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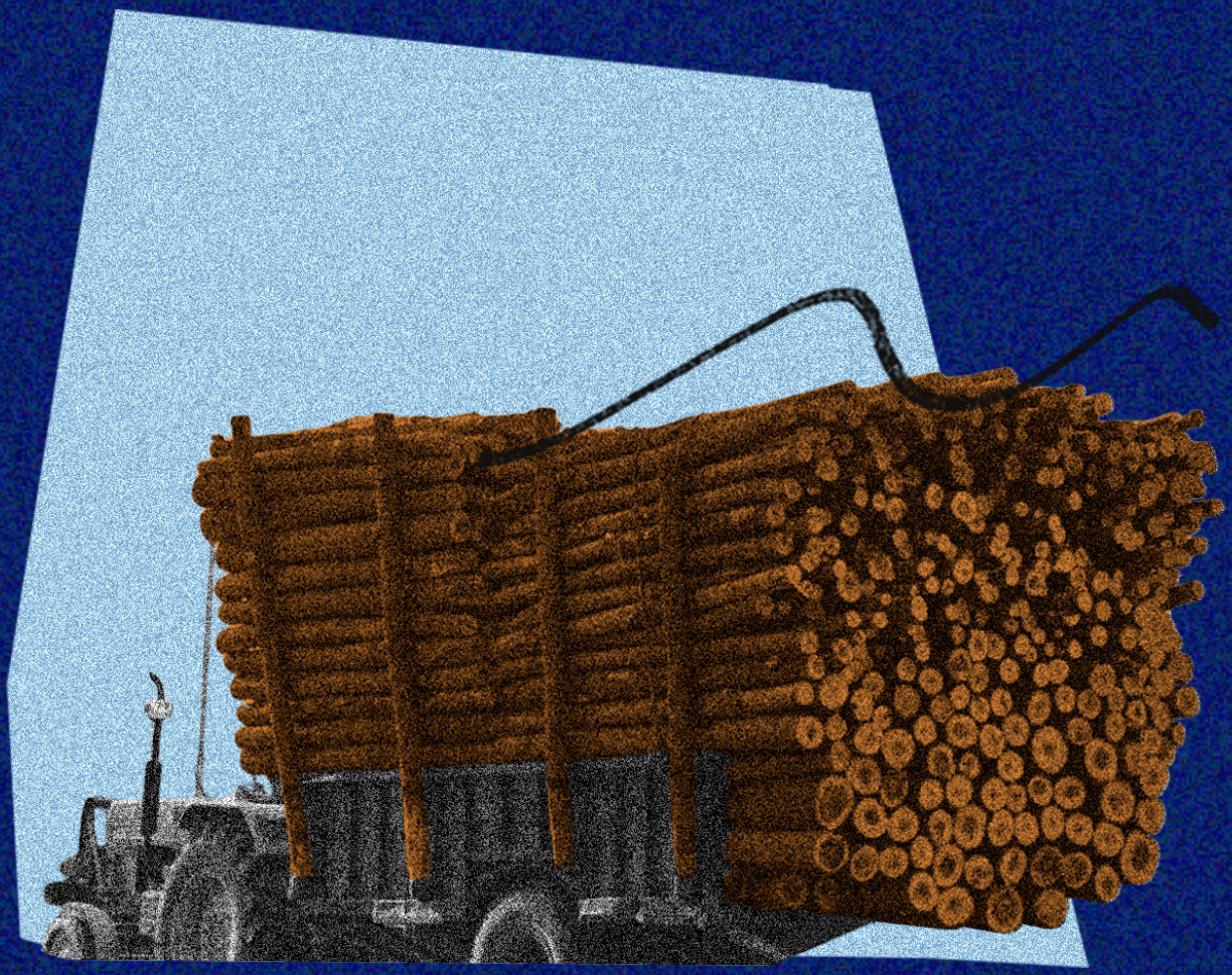

MARKETS AND FOREST:

Regulatory Opportunities in the Amazon

Report 2:

TIMBER

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Introduction

Regulating sectors that impact forests is essential to prevent, reduce, and combat environmental crimes in the Amazon. Illegality does not lie in natural resources themselves, but in how they are extracted, processed, transported, and traded. When markets for gold, timber, cattle, and land operate without effective regulation, illicit practices make their way into legitimate supply chains and often face little consequence. Strengthening the regulatory framework is a concrete way to address criminal activities driving forest loss.

