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EMERGING TECHNOLOGIES FOR SUSTAINABILITY

AN OVERVIEW OF TRENDS, PLAYERS AND ACTION

FIGHTING ILLEGAL LOGGING IN EUROPE

AN OVERVIEW OF TRENDS, PLAYERS AND ACTION

Cover image

Critically endangered
Araucaria trees in the state
of Paranà, Brazil

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About Ambitus

This report is part of project Ambitus, which was developed in the years 2019-2022 with the aim of boosting the operational activities of law enforcement authorities in their combat against environmental crime in the long term, while:

- Deepening the analysis of the environmental crime phenomenon, offering a more accurate knowledge of, for instance, threats and trends, areas and flows, criminal networks and links;
- Developing further cooperation by gathering knowledge, standardising and improving practices and procedures, and establishing more efficient networking mechanisms among member states and with non-EU partners;
- Implementing or supporting operational actions based on intelligence-led investigations and tools while focusing on specific locations, clusters and organised criminal groups (OCGs).

In the course of its activities, Ambitus has produced detailed reports, summary records & decisions, dedicated tools & training programmes on environmental crimes in Europe, as well as tailored communication items.

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The Istituto Affari Internazionali (IAI) has been responsible for the development of this report. IAI is a private, independent non-profit think tank, founded in 1965 on the initiative of Altiero Spinelli. IAI seeks to promote awareness of international politics and to contribute to the advancement of European integration and multilateral cooperation, focusing on topics such as European integration, security and defence, energy and climate policies, as well as key regions such as the Mediterranean, the Middle East, Asia, Eurasia, Africa and the Americas. The IAI publishes an English language quarterly (*The International Spectator*), an online webzine (*AffarInternazionali*), three book series (*Global Politics and Security*, *Quaderni IAI* and *IAI Research Studies*) and other paper series related to IAI research projects.

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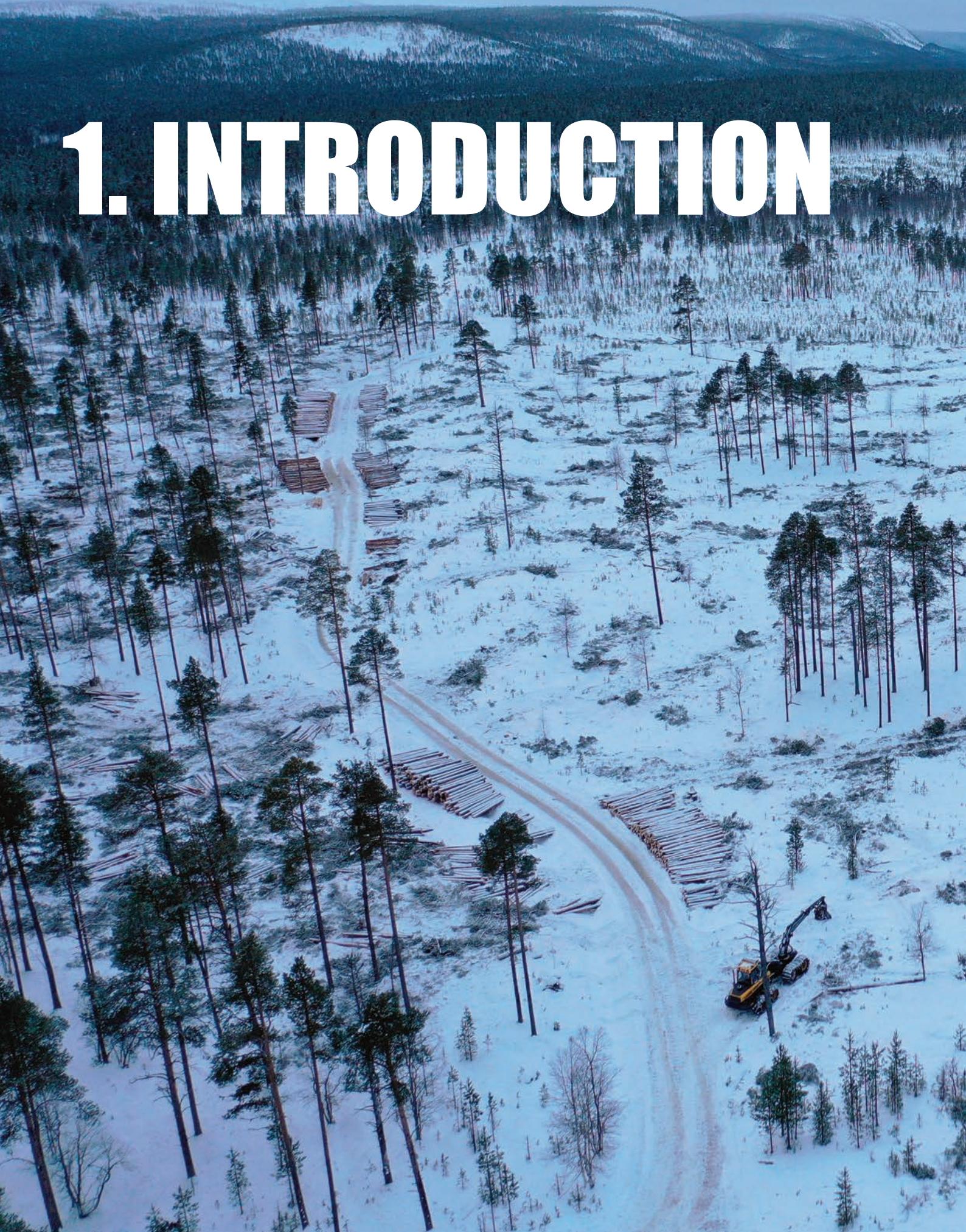
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1. INTRODUCTION



Throughout the world, forests have never been so important. They represent a variety of ecosystems which are key to slowing down the dramatic loss of biodiversity, while also being a fundamental carbon sink that, if altered, could vanish most of our efforts to mitigate climate change. While they have always been one of the foundation stones for life as we know it on our planet, the environmental challenges the world as a whole is facing now make forests one of the most precious components of the biosphere that we must protect and improve.

Impact of deforestation Yet, deforestation¹ continues at a speed which is beyond the regenerative capability of most ecosystems: we lost 437 million hectares (Mha) of tree cover from 2001 to 2021 (11 per cent of the global forest cover), at a rate increasing from 13.4 Mha in 2001 to 25.3 Mha in 2021 (with a 29.7 Mha peak in 2016).² This is not only dramatically reducing the world's forest cover in general, but it is also causing the last remaining primeval forests in the world (which represent circa 16 per cent of the total forest cover loss³) to rapidly disappear. Woods untouched for thousands of years are logged not only in the Amazon, Borneo or Africa, but also in Europe; the world is losing ecosystems which are invaluable for their capacity to protect and support biodiversity, and which will take not decades, but hundreds of years to restore. The damage is however done not only to the environment, but also to the communities depending on it: the disappearance of forests is a direct threat to the people whose food security and income depends on forest products or on the ecosystem services provided by the forests, and who often belong to the most fragile strata of the population.

Illegal logging is to blame for a significant share of all of this: although estimates vary, according to Interpol it represents from 50 per cent to 90 per cent of all deforestation in key areas, such as the Amazon or Southeast Asia,⁴ while Chatham House's evaluation is around 30% of all timber from nine critical producing countries (Brazil, Cameroon, DRC, Ghana, Indonesia, Laos, Malaysia, PNG and Republic of Congo).⁵ The practice fosters unsustainable levels of logging, often in highly biodiverse areas; it complicates the monitoring and coordination of the exploitation of timber and leads to underestimation of the actual impact of timber trade on global ecosystems. Destructive logging practices (which can also be legal) have an often-tremendous impact not only on biodiversity, but on water supplies, on agriculture, land degradation and on the sustenance of local communities. By decreasing the global price for timber, illegal logging also damages legal logging and pushes sustainable producers towards unsustainable practices.

