggregate and individual governance indicators for six dimensions of governance: voice and accountability; political stability and absence of violence; government effectiveness; regulatory quality; rule of law; control and corruption.	<a href="#">Visit</a>



## Risk assessment and monitoring tools: Deforestation, ecosystem conversion, and human rights

Resource Name	Geography	Description	Link
Agroideal	Brazil, Argentina	Overlays economic, environmental, and social risk data to generate a map of risk exposure for the selected region (farms, municipalities, states, or biomes) where current or potential suppliers are located.	<a href="#">Visit</a>
FSC Controlled Wood National Risk Assessments	Global	National risk assessment maps for timber/pulp and paper, including ecosystem conversion, HCVs, Indigenous Peoples' rights, ILO core conventions, and social conflict. Data platform created as a quick reference format for FSC certificate holders applying FSC-STD-40-005 'Requirements for sourcing FSC controlled wood' and certification bodies.	<a href="#">Visit</a>
Global Risk Assessment Services (GRAS)	Global	Provides information on ecological and social risks related to commodity origin. The analyses are based on sustainability criteria set up by the European Commission in the Renewable Energy Directive (RED) and sustainability requirements of individual companies and associations. Basic online platform is free; customised analysis is fee for service.	<a href="#">Visit</a>
Maplecroft risk calculators and dashboards	Global	Provides risk analyses and due diligence for environmental and social issues via online platforms. Fee-based.	<a href="#">Visit</a>
MVO Nederland CSR Risk Check	Global	Provides regularly updated national-level risk profiles across several environmental, social, and governance topics, categorised by commodity. Uses publicly available information.	<a href="#">Visit</a>
Preferred by Nature Sourcing Hub	Global	National risk ratings per commodity (timber, beef, palm oil, soy) as well as risk assessment tools and checklists.	<a href="#">Visit</a>



## Traceability tools: Deforestation and ecosystem conversion

Resource Name	Geography	Scope	Description	Link
ChainPoint	Global	All commodities	Software platform for monitoring and traceability in supply chains, allowing for visibility into whole supply network, support for supplier management, and tracking of certifications, audits and corrective actions. Part of Source Intelligence since 2023. Fee-based.	<a href="#">Visit</a>
Global Traceability	Global	All commodities	Providers of RADIX Tree, a supply chain compliance management platform. Connects suppliers to share and verify information for compliance requirements. Provides end-to-end traceability, data for due diligence and EUDR. Includes interactive geo-location tool to track tree cover changes. Paid subscription.	<a href="#">Visit</a>
Hamurni	Indonesia	Palm oil	Supply chain mapping and traceability tool/app to empower smallholders and increase transparency of the palm oil industry. Allows for creation, submission and tracking of transaction forms between sellers and buyers. Available in English and Bahasa Indonesia. Developed by WWF-Indonesia, aligned with the Accountability Framework, and follows RSPO P&C. Reference data based on HCVRN.	<a href="#">Visit</a>
Koltiva/KoliTrace	Global	All commodities	Traceability platform and geolocation/mapping tool covering palm oil, cocoa and other commodities. Provides legality verification and due diligence statements for EUDR; provides farm management/ smallholder data and other advanced features for verified supply chains. Also includes source GHG management. Fee-based.	<a href="#">Visit</a>
Optel	Global	All commodities	Provider of traceability solutions for responsible sourcing. Uses Optchain™ to support end-to-end supply chain, real-time visibility, including supplier assessments, origin of raw materials and social responsibility practices of suppliers. Collects quantitative and qualitative data across entire upstream supply chain and support	<a href="#">Visit</a>



			monitoring of responsible sourcing practices. Offers a package solution for companies looking to comply with EUDR. Fee-based.
Sourcemap	Global	All commodities	Automated software supporting compliance with supply chain due diligence, including supply chain mapping, supplier engagement, risk assessment, traceability and reporting. “Deforestation Solution” collects all relevant data points for EUDR and CSRD requirements. Fee-based. <a href="#">Visit</a>



## Traceability tools: Deforestation, ecosystem conversion, and human rights

Resource Name	Geography	Commodity scope	Description	Link
Palm Oil Transparency Coalition	Global	Palm oil	Pre-competitive coalition of downstream supply chain companies and investors dedicated to engagement and review of major international first importers of palm oil to determine how they are tackling deforestation and exploitation in their palm oil supply chains. Aim to promote transparency and encourage progress beyond certification. Published annual Importer Assessment (since 2017); developed palm trader and refiner performance assessment methodology. Membership organisation.	<a href="#">View</a>
Soy Transparency Coalition	Global	Soy	Pre-competitive coalition of downstream supply chain companies and investors to overcome transparency challenges. Provides annual benchmark of performance of major soy traders (Annual Trader Assessment) based on a robust research and engagement process. Scope includes deforestation, conversion, and human rights. Membership organisation.	<a href="#">View</a>

