MAAP #105: From satellite to drone to legal action in the Peruvian Amazon

ACOMAT member flying a drone for monitoring. Source: ACCA.

Amazon Conservation, in collaboration with its Peruvian sister organization, is implementing a project aimed at linking **cutting-edge technology** (satellites and drones) with **legal action**, in the southern Peruvian Amazon (Madre de Dios region).

The project is building a comprehensive deforestation monitoring system with a local group of forestry concessionaires, known as **ACOMAT**,* who manage over 486,000 acres (see Base Map).

The **monitoring system** has three basic steps:

1) **Real-time** deforestation monitoring with satellite-based **early warning** forest loss alerts.*

2) Verify and document the alerts with **drone** overflights.*

3) Initiate a **criminal complaint** with the local environmental prosecuter's office* (or an administrative complaint with the relevant forestry authorities) if suspected illegalities are found.

Below, we describe **6 cases** (**A-E**) that have been generated from this comprehensive monitoring system.

It is important to emphasize that this type of monitoring system, featuring local forest custodians (such as concessionaires and indigenous communities) is possible to **replicate** in the Amazon and other tropical forests.

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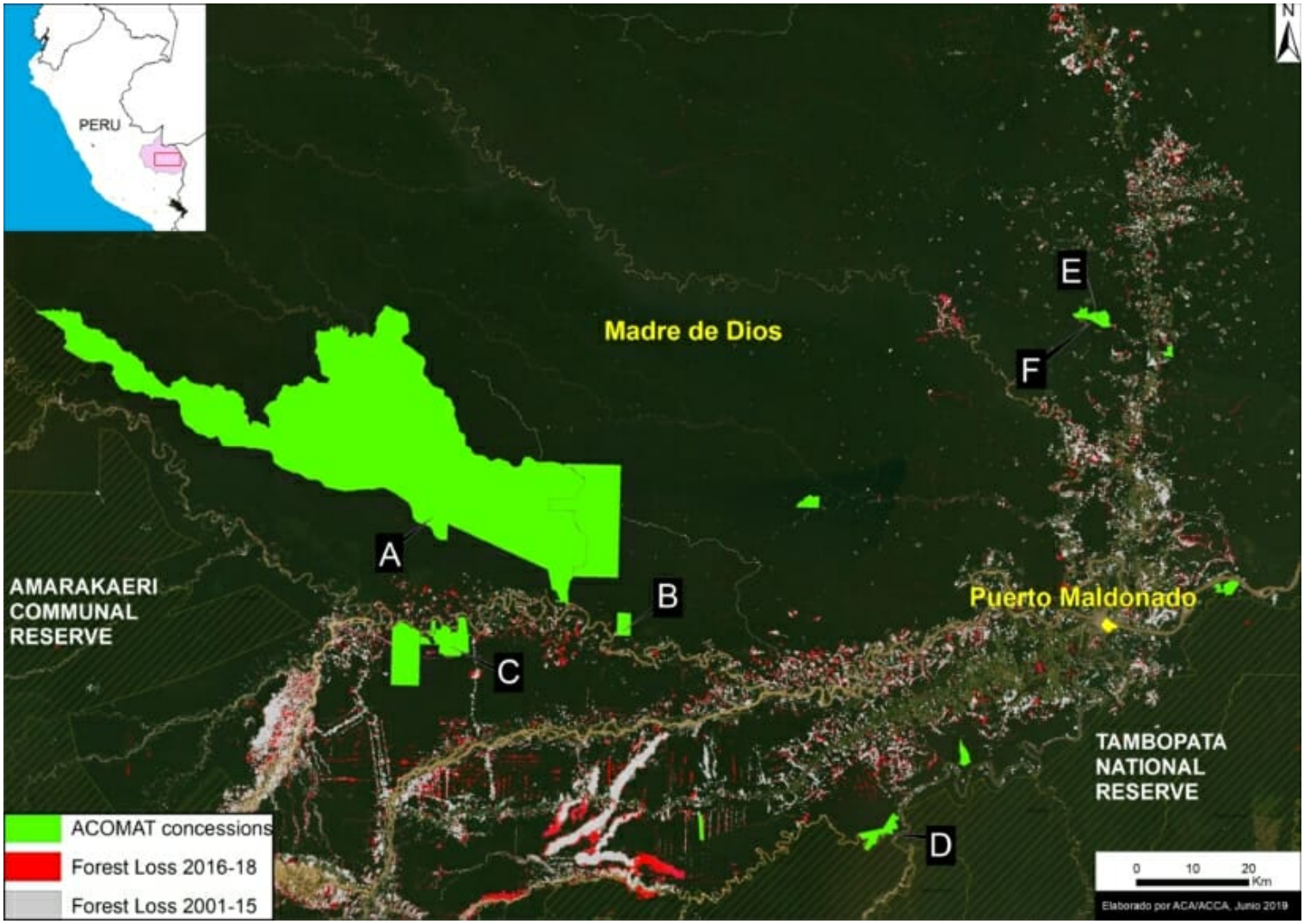
This innovative project is largely funded by the Norwegian Agency for Development Cooperation (NORAD) and International Conservation Fund of Canada (ICFC).