This report draws on the study Markets and Forest (Igarapé Institute, 2025), which analyzed how eight countries in the Amazon Basin—**Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela**—regulate these markets. Countries in the basin are not starting from scratch. In each, there are rules, registries, and practices that, with adjustments, resources, or better coordination, can strengthen regulation. Many of these tools are little known beyond their national contexts; others are recent and not yet documented. This report compiles these initiatives and presents them as regulatory opportunities, illustrated with concrete experiences from the region.

This analysis does not assess the effectiveness of these tools or how they operate in practice, which would require dedicated field studies in each country. Its value lies in bringing together what exists but remains scattered, showing how different countries address similar challenges, and in offering options that can be adapted, combined, or strengthened to fit each context. Rather than judging what works, it invites exploration of what is available.

The report is organized into three parts: an overview of the timber sector in the Amazon, a set of regulatory opportunities illustrated by experiences from countries in the basin, and a final section synthesizing the patterns that emerge from this comparative review.

Context of Logging in the Amazon Region

Illegal logging is associated with deforestation, soil degradation, and biodiversity loss, and operates through mechanisms that exploit gaps in implementation and enforcement rather than the absence of regulations. These include the falsification of management plans, fraud in transport permits, and the clandestine trade of high economic value species.

The market for illegally sourced timber moves between USD 50 billion and USD 150 billion annually according to Interpol estimates. In the Brazilian Amazon, about 38% of harvested timber comes from irregular sources, a pattern that is also observed in other countries in the basin (*Markets and Forest*, Igarapé Institute, 2025). International demand, particularly from China, the European Union, and the United States, reinforces incentives for irregularly sourced timber to enter formal markets, exploiting recurring weaknesses in traceability systems.

The Amazonian forest sector is also characterized by high levels of labor informality, exceeding the global average estimated at 55%. In Bolivia, Guyana, Suriname, and Venezuela, the rates are even higher, with reports of precarious conditions, long working hours, and, in the most serious cases, forced labor and exploitation of migrant workers under schemes of economic dependency (*Markets and Forest*, Igarapé Institute, 2025).

Unauthorized extraction has been documented in protected areas of all countries in the basin, with recurring impacts on Indigenous and local communities. In Bolivia, Brazil, and Venezuela, the percentages of deforestation attributed to the timber sector exceed the global average by at least 10%, placing these countries on high alert (*Markets and Forest*, Igarapé Institute, 2025).

Although the region has forest regulatory frameworks with varying degrees of development, significant differences persist in the capacity to ensure traceability, prevent timber laundering, and sustain effective inspection actions. Corruption, labor informality, and lack of transparency in supply chains continue to create spaces where illegality can easily take root. Under these conditions, the countries of the basin have developed responses that deserve to be analyzed in their respective contexts.

Opportunities to Strengthen Regulatory Framework

Countries in the basin have developed practices to regulate forest harvesting, reduce the spaces in which unauthorized timber circulates, and expand oversight in areas where distance and the dispersal of activities make enforcement difficult. This report brings together initiatives based on experiences in **Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Suriname.**

1. Normative Frameworks as a Path for Regulating the Forest Supply Chain

Over the past decade, several Amazonian countries have updated their forest legal frameworks, incorporating more precise criteria for the authorization, transport, and sale of timber, as well as expanding the range of sanctions and clarifying institutional responsibilities. These normative advances do not, by themselves, resolve implementation gaps, but they provide a basis for regulating fragmented supply chains and reducing margins of discretion.

Colombia has a broad legal framework. Law 2111 of 2021 created six new environmental crimes, established a minimum continuous threshold of 1 hectare to classify illegal deforestation, and defined the financing of deforestation as a specific crime. This framework coexists with a set of administrative rules on licenses and transport permits, forming a legal structure that expands the range of responses available to address illegal logging. Its territorial implementation varies according to the capacities of each region.

In Ecuador, the forest sanctioning regime provides for measures such as seizure of products, suspension of activities, and revocation of authorizations. This range offers different levels of intervention, whose practical scope has depended on operational capacity and on how the competent authorities use these tools.

