

A Technology Revolution to Curb Illegal Logging

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Our future is inextricably linked to forests. The social and economic benefits they provide are essential to realizing a sustainable century. A key litmus test of our commitment to this future is our response to a growing, global threat: illegal logging and the criminal timber trade.

Forests are vital source of biodiversity and livelihoods. More than 1.6 billion people depend on forests for their livelihoods, including 60 million indigenous people who are wholly dependent on forests. They are also natural carbon storage systems and key allies in combating climate change. They are vast, nature-based water utilities assisting in the storage and release of freshwater to lakes and river networks.

While deforestation is slowing in some places—most notably Brazil— it still remains far too high. The loss of forests is responsible for up to 17 per cent of all human-made greenhouse gas emissions, 50 per cent more than that from ships, aviation and land transport combined.

Organized Crime in Global Forests

There is increasing evidence that an important slice of these losses and emissions is linked to illegal logging and organized crime in key tropical countries of the Amazon basin, Congo Basin and in Southeast Asia.

Indeed, *Green Carbon: Black Trade*, a recent report by the UN Environment Programme (UNEP) and INTERPOL, estimates that illegal activity accounts for 50 to 90 percent of all logging in these key areas—a criminal trade worth between US\$30 and 100 billion annually worldwide.

Illegal operations, including bribes and even hacking of government databases, are also becoming more sophisticated. Loggers and dealers quickly shift between regions and countries to avoid local and international policing efforts, laundering wood by mixing it with legally cut timber, or passing off wood originating from wild forests as plantation timber.

With the increase in organized criminal activity related to forests, crimes such as murder are also on the rise. The growing involvement of criminal cartels should be of grave concern for communities, companies, conservationists, and all forest stakeholders.

But there is also good news that may finally help crack down on the criminals and the theft of the natural resources—resources that often are the ‘GDP of the poor’.

UNEP’s Global Environment Outlook 5 noted a drop in deforestation rates— from over 25,000 square kilometers to just over 5,000 per year— in the Brazilian Amazon, which comes in part as a

result of more agile and determined enforcement. Meanwhile in Indonesia, President Susilo Bambang Yudhoyono has placed a moratorium on new forest clearings that has helped cut deforestation and illegal activities in the region.

Companies are also starting to respond. Most recently, the Asia Pulp and Paper announced that they will no longer buy wood from deforestation of natural forests.

INTERPOL and UNEP, through the GRID Arendal centre in Norway, have also established a pilot project, called Law Enforcement Assistance to Forests (LEAF), to develop an international system to combat organized crime.

Enter the Technology Revolution

A final piece to the puzzle may be emerging—rapid, online alerts that deforestation is taking place, particularly in remote location.

Until now, by the time satellite images of deforestation can be viewed the criminals are often far away. Cattle are already grazing amidst stumps, the illegal oil palm plantation has been established and a company's financial support for ecosystem services—now degraded and lost—may already have been paid. The most recent forest maps of Indonesia, produced from Landsat satellite data, took three years from the time the data was taken to being posted online. This is not unusual since it typically takes around three to five years to produce a national forest cover map.

All this is on the verge of changing with help from an innovative partnership convened by the World Resources Institute (WRI), with partners including UNEP, and businesses and NGOs from around the world.

Global Forest Watch 2.0, which will be launched later this year, will take advantage of remote sensing technology to show high-resolution, near real-time deforestation maps on a user-friendly platform. The system will provide global deforestation alerts to identify illegal logging and deforestation hotspots, drawing on a combination satellite and crowd-sourced data, including from local communities.

Technologies like Global Forest Watch 2.0 have the potential to democratize the management and protection of forests. Imagine an analyst from a forest conservation group in Jakarta receives an alert via social media showing where deforestation has occurred. He then notifies the authorities who head to the location to take pictures and upload them, starting an effort to save the park and apprehend the illegal loggers.

Or consider the Vice President of Sustainability at a major global corporation tasked with ensuring that the firm purchases palm oil from responsible suppliers. She is concerned about a supplier in Ecuador whose plantations are located within critical forest habitat. She accesses the new system online and discovers that primary forest in the critical, off-limits corridor has been

cleared. The company can immediately suspend its purchases and use the information to confront the supplier.

Only time will tell if these technologies will be true game changers. But, as the world celebrates the first-ever International Day of Forests, it is encouraging to these powerful alliances of governments, companies, civil society organizations, and enforcement agencies which are determined to call time on illegal logging. It is time to put the opportunities for healthy forests and a Green Economy back into the hands of the people.