The role of the EU

The EU is one of the key players in this. It is one of the leading importers of tropical deforestation, both directly, by purchasing illegal timber, and indirectly, through imports of products which cause illegal logging (such as soy and palm oil). The EU is also home to a few primeval forests, mostly concentrated in four member states: Romania, Sweden, Bulgaria and Finland.⁶ Illegal logging is an issue in all these countries and, in the case of Romania and to a lesser extent

« A recently logged primary forests in Finland, shortly after the cutting was stopped by local activists

Bulgaria, it also has a significant impact on domestic security because of the involvement of organised crime groups.

This report thus analyses illegal logging in the EU, considering the Union's double role as an importer and as a producer of illegal timber. From this perspective, the report details the main sources and routes, focusing on member states, Southeast Asia and Latin America. It then considers the legislative and operative framework at the member state and EU level, with details also on international institutions and treaties. It then assesses the obstacles in the fight against illegal logging, from an operative and a legislative point of view, finally debating the solutions being adopted globally – technological, but also concerning criminal justice strategies, programmes such as the EU's Forest Law Enforcement, Government and Trade Action Plan (FLEGT AP) and Voluntary Partnership Agreements (VPAs), and intelligence work.

1.1. DEFINITION AND OVERVIEW

Generally speaking, illegal logging, unsustainable logging and even deforestation are different concepts, that are strictly interconnected but differ: legal practices can be unsustainable, while illegal logging can cause significant harm to a country but have very limited impact on deforestation (for instance when it concerns tax evasion). For the purpose of this report, we will consider mostly illegal logging, focusing however on actions that can assure the sustainability of production and limit deforestation.

Defining illegal logging is however a complicated issue per se. The World Wildlife Fund (WWF) states that *illegal logging and related trade occurs when timber is harvested, transported, processed, bought or sold in violation of national or sub-national laws.*⁷ Offenses are thus varied: illegal logging is not only the clear-cutting of protected forests, but also exceeding logging quotas, unlawful management of forests (early cutting, for instance, or logging during nesting season), tax or VAT frauds, obtaining permits through corruption or the use of illegal techniques (clear-cutting when not permitted), among others. In this sense both logging and timber trade can be illegal, as offenses can consist not only in the act of cutting the wood, but in the different steps of the value chain – a missing transportation document, for instance, can be sufficient to identify timber as illegal.

A definition
of illegal logging

Detecting whether timber is legal or illegal is however very complex, for a number of reasons: in the timber industry of countries such as Brazil, forgery is widespread for both logging and trade permits.⁸ Due to often missing information across the value chain, it is complicated to trace the legal or illegal origin of timber, both outside and inside Europe: in particular, the so-called practice of "log laundering"

happens when legal and illegal logs are mixed and are thus it becomes impossible to find proof of the offenses. In addition, practices that are legal in one country can be illegal in another, where the timber is sold – thus making the purchase illegal.

Causes of illegal logging

Causes of illegal logging are different. While in Europe the majority of cutting is done to sell the timber, in Latin America deforestation is mostly driven by demand for commodities such as soy, while in Africa it relates largely to agriculture.⁹ In this sense, the creation or enlargement of legal and illegal mines, roads and infrastructures, and of cattle ranches and plantations (such as the well-known cases of soy in Brazil and palm oil in Indonesia) are among the most common occurrences. Players involved in the illegal timber trade are thus equally diverse; the cutting is often done by locals, sometimes part of small organised crime groups (as in the case of Romania¹⁰) or belonging to companies mixing legal and illegal logging activities. The client could be a mining company or an agribusiness or a national or international timber company; the main issue related to the latter is that such enterprises officially sell an apparently legal product thanks to log laundering, and are then often largely financed by European, American and Asian investors that are unaware of or cannot be linked to illegal logging.¹¹ Thus, tackling illegal logging also involves addressing the financial as well as the timber demand side, including the companies buying the timber for production purposes, without sufficient concern over its legality – as in the case of Ikea and the use of illegally sourced boreal pine from Siberia, for instance.¹²

Fighting illegal logging is thus a complex operation which requires different and mixed tools. Certification schemes could be effective, but their reliability and effectiveness need to be improved; while they generally prove better than business as usual, they often leave loopholes and have scarce monitoring capacity that allows illegal logging to infiltrate their system. This is the case for instance with the Forest Stewardship Council (FSC), which has received several criticisms over the years for standing by well-known illegal loggers from Europe to Asia and the Americas.¹³ Technological advancements can strongly help law enforcement, as in the case of DNA scanners and satellite imagery analysis, but legislative frameworks have to be largely empowered, in Europe and globally, for them to have an impact in courts. Mutual agreements, such as the EU's VPAs, can have a relevant impact, but they require a series of conditions to be met: investments towards illegal loggers must be reduced as much as possible, local enforcement has to improve and, overall, profits from illegal logging should significantly decrease. In this sense, combating illegal logging is a joint operation that must involve players from both the demand and the offer side.

2. ESTIMATES AND TRENDS

Missing data In past decades, there have been several attempts to estimate the dimension of illegal logging and its related trade patterns, but caution is needed when using the data because they are frequently incomplete, old or have been carried out using particular methodologies with different scopes or timeframes, or focusing on specific aspects of illegal logging.¹⁴ Categorising trends and estimates of the phenomena is also complex because there are multiple market layers for wood products and logging, frequently involving several stakeholders and channels (e.g., producers, pass-throughs, processing and consumer countries, supply chains and financial flows likewise depending on the nature, scope and structure of the markets) that hinder a clear calculation of the phenomenon, especially in producing countries.¹⁵

Nevertheless, illegal logging is generally considered to account for as much as 15 to 30 per cent of the total logging at the global level.¹⁶ The phenomenon has been pushed by the growing global wood products trade due to income growth, population expansion and globalisation, among several other factors.¹⁷ Already in 2009 sources reported¹⁸ that, each year, an area of forest equivalent to Austria disappeared as a result of illegal logging. The trend is particularly worrying in key tropical areas and non-EU countries (e.g., the Amazon, Borneo, Congo, Indonesia, Russian Far East).¹⁹

Illegal logging – and the related timber trade crimes – is among the most profitable crimes worldwide and is valued at US 51–152 billion dollars annually according to INTERPOL data.²⁰ Low awareness of the problem in past decades has worsened the current numbers. In producing countries, trade in illegal logging has traditionally encouraged corruption and tax evasion, thus limiting the resources to invest in sustainable development. In many importing countries, including EU member states, the tendency has been to favour cheap imports over legal ones, thus amplifying the phenomenon.²¹

Despite its growing attention to illegal logging, the EU is largely implicated in the problem, both as a supplier and as a destination for illegally sourced wood. It is thus considered one of the fastest growing offences in the EU.²²

2.1 EUROPEAN HOT-SPOTS

Illegal logging within the EU

« Crop fields and forests in the state of Santa Catarina, Brazil

On the supply side, the phenomenon in the EU is particularly relevant in the ancient forests of central and south-east Europe, in Sweden, Finland, Romania, Bulgaria and to a lesser extent in Poland and Latvia. Romania in particular has very often been in the spotlight for issues related to illegal logging; the country is home to more primary and old-growth forests than in any other EU member state and faces growing illegal logging²³ – this despite some significant progress made in recent years to address illegal practices and notwithstanding legal action by the European

