





midst the destructive pressures of our modern economy, Indigenous peoples have succeeded in preserving the Peruvian Amazon's continuous forests, lakes and rivers. Recently, the notion that Indigenous peoples are the primary guardians of the forest has gained recognition, brought to life by ideas around their botanical knowledge, traditional medicine and sustainable practices. However, this protection also depends on these peoples' unbreakable resistance. What remains of the Amazon biome is there thanks to the will of the Indigenous peoples to defend their territories, a will that has not wavered in five centuries of invasions, kidnappings, tortures and murders linked to colonial and republican exploitation.

The ForestLink project, a collaboration between the Peruvian Indigenous organisation FENA-MAD¹ and Rainforest Foundation UK (RFUK), seeks to strengthen this defensive and protective work that many native communities in Madre de Dios have structured around self-led 'Forest Observatories'. On the one hand, ForestLink has provided easy-to-use technology, allowing community monitors to send real-time alerts about illegal activities in their territories, even from isolated areas without mobile networks or internet access. On the other hand, FENAMAD has integrated this system into its advocacy and legal action methods. In practice, this enables the

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organisation to connect alerts from the ground with the relevant authorities to obtain a response and promote law enforcement. These achievements are promising in the current global context, where effective forest protection strategies are urgently needed to mitigate climate change and preserve ecosystems and biodiversity. This model is also cost-effective, highly adaptable to other contexts and, most importantly, originates from the Indigenous movement itself.

Threats to peoples and territories

Since the arrival of European conquerors in South America, the Amazon has been the object of greed. Today, ethics, international law and numerous national regulations condemn illegal economic activities as social and environmental crimes. Nevertheless, they continue. On the contrary, the Amazon is a hotspot for minor and major crimes committed by individuals and criminal organisations, most of which go unpunished due to the authorities' complicity, negligence or lack of resources.

In Madre de Dios, the two main environmental crimes are illegal logging and illegal mining, which both represent constant threats and violence against Indigenous environmental defenders. It is estimated that at least two-thirds of the wood traded on the domestic market and exported by Peru comes from illegal logging.

This is primarily due to a concession system that makes large tracts of national territory available to logging companies without a state counterpart capable of monitoring and enforcing the law in these areas. The legal framework for logging within Indigenous communities is also complex and culturally inaccessible. According to Peruvian law, native communities can only exploit timber resources by obtaining contracts in which the state 'cedes' them the use of this resource. This is effectively a distorted interpretation of collective Indigenous rights, considering timber is an integral part of their ancestral territories.

The fragility of regulations and their inconsistent and arbitrary enforcement, naturally respond to powerful vested interests embedded in the Amazon and with influence in national politics. As a result, the Peruvian forestry sector is characterised by a widespread fragmentation and political vulnerability of forest management institutions. All of this encourages the irregular extraction and over-exploitation of timber resources through fraudulent or abusive timber sale contracts with third parties for absurdly low prices or through the theft of timber from native communities.

In response, communities can do little more than monitor their boundaries, assuming costs and risks (that public authorities should bear) and reporting illegal activities and timber theft to the authorities. However, in prosecution processes, communities themselves risk being sanctioned and subjected to hefty fines, due to a bureaucratic logic that substitutes crime prevention with the management of proven infractions, focusing on the weakest links in the chain. At the same time, the intimidation and murder of community members and local authorities when they oppose illegal loggers are common in Peru.

Furthermore, mining activities represent one of the greatest threats in the Madre de Dios region. In the Madre de Dios River and its Andean tributaries, permanent mining sites have gradually expanded, encroaching upon forested and aquatic ecosystems as well as Indigenous territories. Illegal mining has had severe social and environmental consequences. Between 2010 and 2017, this activity led to the deforestation of approximately 65,000 hectares of forests in Madre de Dios, becoming the region's primary cause of forest cover loss. In a more limited period, between 2017 and 2018, illegal mining camps emitted 1.2 million tons of carbon dioxide, equivalent to nearly 24,000 affected hectares, exceeding the

national metallurgical industry's emissions by 64%. Illegal mining also currently places Madre de Dios at the top of the list of areas most affected by deforestation nationally.

Mining activity also has adverse and lasting effects on the population's health and the future of Indigenous children. The mining has mobilised significant amounts of mercury and other heavy metals into the water and has reached the human population. This is particularly serious for Indigenous riverine peoples who use water from lakes and natural streams, and for whom fish is an essential source of protein. Recent studies state that the Indigenous population has much higher levels of mercury than the non-Indigenous population and far above the maximum healthy limit established by the World Health Organization (WHO), with serious consequences for their health and development.

Similar to logging, mining activity in Peru has led to a degradation of the rule of law, which is dangerous for those seeking justice. It is worth noting that, according to estimates by Global Witness, between 2012 and 2021 at least 51 environmental defenders were killed in Peru, with half of them being Indigenous. This does not even account for those who are frequently intimidated and suffer other forms of violence for defending their territories against economic activities that deplete them.

In this context, communities and FENAMAD face a threefold challenge: to monitor their territories and repel illegal activities; to obtain timely and effective responses from the state in fulfilling its duty to prosecute crime and protect fundamental rights and environmental health; and to share information and coordinate efficiently and securely between remote and resource-scarce communities and their regional organisation.

The ForestLink Project and the Indigenous Forest Observatory in Madre de Dios

The first Indigenous Forest Observatory was established in Ucayali in 2008 to assist communities in entering into trade agreements with third parties on fair terms, especially regarding the sale of timber, where fraud is rife. As a result of this initial experience, over the following decade, more Forest Observatories were established in other Amazon regions and have become more ambitious as technical and legal bodies of Indigenous organisations that not only work on forestry issues but also

address a variety of challenges related to communal territories. The Interethnic Association for the Development of the Peruvian Rainforest (AIDESEP) established a National Indigenous Forest Observatory in 2012, encouraging regional movements to follow suit, and community level observatories began to be established that year as well.