Measures have also been developed to improve the integrity of key actors in the supply chain. In Peru, Legislative Decree 1319 (2017) allows for the precautionary suspension of the license of technical professionals who submit false information in management plans. The Registry of Portable Sawmills, which requires GPS, seeks to limit the use of high-risk equipment for timber laundering.

These experiences show that the region has a legal basis that covers more stages of the forest supply chain than in previous decades. The central challenge lies not in the absence of rules, but in the gap between how they are designed and how they are applied in practice — a product of operational limitations, institutional fragmentation, and weaknesses in enforcement, which continue to contribute to the persistence of illegal logging.

When their application is sustained over time across authorization systems, transport rules, sanctions, and specific prohibitions, it is possible to reduce the spaces for illegal extraction and commercialization. This also strengthens institutional capacity in a sector in which legislation has advanced more rapidly than its implementation on the ground.

2. Traceability Systems as a Barrier to the Circulation of Illegal Timber

In the forest sector, much of the risk occurs after extraction and during transport, processing, and commercialization. Because these stages often take place far from the point of harvest and with limited state presence, traceability systems — digital, certifiable, or based on independent verification — are tools aimed at identifying inconsistencies without relying exclusively on field operations. These systems are designed to reduce discretion, generate comparable information, and limit the entry points through which unauthorized timber enters the supply chain.

In Colombia, the Ministry of Environment designed the National Forest Traceability System (SNTF) to monitor the timber product supply chain from origin to final destination. The system records the legal origin of timber and is expected to integrate with tools such as the Single Environmental Procedures System (*Ventanilla Integral de Trámites Ambientales*, Vital) and other administrative registries. The aim is to facilitate the verification of timber origin and support producer formalization. Its implementation has progressed unevenly across regions and faces limitations in connectivity, resources, and coordination among platforms.

This scheme is complemented by the platform Choose Legal Timber (*Elija Madera Legal*), which connects producers in compliance with regulations to buyers, with the purpose of facilitating the distinction between legal and illegal timber in the Colombian market. Its coverage and effective use have not yet been subject to systematic evaluation.

In Bolivia, the Authority for the Supervision and Social Control of Forests and Land (*Autoridad de Fiscalización y Control Social de Bosques y Tierra*, ABT) administers forest control systems that include the registration of harvesting authorizations, operational plans, and timber

transport permits, mainly through the Forest Control System (Sistema Integrado de Control de Bosques, Sicob). These instruments make it possible to manage permits and verify the movement of forest products. At stages where digitization and integration have not advanced, control still relies on physical records, which are more easily falsified.

In recent years, the ABT has advanced in modernizing processes and incorporating geospatial tools to support enforcement, in coordination with external monitoring platforms and technical cooperation initiatives. These systems contribute to organizing administrative information, strengthening oversight, and expanding control at different stages of the production chain, although their integration as a traceability mechanism remains under development.

Across the Amazon basin, the implementation of these systems faces recurring obstacles: connectivity challenges in key forest regions limit the operation of digital platforms, and records at processing centers, a central element for verifying product origin, are often voluntary or remain in physical format. In these links, spaces persist through which unauthorized timber can enter.

In the regional experience, traceability has relied on a combination of digital platforms, independent verification systems, and voluntary certification to track timber origin, identify inconsistencies, and limit the circulation of unauthorized products.

3. Territorial Enforcement Coordinated with Technical Information

Forest oversight in the Amazon is hampered by vast distances, the mobility of actors, and limited state presence in remote areas. In this context, several countries have adopted approaches that combine territorial presence, defined operational criteria, and the systematic use of technical information.

In Colombia, the Regional Autonomous Corporations (*Corporaciones Autonomas Regionales*, CAR) occupy a particular position within this structure. Under Law 99 of 1993 and Law 1333 of 2009, the CAR have the authority to suspend activities, impose preventive measures, seize forest products, and initiate sanctioning proceedings. Their territorial presence makes them one of the few actors with a permanent role across extensive forest areas of the country, especially where the national authority has limited operational reach. The CAR operate with uneven capacities, shaped by available resources, technical expertise, and local political contexts, resulting in varied responses rather than a uniform enforcement model.