Commission against the country to combat it. In Bulgaria, illegal operations made up around a quarter of all logging in 2006–2013 according to the WWF,²⁴ generating hidden revenue of over 50 million euros per year – and the phenomenon still ranks among the most serious criminal markets in the country.²⁵ Several Central and Eastern Europe member states have been clashing with EU institutions over forest management for many years and continue to do so: besides Romania, in 2018 the Court of Justice of the EU ruled that Poland had breached the EU's rules when it decided to increase logging rates in parts of the protected and extremely biodiverse Białowieża forest.²⁶ Scandinavian member states (both Finland and Sweden) are affected by the problem as well, despite having a reputation as some of the world's most environmentally progressive countries: while the legality of cutting is officially generally guaranteed, the use of practices such as clear-cutting and scarification make a large share of the Scandinavian forestry unsustainable.²⁷ The issue is also worsened by the lack of monitoring and protection of biodiverse forest habitats.²⁸

Demand for illegally sourced timber is pushed by an overall strong demand for cheap wood products feeding the significantly large timber industry in Europe. In the EU, the scale of this industry is indeed considerable: in 2018 about 397,000 enterprises were active in wood-based industries across the EU-27 bloc, representing 19.6 per cent of manufacturing enterprises in the European Union.²⁹ Eurostat considers that more than 2 billion tonnes of timber and related products (worth more than EUR 1 trillion) were placed on the EU market in the decade 2006–2016, of which 25 per cent was imported from third countries.³⁰

The EU receives its timber supplies from two main sources; it imports tropical timber mostly from Latin America and Africa, a very valuable wood type which the EU buys in relatively small volumes. It also purchases boreal timber, coming mostly from Russia, Ukraine, Belarus and the EU's eastern flank – which is cheaper, imported in bigger quantities and exploited for wider uses. As for what concerns the first type, according to WWF estimates³¹ the Union is the second largest importer of tropical deforestation in the world after China, and 80 per cent of this trade is triggered by a few European countries (Germany, France, Italy, Spain, the Netherlands, Belgium and Poland). As for the second, clearly the Russian war on Ukraine and the EU sanctions agreed thereafter (completely forbidding the purchase of Russian timber since March 2022³²) have blocked large volumes of wood entering the EU. However, for the boreal timber not covered by export bans or sanctions, some operators now struggle to provide a full assessment of the risk of illegality of that timber.³³

Trade in potentially illegal wood is thus a subject of strong concern for the EU. Some products of illegal logging are allegedly sold in the EU as certified timber³⁴ and products suspected to contain illegally sourced wood (e.g., furniture from China) can be found on the EU market.³⁵ In some cases, despite some products

The EU as an importer of illegal logging

being subject to penalties and import bans in some EU countries, they can make it to others. The case of Myanmar teak is emblematic in this sense: although penalised in Sweden and the Netherlands, it is traded by operators in Croatia, Slovenia and Czechia, and redirected to other EU countries that have an import ban. The Environmental Investigation Agency (EIA) revealed that nearly 30 Italian operators continued to export that same teak in 2020 and 2021.³⁶

2.2 GLOBAL HOT-SPOTS

Major players Dynamics outside of the European Union, specifically in Central Africa, Latin America and Southeast Asia, are even worse and have potential effects on climate change, in addition to biodiversity loss.³⁷ On the supply side, while illegal timber trade has been primarily and historically associated with tropical hardwood, Russia's rise as significant source of illegal timber is relatively recent but has been rapid.³⁸ Most of the tropical hardwood trade at risk of illegality has taken place along routes from countries where rapid growth in overall hardwood trade has occurred.³⁹ Illegal logging is indeed widespread across all tropical forest regions (representing 7 per cent of Earth's surface and home to well over half of living species on land). Although ranges do vary greatly, according to recent estimates⁴⁰ the percentage of illegal logging is highest in Democratic Republic of the Congo (DRC) (90 per cent), Indonesia (60–80 per cent), Cameroon (50–65 per cent), Brazil (50 per cent), Peru and Laos (35–80 per cent), and Myanmar, Papua New Guinea and Ghana (34–70 per cent).

A portion of illegal logging and related timber trade stems from illegal forest clearance. Around 31 per cent of tropical timber which is commercialised originates from illegal forest conversion.⁴¹ This happens partially for commercial agricultural production, particularly export-oriented: from 2000 to 2012, total and illegal conversion of forestlands for commercial agriculture contributed to 71 per cent and 49 per cent respectively of total tropical deforestation, experts consider.⁴² In the same period, 24 per cent of total tropical deforestation was caused by illegal conversion for agricultural exports (mainly in Brazil and Indonesia). Agro-commodities illegally produced for export markets include soy, palm oil, beef and timber from plantations, among other products, with a combined annual trade valued at USD 61 billion.⁴³

Other major importers of illegal timber On the demand side, responsibilities are wide-ranging. Until recent years, the EU, the US and Japan were the major importers of tropical wood products according to Center for International Forestry Research (CIFOR) estimates.⁴⁴ China and India have now surpassed them to become the two main global importers of tropical roundwood, together covering 72 per cent of global tropical log imports in 2014 compared to 28 per cent in 2000. Japan remains however the largest im-

porter of tropical hardwood plywood.⁴⁵ Approximately 70 and 67 per cent of the tropical roundwood exported, respectively, from Africa and Southeast Asia was destined to China and India in 2014; in 2000 these figures were 25 per cent from Africa and 34 per cent from Southeast Asia, according to CIFOR estimates.⁴⁶ As well as being one of the largest consumers of timber in the world, China is also highly involved in the processing and re-export of timber-products.⁴⁷ The increased imports of tropical roundwood by China and India are attributable to at least three factors. First, rapid economic growth in China and India has generally increased their demand for wood products; second, as an export-orientated economy, China converts primary wood products into secondary ones, relying on imports; third, traders may prefer exporting timber to markets characterised by less stringent regulatory frameworks (e.g., China and India) since legality requirements set by other markets are often associated with extra costs, certifications, etc.⁴⁸ Experts therefore consider⁴⁹ that the increased importance of China means that sensitive markets, such as the EU and the US, are becoming less important for producers, and their progressive policies less influential.



3. LEGISLATIVE AND OPERATIVE FRAMEWORK



A growing attention to illegal logging

In the past three decades,⁵⁰ a stronger multilateral action against illegal logging has emerged around the world. In addition to deforestation, forest degradation, desertification, soil erosion, threat to biodiversity, also violations of human rights, corruption and fraud have appeared as clearly linked to the phenomenon⁵¹ and have contributed to pushing many consumer countries (the US and the EU in particular) to adopt legislative and regulatory frameworks to contrast illegal logging. Producing countries have also been progressively involved in cooperation frameworks to tackle the problem, through agreements and stronger transparency and accountability mechanisms. Although wood-products consumption has increased globally and political attention towards illegal components is now relatively strong, the legislative and operational framework is highly insufficient *per se* and even when compared to other environmental crimes (e.g., waste trafficking, poaching).

Illegal logging at the European and global level is tackled through measures which are usually divided into those mostly focused on prevention (i.e., setting up a governance, transparency and economic framework preventing illegal logging, such as the FLEGT) and those using more traditional enforcement. There are however significant differences across different legislative frameworks around the world in mixing these two elements; in the European Union, for example, the policy framework insists mostly on preventive measures, while the United States has a stronger enforcement framework in place.

A variety of frameworks

The operational and legislative frameworks however vary considerably across the globe, and differ because of specific legal systems, particular environmental and social goals, levels of traceability along the supply chain, certification schemes in place, implementation levels and countries' enforcement capacities, among many other factors. Cooperation across countries and jurisdictions also touches upon sensitive issues, such as governance, transparency, accountability, trade and land tenure. Finally, alongside the need to frame what constitutes *legal* timber, the EU has recently started focusing on the pressing priority to recognise *sustainable* wood - a concept included in the upcoming revision of the EUTR, but whose definition is still complicated (as discussed later in the report).

The international, European and national legislative and operative frameworks are thus complex and multi-layered, and include several actors and institutions with different scopes and tools.