FENAMAD, for its part, established its Forest Observatory in May 2013. Subsequently, in 2016 the observatory adopted the ForestLink system, developed by RFUK, to facilitate the documentation of illegal activities and encourage a more efficient state response to these cases.

ForestLink includes an easy-to-use mobile application that allows community observers to gather rigorous and georeferenced information and send it in real-time via satellite from remote forest areas where mobile and internet networks are unavailable. FENAMAD receives these alerts and centralises them in a single platform, allowing it to follow up on each case and identify trends. The innovative features of the system thus include:

- Real-time connectivity via satellite.
- End-to-end digitalisation of the process, from generating the alert to case resolution.

- Production of standardised and reliable information, as data entry forms are based on legal framework provisions.
- Systematic and unprecedented aggregation of information directly from the field, providing a finer understanding of threats to the relevant territories.
- Integration of the digital system with FENAMAD's enhanced capacity for advocacy, legal action and urging authorities to respond to alerts.

As a result, the project between FENAMAD and RFUK provides a new technological tool within a mechanism already developed by Indigenous organisations to improve their territorial management. RFUK also provides **high-quality technical support** at a low cost to FENAMAD, adding value to the work and creating a relationship of allies and teamwork. Additionally, it responds to the weakest link in the chain, represented by the limited capacity and the need for more resources from the authorities to respond to Indigenous complaints and alerts.

In the last seven years, FENAMAD's Forest Observatory has materialised a strategic and territorial vision of Indigenous peoples, **achieving successful results such as**:



Identifying four active boundaries of illegal mining, beyond the most well-publicised and well-known enclaves in the region.



Conducting 20 operations with the presence of forestry authorities, police and prosecutors in response to alerts, resulting in the destruction of 23 illegal camps and more than 195 illegal devices between 2016 and 2020.



Training and official recognition of 101 community forest monitors between 2016 and 2023.



Community monitors have sent around **600** alerts through ForestLink since **2016**, contributing to combating illegal mining, logging and deforestation and improving coordination with government authorities.



In the native communities of Masenawa and Nueva Oceania, there have been **two judgments in favour of their members** and against illicit activities on their lands.

The fundamental impact of the project is that the participating communities have renewed hope of obtaining justice and have reaffirmed their willingness to monitor and defend their territories, seeing them not just as a resource but as the foundation of their cultural and individual identity. This strengthened confidence in their capacity to act has translated into greater recognition of FENA-MAD's value. For an organisation committed to defending collective rights, the importance of having political support from its grassroots communities is incalculable.

The Forestlink satellite alert system has proven its effectiveness by not presenting itself as a simple technological solution but as an integrated tool in a complex context that no technology in isolation could solve. Direct contact with the field and communities cannot be replaced by remote technology. The project's virtue lies in its approach to developing technology based on evidence from the field rather than imposing unilateral solutions.

Furthermore, the project has facilitated the coordination of local monitoring with effective state responses. This demonstrates that in Peru, it is possible to summon the justice system with tangible effects on the ground. From the state's perspective, it also proves that having alerts provided by citizens allows for a more comprehensive understanding of illegal dynamics and enables timely and relevant responses. All of this has helped identify the weakest links and bottlenecks in the justice system (including police, prosecution and courts) in dealing with environmental crimes in Madre de Dios, highlighting the crucial role of citizen action.

Outlook: A Model with Enormous Potential

The ForestLink project demonstrates that a relatively modest investment of philanthropic funds can have profound impacts on the ground. With similar resources, it would be possible to replicate this experience in a wide range of contexts, as evidenced by the fact that ForestLink already operates in seven countries besides Peru.

To achieve the rights of Indigenous peoples, a national and even global strategy for financial and institutional protection of Indigenous territories is needed. This requires mobilising the political and monetary resources to support monitoring structures' technical and logistical functioning, good governance of Indigenous organisations and the transformation and improvement of state control and surveillance institutions. Internationally, this should be explicitly part of the climate and biodiversity agenda.

Considering the above, it is clear that the best course of action will be one that gives a greater voice, guarantees and decision-making capacity to Indigenous communities and peoples, and strengthens the link between them and the organizations that they have created autonomously. According to this perspective, to ensure the strengthening and adequate sustainability of regional forest observatories, it is essential that funds support four key areas:

- The monitoring and alert system, including remuneration of community monitors, in the form that communities choose.
- 2. The cost of the system for responding to alerts, including the follow-up of complaints and expediting judicial processes.
- The cost of the legal consolidation of Indigenous territories, from statutory updates to changes in titling regulations.
- The operating costs of Indigenous organisations and their political work, which supports broader justice and conservation strategies.

In Peru, the State could cover the first two areas through a modification of investment mechanisms and cooperation conditions of the National Programme for Forest Conservation, without affecting the programme's budget. The legal consolidation of territories and support for the functioning of Indigenous organisations would require increased international cooperation.

Moreover, in the framework of the Indigenous organisation's activities, it is imperative to collaboratively develop labour and commercial strategies with local communities to enhance the economic value of forest-derived products and services. This endeavour will yield collective resources to bolster community initiatives and improve overall quality of life.

Nevertheless, financial resources alone are not enough. Both domestic and international political commitment are indispensable to amplify the impact of Indigenous communities' efforts. Safeguarding the well-being of environmental defenders is of utmost urgency in the contemporary context. Equally critical is the acknowledgement and transformation of economic processes responsible for degrading ecosystems and ancestral territories. Advocating for Indigenous rights should be coupled with a genuine commitment to enact meaningful change.