Peru complements its field presence with the use of satellite monitoring tools. Alerts of forest cover loss generated by remote monitoring systems are cross-referenced with information on harvesting and transport authorizations integrated into the National Forest and Wildlife Information System (*Sistema Nacional de Información Forestal y de Fauna Silvestre*, SNIFFS), enabling the identification of areas that require on-the-ground verification. This arrangement operates within the framework of the National Forest and Wildlife Control and Surveillance System (*Sistema Nacional de Control y Vigilancia Forestal y de Fauna Silvestre*, SNCVFFS), in which information generation corresponds to the national level and field control rests with regional governments, so that the activation of oversight actions depends on coordination between these two levels.

The combination of on-the-ground presence and technical information expands the repertoire of tools available for forest enforcement in remote areas. Its reach depends on coordination between information generation and field-level enforcement, shaping operational arrangements that integrate technical detection with on-the-ground intervention.

4. Interinstitutional Coordination in the Face of Fragmented Oversight

Forest governance involves environmental entities, tax and transport authorities, verification and security agencies, and technological platforms. When these actors operate independently, gaps emerge that facilitate irregular extraction and the circulation of timber without legal backing. Interinstitutional coordination has become a recurring component in efforts to align mandates and provide greater coherence to responses.

In Brazil, coordination depends on the still-developing interoperability between forest management platforms and alert systems. The National System for the Control of the Origin of Forest Products (*Sistema Nacional de Controle da Origem dos Produtos Florestais*, Sinaflor) and the Forest Origin Document (*Documento de Origem Florestal*, DOF) record authorizations, transport, and trade of forest products, while the DOF+ Traceability module incorporates traceability functions along the supply chain. These platforms are complemented by satellite alerts from the National Institute for Space Research (*Instituto Nacional de Pesquisa Espacial*, INPE), which indicate areas under pressure. Despite differences, the gradual integration of these systems allows environmental agencies and, in some cases, tax authorities to work with compatible databases.

Shared access to digital records and risk signals facilitates the detection of inconsistencies, guides operations by the Brazilian Institute of Environment and Renewable Natural Resources (Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis, Ibama) and the Federal Police, and reduces some of the institutional fragmentation that has historically limited oversight. The scope of this approach and the integration between territorially grounded technical information and national databases depend on coordination between federal and subnational authorities, whose operational capacities vary across Amazonian regions.

In Colombia, the lack of coordination among environmental authorities, security forces, and judicial entities led to the creation, in 2017, of the National Council to Combat Deforestation and Other Environmental Crimes (*Consejo Nacional de Lucha Contra la Deforestación y otros crímenes ambientales*, Conaldef). This body does not administer forest instruments such as licenses, transport permits, or traceability systems, but instead seeks to coordinate the entities responsible for environmental and territorial control, including oversight of illegal logging. In this context, interinstitutional operations have been carried out in Amazonian areas, along with cross-border cooperation efforts with Brazil. Its role is primarily strategic and focused on institutional alignment; its effectiveness in forest regulation depends on coordination with the authorities that manage technical instruments, such as the CAR, the Public Prosecutor's Office, and the Environmental Police, as well as on sustained operational presence in the field.

These initiatives demonstrate that multisectoral coordination does not replace inspection or traceability, but rather complements them by connecting actors and information at different stages of the supply chain. In experiences where information sharing, alignment of procedures, and system connectivity among environmental authorities, verification bodies, transport entities, and security forces have occurred, responses have gained greater coherence.

5. Ecological Criteria in Harvesting Decisions

In several countries in the basin, decisions about where, how, and how much of the forest may be exploited have begun to incorporate ecological criteria into state regulation and into voluntary schemes supported by technical assistance.

In Ecuador, the Ministry of Environment, Water, and Ecological Transition (MAATE) defines the technical conditions for forest harvesting, including Sustainable Forest Management Plans, and establishes restrictions in areas of high conservation value or with specific environmental risks. To organize information and monitor activities, the country uses administrative systems such as the National Forest Control System (NFCS) and the Forest Administration System (FAS). These systems are not always fully integrated, and their implementation faces limitations in coverage, connectivity, and resources. Even so, they constitute an institutional basis for verifying whether authorized activities comply with the environmental criteria established by legislation.