3.1 THE INTERNATIONAL FRAMEWORK

« An area in southern Scotland shortly after being logged to make space for a wind farm

At the international level UN convention bodies represent the widest reference frameworks. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in particular is an inter-governmental agreement aiming

at ensuring that international trade in specimens of wild animals and plants does not threaten their survival. CITES has a central role in controlling illegal logging globally for its high level of ambition and wide-ranging reach, with some species subject to illegal logging being indeed under the protection of CITES or on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species.⁵¹ The International Tropical Timber Organization (ITTO) promotes the sustainable management and conservation of tropical forests and trade in tropical timber and is regulated by the International Tropical Timber Agreement renegotiated in 2006 and in force from late 2011. Countries also work through international institutions to strengthen cooperation and policies in this field, such as the Food and Agriculture Organization (FAO, framing the sustainable exploitation of forests), the G7 and G20 fora (on several aspects of climate change and biodiversity), the World Trade Organization (WTO, on the commercial routes and rules) and the Organisation for Economic Co-operation and Development (OECD). International commitments (e.g., within the UN Framework Convention on Climate Change, UNFCCC) are also driving international moves, such as the recently agreed COP26 pledge joined by more than 100 countries to end deforestation and land degradation by 2030.⁵³ Emissions from deforestation and forest degradation have however already been addressed since the COP13 in 2008 through the first decision of the UNFCCC on the REDD+ mechanism and the creation of the UN-REDD body for its management.⁵⁴

Interpol is the most prominent actor from a law enforcement perspective; among its activities, it has kept countries consistently updated on technological innovations which can strengthen investigations (e.g., timber forensics, high tech tools to remotely monitor illegal logging sites, etc.).⁵⁵ Interpol is also involved in several international investigations on illicit logging and timber trafficking: amongst most recent cases its cooperation with the Thai police,⁵⁶ as well as its operation against forestry crime in Latin America and the Caribbean are particularly relevant.⁵⁷

The role of Interpol

3.2 THE EUROPEAN FRAMEWORK

Over the past decades a broad range of environmental legislation has been adopted in the EU; the bloc combined supply- and demand-side measures to improve logging activities, as well as cooperation schemes to address the problem along the supply chain. In 2003, the Forest Law Enforcement, Governance and Trade Action Plan (FLEGT AP) was endorsed by the EU Council as a way to strengthen law enforcement and promote trade in legally harvested timber and related products, and its impact has been the subject of numerous evaluations through the years.⁵⁸ The FLEGT AP contributes to achieving EU international commitments, such as the 2030 Agenda for sustainable development, the Paris Agreement, and the UN Strategic Plan for Forests 2017–2030. This Action Plan gave rise to the FLEGT (2013)

The rise of FLEGT

Regulation – addressing supply-side measures – and the European Union Timber (EUTR, 2010) Regulation, tackling demand-side measures.

In order to target hot-spots of illegal logging, the FLEGT Regulation foresees the already mentioned bilateral Voluntary Partnership Agreements (VPAs) between the EU and exporting third countries⁵⁹ – committing both parties to halt trade in illegal timber, notably with licence schemes at the partner country level and the issuance of FLEGT licences that certify the legality of what enters in the EU.⁶⁰ VPAs are in place with Ghana (the first such agreement, in 2009), the Republic of Congo, Cameroon, Indonesia, the Central African Republic, Liberia and Vietnam, while the EU has concluded negotiations and initialised a VPA with Honduras and Guyana. Negotiations are ongoing with Côte d'Ivoire, Democratic Republic of the Congo, Gabon, Laos, Malaysia and Thailand.⁶¹ However, only one FLEGT licensing scheme is currently active (with Indonesia).⁶² The EU also promotes collaborative mechanisms to address trade substitution or diversion that could undermine EU efforts to address illegal logging, such as in the case of the EU-China agreement in 2009.⁶³

The role of the EUTR

The EUTR on the other side establishes demand-side measures to address the problem, covering a broad range of timber products. The EUTR applies to those that are harvested and traded within its borders, as well as to timber from third countries entering the EU.⁶⁴ The regulation combats trade in illegally harvested timber and timber products (i) by prohibiting the placing of illegal timber and timber products on the EU market, (ii) by obliging traders placing such goods on the EU market for the first time to observe "due diligence"⁶⁵ by taking measures to verify their legality and (iii) by obligating traders to keep records including the names of suppliers and customers to ensure the traceability of products.

Findings of the FLEGT/EUTR Fitness Check⁶⁶ were published at the end of 2021. Despite recognising their important role and added value, the document emphasises several challenges that these instruments have faced. Concerning the EUTR system based on due diligence in particular, the Fitness Check revealed it could be better fit for purpose if improved and adapted to the changing global political context, while highlighting the very limited impact of VPAs under the FLEGT.

Recent developments in EU legislation

More recently, on 23 July 2019 the European Commission adopted an EU Communication on Stepping Up EU Action to protect and restore the world's forests,⁶⁷ aiming at improving the health of forests around the globe and promoting their sustainable and biodiverse coverage worldwide. Later in the same year, the adoption of the European Green Deal in December 2019 represented a watershed moment in environmental protection. As a flagship initiative of this new vision, the Commission has adopted the New Forest Strategy for 2030⁶⁸ and a stronger approach on environmental crimes. New categories of criminal offences are indeed

proposed in the revised Environmental Crime Directive (Directive 2008/99/EC), the main binding instrument of the EU in this field. The new provisions on sanctions and rules would strengthen enforcement to counter illegal timber trade, as one of the categories being introduced. The proposal also obliges countries to collect data and to support and assist people who report environmental offenses and cooperate with law enforcement.⁶⁹ This revision followed a public consultation between February and May 2021 on ways to improve the 2008 Directive, which gathered around 500 contributions. The revision of the directive is currently under discussion at both the Parliament and Council levels.⁷⁰ Together with the above-mentioned Fitness Check on the EUTR and FLEGT, the Commission has presented a new draft regulation on deforestation-free supply chains⁷¹ to guarantee that the products that EU citizens consume on the EU market do not contribute to deforestation and forest degradation within the EU and globally, thereby bringing down greenhouse gas emissions and biodiversity loss.

3.3. NATIONAL FRAMEWORKS

In the EU the formulation of forest policies is the competence of member states that have in place different national and regional laws regulating various aspects of forest management, including illegal deforestation.⁷² Notwithstanding that, the EUTR and FLEGT represent a major share of the regulations dedicated to illegal logging in member states, which is the reason why this report largely focuses on these regulations when analysing national frameworks.

EU rules and
national legislations

Overall, illegal logging frameworks in member states include, on the one hand, the implementation of the EUTR and FLEGT (covering the demand side) and, on the other hand, laws and enforcement systems aimed at preventing and sanctioning deforestation on their territory (covering the supply side). To a certain extent, the two aspects overlap as the EUTR introduces controls and sanctions to prevent illegal timber being placed on the EU market, which should thus create a general disincentive for deforestation to take place within member states.

Member states present substantial differences in terms of forest management traditions, relevance given to the matter of illegal logging and adopted approaches; and the introduction of a common EU timber legislation has so far reduced these discrepancies only to a very limited extent, as further discussed in the obstacles section. In order to implement the EUTR, all member states are required to establish national legislative frameworks which define for instance the set of sanctions applicable to relevant infringements. In addition, they also have to designate one or more Competent Authorities (CAs) responsible to enforce the Regulation, which are usually the authorities competent for forestry matters in the country.