Base Map. The 6 Acomat cases (A-F) described in this report. Data: ACCA, MINAM/PNCB, SERNANP.

Case A. Illegal logging in the "Los Amigos" Conservation Concession

This evidence in this case was obtained from a drone overflight of an area that was the subject of an early warning forest loss alert within **Los Amigos Conservation Consession** (a conservation area where logging is not permitted). The overflight documented the **illegal logging** of the timber species known locally as tornillo (*Cedrelinga cateniformis*) within the concession (see image below). The drone images were presented to the environmental prosecuter's office in Madre de Dios as part of a criminal complaint.

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Case A. Illegal logging in the Conservation Concession “Los Amigos”, identified with a drone flying over. Source: ACCA.

Case B. Illegal mining in the “Sonidos de la Amazonía” Ecotourism Concession

The owner of the Sonidos de la Amazonía Ecotourism Concession received an early warning forest loss alert on his cellphone. She then organized a drone overflight and documented active **illegal gold mining** activity, including infrastructure (see image below). The drone images were presented to the environmental prosecuter's office in Madre de Dios as part of a criminal complaint.

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Case B. Illegal mining in the Tourism Concession “Sonidos de la Amazonía,” identified with drone images. Source: ACCA.

Case C. Illegal mining in the "AGROFOCMA" Forestry Concession

The owner of the AGROFOCMA forestry (logging) concession received an early warning forest loss alert on his cellphone. He then organized a drone overflight and documented active **illegal gold mining** activity, including infrastructure (see image below). The drone images were presented to the environmental prosecuter's office in Madre de Dios as part of a criminal complaint.

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Case C. Illegal mining in the Forest Concession “AGROFOCMA,” identified with drone images. Source: ACCA.

Case D. Illegal mining in the “Inversiones Manu" Forestry Concession

The owner of the Inversiones Manu forestry (logging) concession received an early warning forest loss alert on his cellphone. He then organized a drone overflight and documented active **illegal gold mining** activity, including workers and infrastructure (see image below). The drone images were presented to the environmental prosecuter's office in Madre de Dios as part of a criminal complaint.

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Case D. Illegal mining in the Forest Concession “Inversiones Manu,” identified with drone images. Source: ACCA.

Case E. Illegal logging in the “Sara Hurtado” Brazil Nut Concession

The owner of the Sara Hurtado Brazil Nut Concession received an early warning forest loss alert on her cellphone. She then organized a drone overflight and documented active **illegal logging** activity, including cedar wood planks (see image below). The drone images were presented to the environmental prosecuter's office in Madre de Dios as part of a criminal complaint.

In a related case, drones also captured images of a nearby collection center and transport truck for the recently logged planks. These images were also presented to the environmental prosecuter's office as part of a sixth case.

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Case E. Illegal logging in the Forest Concession “Sara Hurtado” identified with drone images. Source: ACCA.

*Notes

ACOMAT is the "Asociación de Concesionarios Forestales Maderables y no Maderables de las Provincias del Manu, Tambopata y Tahuamanu."

The early warning alerts are generated by the Peruvian government (Geobosques/MINAM). GLAD alerts can also be used (these are generated by the University of Maryland and presented by Global Forest Watch). In our case, the concessionaires receive Geobosques alerts in their emails.

We used quadricopter drones. Obtained images are very-high resolution (

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