In Suriname, the Sustainable Timber in Suriname (Sustame) project adopted a different approach: through technical support, capacity building, and a progressive certification process under the Forest Stewardship Council (FSC) standard, it supported communities in developing their forest management plans. This model does not directly condition state authorization for exploitation, but it introduces more stringent ecological standards into resource management. Because it operates outside the regulatory framework, its continuity depends on external funding, ongoing technical support, and the incentives offered by certified markets to sellers of sustainable timber.

In cases where ecological criteria were incorporated into permits, plans, and authorization procedures, they functioned as a technical incentive to guide exploitation in contexts of high environmental sensitivity. The existence of these criteria alone, whether in regulation or in voluntary standards, has not automatically translated into changes in extractive practices. The gap between what is provided for in the instruments and what occurs on the ground continues to depend on institutional capacities, available resources, operational continuity, and coordination among regulation, monitoring, and control.

6. Technical Guidelines and Codes of Practice Along the Supply Chain

In addition to normative frameworks and control systems, some Amazonian countries have developed technical guidelines, codes of practice, and sectoral guides aimed at standardizing procedures, reducing operational variability, and providing clear criteria for the conduct of public and private actors along the forest supply chain. These tools do not replace oversight or traceability systems, but they can complement them by translating legal obligations into concrete operational practices.

Guyana has a structured set of technical guidelines applicable to the forest sector. The Guyana Forestry Commission applies a mandatory Code of Practice for Forest Operations (2018), which establishes technical standards for the harvesting, management, and transport of forest products, integrating them into concession conditions and the approval of management plans. In addition, the Code of Practice for Timber Processing (2012), developed with support from the International Tropical Timber Organization (ITTO), establishes guidelines for industrial activities. These instruments are part of the regulatory regime and are linked to concession conditions and to the forest authority's verification processes, although their scope depends on supervisory capacity across different areas of operation.

Guyana also applies a model based on rules and procedures through the Timber Legality Assurance System (TLAS), developed under the Voluntary Partnership Agreement with the European Union, known as VPA–FLEGT. By integrating audits, records, legal verification, and chains of custody into a single standard, the TLAS establishes a coordination mechanism among the Guyana Forestry Commission, monitoring bodies, and independent verification entities. This common framework facilitates the operation of different entities under shared procedures along the supply chain. The VPA was ratified by Guyana in 2023 and is under implementation, with the first FLEGT licenses expected to be issued in 2026, according to official information from the Government of Guyana and the European Union. Core components of the system remain under development, leaving the TLAS as a framework still under construction, whose scope will depend on operational and political conditions as implementation advances.

In Colombia, the adoption of guidelines has focused on the other end of the forest supply chain: consumer markets. In 2022, the Ministry of Environment and Sustainable Development, in coordination with the Colombian Chamber of Construction (Camacol), developed a sectoral guide for the responsible purchase and use of timber. This instrument provides tools and guidance for architects, suppliers, and construction companies to verify the legal origin of timber, adopt sustainability criteria in procurement, and reduce the risk of incorporating irregular products into urban and infrastructure projects. The guide is voluntary, and its scope depends on its effective integration into company procurement processes.

Technical guidelines and codes of good practice can complement legislation by translating it into operational procedures and clarifying technical expectations across different segments of the supply chain. When operating in isolation, without monitoring mechanisms, consequences for non-compliance, or links to control and traceability systems, their impact has tended to be limited to formal compliance.

7. Community Forest Management as a Way to Expand Forest Governance

Several Amazonian countries have incorporated community forest management into their legislation, recognizing Indigenous and local communities as actors within the forest regime. Under different modalities, these norms allow communities to harvest timber resources from their territories through planning instruments and under technical conditions defined by the forest authority. This recognition takes place in a context in which about half of the intact forests of the Amazon basin are located in Indigenous and community territories, and where the institutional presence of the state is often limited. Integrating these communities into the formal forest regime is one of the strategies to expand forest governance in territories where the state alone has limited reach, although outcomes depend on the conditions under which this integration occurs.