Competent Authorities The institutional structure and competences of CAs vary significantly across member states. In most countries, Ministries are the designated CAs, for instance in the case of Spain (Ministerio de Agricultura, Pesca y Alimentación) or France (Ministère de l’Agriculture et de l’Alimentation), and in some cases they share competences with enforcement agencies (for instance in Italy, the Ministero delle politiche agricole alimentari, forestali e del turismo shares competences with the Arma dei Carabinieri). In the case of Greece and the Czech Republic, customs authorities are part of the CAs. In other member states, CAs include environmental inspectorates (in Poland, the Chief Inspectorate of Environmental Protection) or agencies competent on forests, environment or food (for instance, in Bulgaria, the Executive Forest Agency, in Denmark, the Danish Environmental Protection Agency and in Finland, The Finnish Food Authority).⁷³ In the majority of member states, the responsibilities of CAs include carrying out checks to verify operators’ compliance with the EU TR, issuing notices of remedial actions (e.g., warning letters) and enforcing interim measures, such as preventive temporary seizure of timber/products or prohibition of marketing of timber or timber products.

In some cases, there is a distinction between CAs responsible for importing operators (placing imported timber on the EU market) and those covering domestic operators (placing domestic timber on the EU market). In Austria, Norway and Germany two separate CAs were designated to deal with domestic and imported timber. In other countries, specific agencies are involved to carry out checks on domestic operators. For instance, in France, Latvia and Slovakia, regional CAs are responsible for domestic operators, while in Finland and Slovenia other national agencies (the Forest Centre and Forestry Inspection respectively) support the central CA on inspections of domestic timber.⁷⁴

These examples highlight that member states’ responsibility to enforce the EU TR can converge with their efforts to tackle deforestation within their territory, thus strong collaboration among relevant authorities is necessary to ensure efficiency and effective enforcement. In fact, member states reported that cooperation between CAs and other national and third-country authorities is key for the effective implementation of the EU TR.⁷⁵ In particular, they highlighted that cooperation between CAs and national police forces is especially important concerning domestic timber, while for imported timber cooperation between CAs and customs and CAs of other countries is very relevant. Nevertheless, only eight countries have legislation providing for cooperation between CAs and the police, and only seven for cooperation between CAs and customs. Despite this, several countries have reported that this is partially compensated for by informal collaborations.⁷⁶

Level of penalties across member states In their legislation, member states also foresee the type and level of penalties applicable to EU TR infringements, following the requirement to set out “effective, proportionate and dissuasive penalties”. Overall, studies show that EU TR pe-

nalties are too low⁷⁷; in fact even when high maximum penalties are provided for they are rarely applied, as later discussed in the obstacles section. The majority of member states (23 countries) can apply administrative fines and seize timber or timber products. Other types of penalties that can be also applied include imprisonment (17 countries), criminal fines (16 countries) and suspension of authority to trade (15 countries).

Scandinavian countries, including Denmark, Sweden, Norway and Finland, have among the highest administrative and criminal fines, often placing no upper ceiling. Belgium, Slovenia and Spain also have high administrative fines (> 100,000 euros), while Estonia, France, Ireland, Belgium, Latvia and Luxembourg can impose some of the highest criminal fines (> 100,000 euros). Concerning imprisonment, Greece can impose the highest sentence (twelve years) followed by Latvia (eight years), the Netherlands and Sweden (six years).⁷⁸ It is interesting to note that among the countries that do not apply criminal sanctions for EUTR violations there are for instance Austria, Bulgaria, Poland, Slovakia and Romania, where illegal logging is a prominent issue. In general, data show that member states tend to prefer the imposition of administrative sanctions rather than criminal ones, as further discussed later in the report.⁷⁹

In addition to the legislative and operational frameworks put in place to enforce the EUTR, member states have similar frameworks aimed at implementing the FLEGT Regulation. As this piece of legislation concerns timber sourced outside of the EU, in 11 countries the designated CAs coincide with national customs authorities, while in countries where CAs and customs are separate, formal agreements are in place with customs authorities to ensure that they can effectively cooperate with CAs for FLEGT implementation. Furthermore, also in this case, member states have identified the type of applicable penalties for FLEGT infringements which include administrative fines (in 18 countries), criminal fines (in 15 countries), imprisonment (in 19 countries), suspension of authority to trade (in 9 countries), seizure (in 22 countries), notices (in 9 countries) and warning letters (in 5 countries).⁸⁰

Focusing on the countries most affected by illegal logging on their territory, in several cases dedicated codes are in place for instance the Forest Act in Finland (1997),⁸¹ the Forestry Act in Bulgaria (1997 and 2011 revision)⁸² and the 2008 Forest Code in Romania updated in 2015.⁸³ In most instances, police forces are in charge of enforcing national legislation on illegal logging and are backed by other national agencies or inspectorates. Usually, police forces oversee criminal cases, while other agencies have administrative competences. For example, in Romania the national police and the National Environmental Guard are responsible for forestry infringements, similarly to Bulgaria where the main responsible bodies are the national police and the Executive Forest Agency.⁸⁴ Sweden also follows a simi-

National legislations and players

lar framework with cooperation between the Swedish Forest Agency and Swedish Police authority, while in Finland the Finnish Forest Centre monitors compliance with forest laws and only a few cases are investigated with support of police.⁸⁵ In some countries, these agencies correspond to the CAs designated to implement the EUTR, for instance in Bulgaria and Romania, a solution which can avoid overlaps and increase efficiency.

4. OBSTACLES



The obstacles hampering an effective fight against illegal logging are manifold and entail different aspects, including legislative loopholes and low sanctions, lack of knowledge and resources among relevant authorities, widespread corruption and political pressure, as well as operational difficulties in tracing the origin and demonstrating the illegality of timber.

4.1 THE DEFINITION ISSUE

Heterogeneous definitions within and outside the EU

One of the key issues in addressing illegal logging is establishing whether the timber placed on the market is legal and sustainable. Yet, there are no internationally recognised parameters for this, and a definition of illegal logging is similarly missing on the international level – a fact leading countries to adopt significantly different approaches. Illegal logging can range from narrow understandings (e.g., sourcing timber from outside authorised concessions or exceeding assigned quotas) to broad approaches encompassing infringements in the whole supply chain and including, for instance, violations against tax regulations. For example, the Australian Illegal Logging Prohibition Act adopts a narrower approach defining illegality only in relation to the act of harvesting or logging. In contrast, the Legal Timber Protection Act adopted by the USA includes also violations of trade and transport law, and the European EUTR includes all rights related to harvesting, tenure rights as well as trade and customs laws.⁸⁶ Nevertheless, the EUTR does not provide a definition of the phenomenon *per se* but leaves the responsibility to define legality up to the country of harvest based on its regulations and the international conventions the country has signed.⁸⁷ Even though the Regulation outlines the categories of laws that are relevant (“applicable legislation”), it does not identify the exact laws to be complied with, leaving space for different interpretations across countries. Ultimately, this approach uses the applicable legislation in the country of harvest as the benchmark to define illegal logging, and thus creates a complex picture where different understandings and definitions of the issue coexist. The political context in the producing country is critical as it determines the definition of legality, and situations of political instability might create significant issues. For instance, in the case of Myanmar, the military coup in February 2021 has been associated with a high risk of severe deforestation. It has also halted the reforms aimed at strengthening the timber legality verification system that were initiated by the government in 2016, following several injunctions from EU countries and the Common Position of EU CAs.⁸⁸ In 2021, as a result of the military seizing power, the EU decided to impose a ban on Burmese timber by making it illegal for EU businesses to import timber from Myanmar. As the military junta controls the state-owned timber enterprise, Myanmar Timber Enterprise, the ban also aims at cutting financing to the military leadership.

« The border between Finland and Norway, near the town of Karasjok

The lack of clarity in the EUTR definition of legality can be very challenging also for the implementation of due diligence, a major pillar of the EUTR requiring operators to track the origin of timber to ascertain to their best ability that wood placed on the EU market is legally harvested. The due diligence is exercised against the criteria of “illegal timber” that is defined in relation to the laws of the country of harvest, which can include a broad spectrum of legislation regarding the rights to harvest, environmental and forestry legislation, biodiversity conservation, payments for harvesting concessions and so on. It can thus be difficult for operators to identify and access this information, and the EUTR does not provide sufficient support in this regard. As a consequence, the process of due diligence is often not carried out effectively. In practice, most companies have accumulated large quantities of documentation from suppliers in countries of origin in the attempt to demonstrate compliance, most of which is considered irrelevant by CAs.⁸⁹

One of the key aspects of the EU timber regime revision currently ongoing is to introduce the requirement of sustainability, beyond that of legality, for timber placed on the EU market. This raises the need to introduce a clear definition of what sustainably sourced timber is, covering environmental but also social, political and economic aspects. To date, there is no commonly accepted definition in this regard, which leads to questionable practices still being considered sustainable. For instance, measures such as clear-cutting and scarification are applied in Scandinavia, despite its reputation for sustainable forest management.⁹⁰

4.2 TRACING THE ORIGIN OF TIMBER

Along with the lack of clear definitions, another major issue concerns the actual identification of illegal timber. In fact, several practices make detection and identification of illicit timber particularly challenging. For instance, countries such as China and Vietnam process and re-export large quantities of their timber imports, including illegal imports; in these cases, it is complex to prove that the wood was illegally harvested in the country of origin.⁹¹ Moreover, offenders use different ways to launder illegally logged wood – for instance, by exporting timber from the country of origin to country B and then re-importing it into the country of origin as a “legal” import from country B. Another among the most common laundering techniques is to mix illegally logged wood with legal wood at various stages of the supply chain (e.g., during forestry operations, transport or at the mill). However, there are plenty more – in total the United Nations Environment Programme (UNEP) and Interpol identified 20 schemes to launder illegal wood.⁹²

In addition to this, other schemes are used to circumvent legislation and bans, such as the so-called “leakage” of illegal logging – that is, when country A im-

**The concept
of due diligence**

**Log
laundering**

**Leakage of
illegal logging**

poses an export ban on country C because it is trading illegal logging, but country C exports timber to country B from which illegal wood still reaches country A, defeating the purpose of the ban. An example of illegal logging leakage is for instance that of Myanmar exports to the EU; in fact, despite the Common Position and the ban imposed by the EU in 2021, entry points have shifted but imports have not reduced in volume. In particular, while imports significantly reduced in countries like the Netherlands, Germany, Belgium, Slovenia, France and Denmark, they increased in the Czech Republic, Italy, Croatia, Greece and Sweden. The EIA showed that Croatia and Italy in particular became main entry points for Myanmar timber, which was then exported to many other EU countries that had dropped direct imports from Myanmar.⁹³ Nevertheless, the leakage of illegal logging is not always a deliberate criminal scheme but is also a natural phenomenon associated with global timber trade as operators might inadvertently import illegal wood or wood products, hence requiring more integrated measures to avoid illegal timber from entering the EU market (compared for instance to imposing a ban on a single country).

4.3 INTERACTIONS WITH OTHER AREAS OF CRIME

Document fraud and corruption

In this already complex context, document fraud and corruption also play a prominent role. Falsifying the origin of timber in customs papers or other document forgery is often at the basis of illegal activities. At the same time, corruption is endemic in illegal timber trade and is deemed to be one of the greatest challenges to legality verification in the timber supply chain.⁹⁴ The global annual cost of corruption in the forestry sector is estimated at 29 billion dollars; and bribery (to obtain for instance logging permits) is the most common form of corruption, followed by fraud, abuse of office, extortion, cronyism and nepotism.⁹⁵ Many timber-rich countries are prone to political interference and corruption because the government is the main landowner and actor overseeing logging matters, including public tenders, concessions and licenses – an issue particularly problematic especially in countries with deep-rooted accountability and governance issues.⁹⁶ Within the EU, for instance, corruption in Romania is partially led by a non-transparent recruitment process of forest staff, and in Slovakia a small number of powerful players influence the whole forestry business.⁹⁷

Other types of crime are also deeply intertwined with illegal logging, namely organised crime, money laundering and fiscal fraud. In particular, the increasing involvement of organised crime groups and the extensive translational activities they pursue represents one of the main challenges to enforcement, particularly because of the mismatch between the resources and techniques used by such groups compared to those available to enforcement authorities.⁹⁸ At the EU level there is an apparent lack of significant forest crime cases involving

big players and organised networks. This is partly because the judicial and enforcement systems focus often too much on small-scale loggers and activities driven by poverty and need, rather than those perpetrated for profit by companies or organised crime, which are less frequent but have far greater implications in terms of damage.⁹⁹

4.4 GAPS IN EUTR IMPLEMENTATION

In this challenging scenario, the implementation of the EUTR represents the primary tool for EU member countries to tackle illegal logging. Nevertheless, looking at the Regulation, studies have highlighted a generally low level of implementation and significant discrepancies across member states, also in terms of sanctions imposed and resources allocated.¹⁰⁰ For instance, checks on operators are not applied systematically and largely depend on resources available for CAs, with data showing that more than half of member states carried out checks on only between 0.3 per cent and 3.1 per cent of importing operators.¹⁰¹ Overall, budgets allocated for EUTR implementation are low and at least ten member states do not have a dedicated budget, while most member states reported having less than 20 people working on EUTR enforcement – usually as one of many responsibilities.¹⁰² Penalties are also too low and applied too infrequently to act as an effective deterrent. For instance, even though several countries set a high maximum level of fines, many did not set minimum levels or they are very low (in some cases tens or hundreds of euros) and usually the fines imposed fall within the lower end of the spectrum. This makes illegal logging a low-sanction and high-earning area of crime, particularly appealing to organised crime. In addition, inconsistencies in implementation of the EUTR between member states can lead to severe market disruptions. Companies located in countries with a stricter level of EUTR implementation might suffer a comparative disadvantage, which could create an incentive for operators unwilling to comply with the EUTR to target member states with weaker enforcement to introduce and trade illegal timber on the EU market.¹⁰³

As mentioned, illegal logging is often connected to corruption, money laundering and organised crime groups, but also to violence, as shown by the six foresters killed in Romania and the 650 people wounded in violent attacks on staff and activists.¹⁰⁴ Considering this and the extensive damages to the environment, economy and society that illegal logging creates, the use of criminal law could be applied more systemically, given the higher degree of social disapproval it entails compared to administrative measures. Yet such is not often the case; most member states seem to prefer relying on administrative sanctions rather than criminal measures as they only require approval from administrative authorities and not a court ruling by a judge.¹⁰⁵ In practice, cases transferred by forest auth-

**Missing elements
in the implementation
of the EUTR**

**Corruption, violence
and organised
crime groups**

orities to law enforcement agencies are often not investigated, not considered by courts or handled too leniently.¹⁰⁶ It is also relevant to note that EUTR violations were not included in the 2008 Environmental Crime Directive, a shortcoming that the new ECD proposal aims at fixing.

The reasons leading courts to not properly address illegal logging cases include lack of awareness, lack of interest or specialisation among persecutors and judges for illegal logging cases, as well as difficulties in providing reliable and actionable evidence to formulate the accusation (i.e., burden of proof).¹⁰⁷ In fact, the nature of these illegal activities makes it particularly difficult to collect evidence; for instance in Romania there is a marking-based checking system which is very time consuming and makes offences particularly hard to prove in court.¹⁰⁸ The legal procedures take such a long time that the evidence (i.e., the markings – an imprint of an iron hammer on the wood) becomes degraded and not valid to be used in court. In addition, when the markings are falsified the law requires for the responsible person to be identified – which is nearly impossible to establish.¹⁰⁹

Lack of specialisation Other obstacles include the lack of training on illegal logging (both on the nature of the phenomenon and the relevant legislation) among relevant authorities in member states, which keeps awareness and expertise low, making it even more challenging to collect solid evidence and leading to inefficient investigations. The rare use of forensic methods, the lack of equipment and the lack of knowledge and high cost of scientific techniques also contribute to poor enforcement. Low salaries for forest staff and inspectors also increase the chances of corruption.¹¹⁰ Finally, overregulation and burdensome bureaucratic procedures in forest management represent a challenge for the fight against illegal logging, since they increase the need for specialisation and the time required, on the part of already overly burdened agencies and administrations.