In Bolivia, community forest management is recognized in legislation and established as a mechanism to organize forest activity in territories with limited state presence. This model is structured around medium-term General Forest Management Plans (PGMF) and Annual Operational Plans (POA), which are required for harvesting and define in advance the areas, volumes, and permitted practices. These instruments provide a technical framework for community forest management, taking into account communities' organizational and territorial capacities.

In Peru, community forest management has a consolidated legal framework based on the Forest and Wildlife Law (Law No. 29763, 2011), amended by Law No. 31973 of 2024, and its regulations, which recognize the right of Indigenous and peasant communities to use their forests under conditions of sustainability. Unlike the Bolivian scheme, Peruvian legislation requires the preparation of forest planning instruments,

management plans, and, in many cases, operational plans, with differentiated modalities depending on the type and scale of harvesting. This approach seeks to facilitate communities' legal access to forest resources. However, because authorizations granted to communities may be intermediated or captured by illegal extraction networks – used to give the appearance of legality to timber from other sources – several countries have developed complementary mechanisms. In Peru, for example, regional governments and the National Forest and Wildlife Service (Serfor), with support from international cooperation projects, have established provisions for entities such as the Technical Units for Community Forest Management and the Community Forest Monitoring and Control Committees to support planning, compliance with requirements, and territorial oversight.

In both countries, these instruments are accompanied, to varying degrees, by community oversight and monitoring mechanisms through which local organizations participate in territorial surveillance and the early detection of irregularities. These practices aim to expand oversight in areas with limited institutional presence. Their effectiveness has been linked to the availability of technical support, the protection of community actors, and coordination with the relevant authorities.

Community forest management constitutes one of the strategies for organizing harvesting in territories with restricted institutional presence. Regional experience indicates that these schemes are more effective when they are supported by adequate technical instruments, continuous institutional follow-up, and control mechanisms. In the absence of these conditions, formalization alone does not alter extraction or intermediation dynamics.

Lessons for the Region

The review of national experiences reveals consistent patterns that can guide action in different Amazonian contexts:

- **Existing forest legislation offers a repertoire of tools whose scope varies depending on the stage of the supply chain at which they apply.** Several countries already have specific criminal offenses, graduated sanctions, and controls targeting key actors. Implementation gaps are most evident in authorization systems, transport control, and the supervision of processing centers.

- **The actors responsible for validating legality within the supply chain also represent points of vulnerability.** Technical professionals who sign management plans, operators of mobile sawmills, and processing centers where records are often voluntary or kept in paper format are points at which laundering can occur. Regional experience suggests that some countries have introduced targeted controls for these actors, such as the precautionary suspension of licenses or mandatory georeferenced registration, to address these vulnerabilities without relying exclusively on field inspection.

- **Timber laundering occurs primarily outside the forest, where traceability can make a difference.** Regional experience associates the effectiveness of these systems with the integration of digital platforms, mandatory registration at key points, and independent verification. This effort can extend to foreign trade, where due diligence standards adopted by importing countries tie access to international markets to verification of legal origin.

- **Technology has expanded detection capacity, but turning alerts into enforcement action depends on institutional presence on the ground.** Entities closest to forest areas operate with uneven capacities, resources, and mandates, leading to uneven responses to what alert systems detect.

- **Records already generated at different stages of the forest supply chain can guide oversight if they are connected to one another.** These records typically feed into separate platforms that operate independently. In countries where integration has taken place, agencies have been able to cross-reference information and direct operations.

- **Licenses and harvesting plans have, in some contexts, served as leverage points for embedding environmental conditions into extractive practices.** Whether they lead to changes on the ground has depended on institutional capacity and coordination among regulation, monitoring, and control.

- **Codes of practice and sectoral guides can reduce discretion in segments of the supply chain where direct oversight is difficult.** By standardizing operations along the chain, they provide clear procedures for public and private actors. Their effectiveness has been limited where they operate without monitoring mechanisms or consequences for non-compliance.

- **Community forest management makes it possible to incorporate communities into territorial oversight.** When these schemes are supported by appropriate technical instruments, institutional backing, and community oversight mechanisms, they increase the capacity to detect irregularities. In the absence of these conditions, formalization alone does not alter intermediation dynamics.

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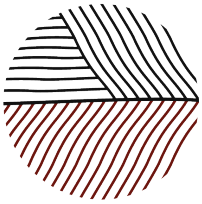

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