Lack of cooperation Cooperation among relevant authorities also represents a key challenge. At the national level, prosecutors, investigators and forest staff are often not sufficiently in contact with each other. There is also a lack of cooperation between EUTR CAs (usually with administrative competences) and other enforcement authorities, namely the police, customs and tax authorities, which leads to inconsistencies and prevents more efficient action.¹¹¹ This is also reflected in the lack of shared information and use of common databases, and it is an issue which becomes even more relevant in federal countries, such as Spain.¹¹² Difficult cooperation also takes place with countries of origin of timber, as it is complicated for relevant authorities and prosecutors to exchange legal information and collect evidence in third countries, partly due to lack of counterpart contacts, which contributes to the difficulty of bringing satisfactory evidence on illegal logging cases.¹¹³

4.5 SHORTCOMINGS OF THE CURRENT INTERNATIONAL FRAMEWORK

Finally, looking into the current EU and international approach to illegal logging there are two key shortcomings that should be noted. First of all, the political vision behind green transition and nature protection strategies places an excessive focus on replanting and reforestation actions, while leaving the protection of existing forests on the back burner. The issue with this approach lies in disregarding the fact that not all trees and forests have the same value for ecosystems, biodiversity and the climate, and therefore protection of the existing forests – especially primeval forests – should be clearly identified as the main priority.

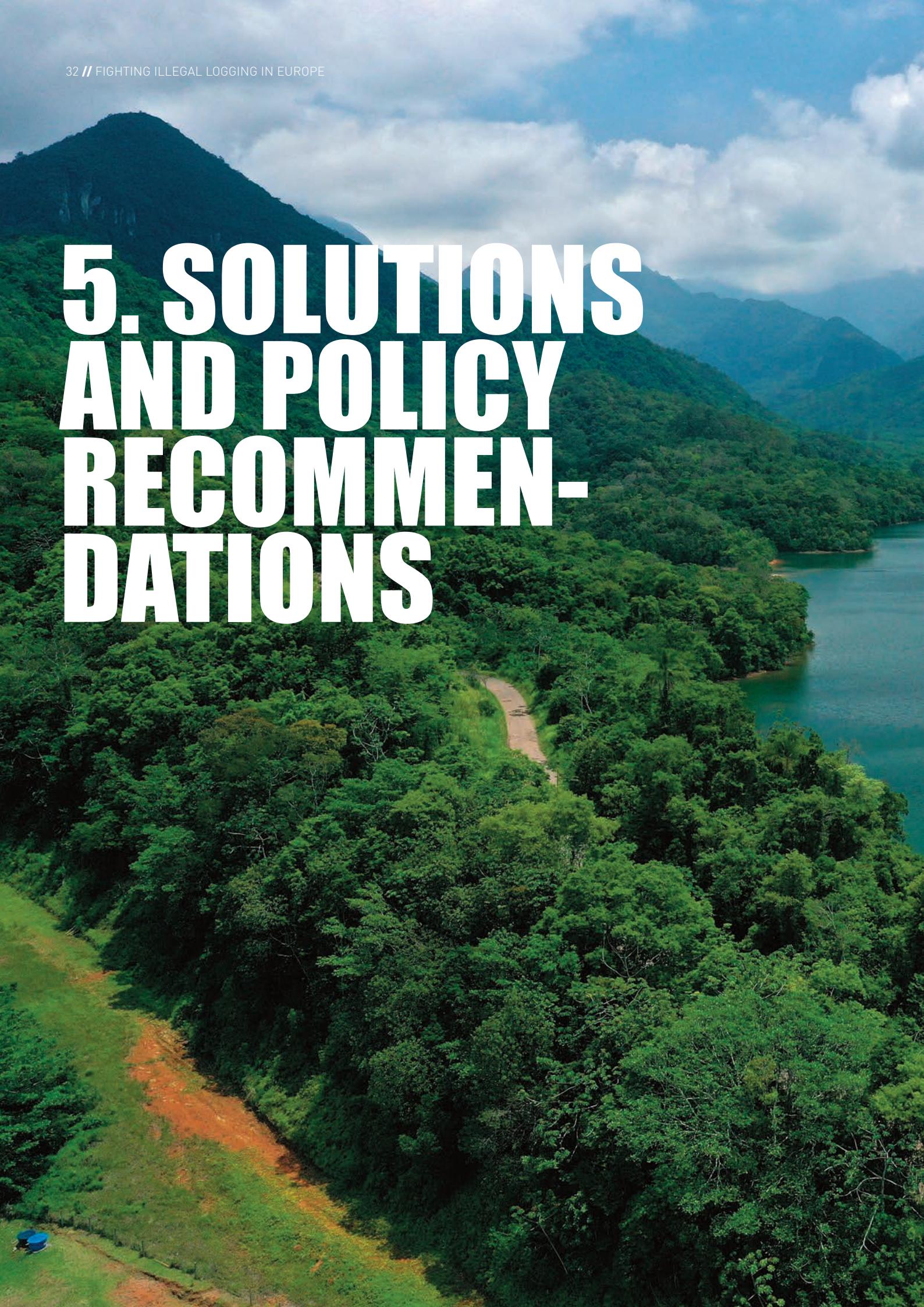
The second critical aspect concerns financial flows to the timber sector. As a result of blurred definitions of legality and sustainability and the numerous challenges in recognising timber sourced through illegal and unsustainable practices, the control over financial flows is very limited. In fact, there is a high risk that large financial flows, including those applying seemingly high standards of sustainability, *de facto* finance illegal logging activities. A notable example is, for instance, the Norwegian sovereign wealth fund whose attempt to limit investments in companies tied to illegal logging has faced numerous obstacles.¹¹⁴ Finding adequate solutions to improve the financing framework is therefore a matter of priority to effectively tackle illegal logging, yet the current EUTR revision seems to have overlooked this aspect – likely a significant shortcoming for the overall effectiveness of the Regulation.

Protecting forests
vs planting trees

The role of
the financial sector



5. SOLUTIONS AND POLICY RECOMMEN- DATIONS



The growing focus on illegal logging on the European and global level is making a series of new political, economic and technological tools available to the agencies and other players fighting against the practice. While DNA and isotope analysis is offering new tools to identify the origin of timber, international players once rarely interested in addressing illegal logging have started to focus on the topic (as in the case of China). Among all regions, the EU is particularly benefitting from the significant boost given to environmental policies by the Green Deal; it is thus witnessing a momentum that can lead to the significant upgrade of action against illegal logging that the EU (and the world) needs now more than ever.

In order to achieve this, the EU and international institutions will have to enable a series of key changes in terms of the legislative and operative frameworks, adoption of technologies, attention to new sectors of action, consolidation of current policies, development of new tools and overall improvement of international cooperation.

5.1 EU-SPECIFIC TOOLS

The measures that should be specifically adopted on the EU level are:

- **Boost member states' efficiency.** Most competences in the EUTR are still left to member states (and particularly to the CAs), but national capacities are still very low in terms of budget, specialisation, adoption of innovative tools, and often also in relation to the overall coherence in the action against illegal logging (i.e., coordination among agencies, consistency of policies, etc.).¹¹⁵ Considering that this strong role of national authorities will likely be maintained in the years to come, it will be key to strengthen the national ability to face illegal logging in the first place, at least for the countries that are more exposed to the issue (either as timber producers, as in the case of Romania or Finland, or as importers, as in the case of Italy or Belgium). This could be achieved, for instance, through the development of national strategies, which will take into consideration national specificities and boost coordination among agencies. Avoiding the fragmentation of competences (e.g., who is in charge of inspections and who is assigning fines) would be also particularly important. The National Recovery and Resilience Plans could be a relevant source of budget for this, but what has been presented so far shows limited proposals or interest for change in the forestry sector.¹¹⁶
- **Improve the implementation and use of existing EU tools.** As discussed, one of the key issues limiting the effectiveness of the EUTR is its incomplete implementation by EU member states. While all countries have established legal frameworks for overall implementation of the Regulation, the level of penalties, the interpretation of rules and the resources adopted still vary greatly among countries.¹¹⁷ In this sense, the existing tools could already be significantly improved through the harmonisation of penalties, which would at the same time

« A dam among forested hills in the state of Santa Catarina, Brazil

reduce the leakage of illegal logging from countries with stronger rules to those with weaker ones, as well as improve coordination among national authorities. In addition to this, other European pieces of legislation have proved particularly effective in fighting illegal logging: the Habitats and the Birds Directives, and the consequent institution of the Natura 2000 sites, have eased the involvement of the European Commission and action at European level in many cases, particularly in relation to the Białowieża forest in Poland.¹¹⁸ Yet, in several countries these Directives have a very limited role in national legislation concerning illegal logging and cannot be fully used by national authorities – this is the case of Romania, for instance.¹¹⁹ Since knowledge and application of these Directives are much more consolidated across the EU, their further adoption also for illegal logging could offer member states a quick and effective instrument.

- **Boost EU action with the adoption of new, more powerful tools.** Illegal logging is one of the most transnational among environmental offenses, making the impact of national action very limited, and European instruments more apt to the task. Considering the ongoing revision of the EUTR and the significant expansion of environmental policies, this also is the right time to deliver more EU-wide tools to counteract illegal logging.

Overall, action against illegal logging would strongly benefit from a greater involvement of the EU in terms of coordinating action and harmonising definitions – particularly of key items such as legality, sustainable practices and forest ecosystems. Among more specific tools, the promotion of capacity building and training among countries will be key to improve enforcement, addressing the widespread lack of specialisation among both enforcement agencies and the judiciary, while more EU-wide police operations could also increase the control over intra-EU timber trade. An increased involvement of agencies such as Europol, Eurojust and Interpol could be particularly relevant for this. The Directorate-General Environment (DG ENV) of the European Commission could also play a greater role in this, since the DG currently is the only one not performing inspections in member states, thus completely relying on national institutions (a fact that, due to lack of capacity, limits the effectiveness of its action). Such new tools could be contained in the new forestry Regulation,¹²⁰ but also in other pieces of legislation being discussed in these months, such as the new Directive on environmental crime¹²¹ (proposed on 15 December 2021 and still under discussion).

5.2 WORLDWIDE TOOLS

Aside from EU-specific tools, action against illegal logging would strongly benefit from a few crucial changes, which are equally valid for EU and non-EU actors:

- **Improve prevention.** Despite the current technological advancements and the

possible improvements in enforcement, reducing illegal logging will likely remain difficult (if not impossible) if corruption, political instability and poverty are not addressed, particularly in third countries and in fragile areas, such as the Amazon. Despite the limited efficiency of the FLEGT Regulation in limiting the trade of illegal timber, its greatest achievement is having opened a channel for dialogue with local stakeholders in third countries, increasing transparency and generally improving governance, thereby laying the foundations for more solid and effective action in the years to come.¹²² It will be fundamental to address illegal logging with a full understanding of the social and economic framework in the producing country, involving local communities and promoting coordination between prevention and enforcement. In this sense, strategies for crime prevention (checkpoints, gates for access roads, for instance¹²³) could go hand in hand with support to legality and the development of economic alternatives to illegal logging.

- **Spread the use of technology.** In recent years, technologies to fight illegal logging have improved and, above all, have become cheaper. The adoption of some of the instruments could be critical at least to preserve the most precious segments of the forest: networked sensors detecting suspicious noises in the forest are being employed against illegal logging in Romania, for instance.¹²⁴ Satellite monitoring associated with automatic scanning using artificial intelligence could signal areas of new deforestation on a weekly basis (using the free, easily available images provided by the Copernicus programme, for instance) or even daily (which will however likely require a payment for the service). More advanced, multispectral images (often free) could also give information about land use change and forest degradation. Apps such as the Romanian Sumal 2.0 are automating controls on documents, thereby reducing the need for specialisation by enforcement officers and increasing the accuracy of checks, while being relatively easy and cheap to develop.¹²⁵ Authorities such as the Spanish SEPRONA are developing scanners able to identify the origin of timber even using a smartphone;¹²⁶ this would allow for the already-existing DNA and stable isotope analysis to become mainstream through cheaper tracing systems.¹²⁷ In particular, these are some of the most relevant tools to track the routes of illegal timber trade; they can lead to an identification not only of the species, but also of the country and the region of origin through the correspondence of genetic tests and wood anatomy to reference samples. While the methods for analysis are becoming increasingly cheaper as well, significant efforts will be required to make them effective: new sample databases should be compiled, requiring substantial support from local authorities, while sample collection from suspicious timber should be quicker and easier than it currently is.
- **Focus on finance.** Financial flows have often been left aside in illegal logging investigations, and most forestry policies still do not address the issue. Yet, limiting the availability of investments going into illegal logging is one of the key elements to increase the cost of illegal timber and discourage offenders. This will however be one of the hardest tasks to achieve; the finance sector is one

of the least transparent in the EU (and in the world) and the situation has hardly improved in recent years. Furthermore, even players willing to rely only on legal timber will face significant difficulties in understanding which timber is truly legal and which suppliers are fully reliable, due to the many recognition issues discussed in the previous chapters. It will be necessary to improve overall transparency requirements at least for major players, to offer stronger and more available certifications for legal timber and include financial investigations into enforcement action. While the topic is not directly addressed in the new EU forestry proposal, it will be likely considered in other upcoming proposals by the Commission, such as new Delegated Acts of the EU Taxonomy and the new Corporate Sustainability Reporting Directive.¹²⁸

- **Promote international cooperation.** In its action against illegal logging the EU cannot go alone: the risk of leakage to other countries and the insufficient traceability of processed products can counteract the EU's efforts – which are also rather expensive from both an economic and a political point of view. Indeed, while a less cumbersome procedure than that of VPAs should be developed for cooperation with exporting partners, it will be equally important to deal also with other importers, the US and China in particular. While Washington's enforcement action is generally stronger than the EU's, the US lacks Europe's experience in prevention. The two systems could thus complete each other, especially if the role of international institutions (Interpol, the UN framework) is strengthened. China's role is also changing, as the country revised its forest law for the first time in more than 20 years at the end of 2019.¹²⁹ While it is not clear if this change will be properly implemented, it marks a significant change of direction that the EU could use to start a fruitful cooperation on illegal logging, which has been lacking so far.

Generally speaking, future effective action against illegal logging will require two major changes, which are already partially contained in current legislative proposals. First, the EU should abandon a still widespread silo mentality, leading to the separation of legal, enforcement, economic and political tools; all of this should be instead be deployed to mix prevention and enforcement at the same time. In addition, the EU should continue the change towards a holistic approach to environmental questions it has started with the Green Deal: for action to be effective, illegal logging should not be considered separately, but alongside environmental issues related to agriculture, land use and resource management. In this sense, the enlargement of the EUTR towards the inclusion of different commodities related to deforestation and forest degradation is perhaps one of the most relevant changes concerning the approach to the fight against illegal logging in recent years.¹³⁰



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