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Here's How We Can Stop Illegal Logging and Poaching on the Spot

by [Susan Bird](#)

July 3, 2014

8:30 am



Do you ever wonder what we can possibly do to end the plague of deforestation caused by illegal logging around the world? Does it worry you that we can't seem to stop the creeping catastrophe of animal poaching? These seem to be hopeless problems with no solution.

Physicist and engineer Topher White, founder of the [Rainforest Connection](#) (RFCx), would disagree with that conclusion. He believes he has the answer, and it's all about smartphones. Your smartphones, to be precise — the ones you're probably throwing away or trading in.

Creative use of upcycled Android smartphones powered by flexible solar panels is “[t]echnology that can stop illegal logging and poaching on-the-spot,” [according to the RFCx](#). “It’s our answer to climate change and global mass extinctions.”

That’s a bold statement, but this idea could actually work. In fact, it does work, as RFCx’s [earlier pilot program](#) in the forests of Western Sumatra has already proved.

Hey Loggers and Poachers: We'll Be Listening From the Trees

This is an incredibly straightforward idea and is demonstrably effective. Here's what happens, [according to RFCx](#):

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We install RFCx devices high in the tree canopy where they are hidden. Each device continuously captures all ambient sound, and can detect the of the sounds of destructive activities — such as logging/chainsaws — up to 1 kilometer in the distance. Upon picking up the sound of a chainsaw, gun shot, distress, the device transmits an alert to our cloud server which in turn sends an SMS message to first responders.

Within mere minutes, authorities can have those first responders on site to capture illegal loggers with chainsaws still in hand or animal poachers still armed and on the hunt. See it happen at around 1:36 in this RFCx video:

Ads by ZINC

“We can pinpoint deforestation activity the moment it begins, while simultaneously streaming the data openly and immediately to anyone around the world,” [according to RFCx](#).

Deforestation is a leading cause of climate change, [according to the United Nations](#). The approximately 33 million acres [we lose every year](#) account for some 20 percent of greenhouse gas emissions attributable to humans. It must stop.

RFCx, a San Francisco-based non-profit, says one of its devices in action offsets the annual carbon impact caused by three U.S. households. In more understandable terms, RFCx says the one square mile of rainforest it can protect with a single smartphone device is the equivalent of taking 3,000 cars off the road for a year.

“It’s clear that real-time awareness and intervention is a major missing piece in protecting the world’s last remaining rainforests,” [said White](#). “By using old smartphones and existing telecommunications infrastructure, we have built a system that we think could scale quickly enough to make a real impact.”





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From the First Day, it Worked Like a Charm

The proof that this idea would fly came on the very first day the initial pilot project began operations in Sumatra in June 2013.

Four phones, hidden within 135 hectares of the Kalaweit Gibbon Sanctuary reserve forest, picked up the unmistakable sounds of chainsaws. Authorities responded — and kept responding for two weeks. Eventually, the loggers took the hint and departed the area. As White recently [told Scientific American](#), after a year they have not returned. Now that's a victory.

No, this system can't stop illegal activity before it begins, but it can catch the criminals red-handed before too much damage is done. That's a far better than the satellite imagery and aerial surveillance we primarily use today, which only provides evidence of illegal poaching or logging activity a week or more after it has happened.

Note that the photographs of these phones provided here are for demonstration purposes only. In reality, these devices sit much higher in the trees where they can't be seen. Watch a quick time lapse video as one of these phones goes from spare parts to final product here:

Now that [RFCx](#) knows this idea works, it wants to kickstart the concept into high gear with pilot projects in Indonesia, equatorial Africa, and the Amazon. RFCx [hopes to raise](#) \$100,000 by the end of July 2014 to be able to do just that. That level of crowdfunding will enable the group to build enough of these durable, waterproof next-generation devices to monitor 125 to 190 miles of rainforest.

First up: in partnership with the Zoological Society of London, RFCx plans to place [about 30 phone devices](#) within a 200-hectare rainforest in Cameroon, western Africa. The area is considered prime habitat for endangered lowland gorillas, chimpanzees and elephants.

"Beyond chainsaws, we will also be detecting vehicle movements along roads, allowing authorities to note when trucks are moving logs on roads where (or when) no such activity is planned or sanctioned," White [told Mongabay.com](#) of his Cameroon plans. "To be blunt, providing an accounting for corruption within the concession — including illegal logging by those who work there — is amongst the primary goals of the pilot."

RFCx hopes to add further pilot programs in Brazil and other African locations as well. Yes, believe it or not, even though you sometimes can't get a decent phone signal as you gad about town, there is [sufficient GSM coverage](#) in these remote areas to ensure the phones will transmit as intended.

Assuming the project finds the funding it needs to move to the next level, RFCx intends to release a web and mobile phone app that will allow anyone to listen in to live streaming audio of the rainforest



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as it is transmitted by these smartphone devices. You might even hear the sounds of illegal activity — and then you'll be able to hear it stop. That will be a nice sound indeed.

Read more: <http://www.care2.com/causes/heres-how-we-can-stop-illegal-logging-and-poaching-on-the-spot.html#ixzz3qRvMjP8u>

Richard P. Vlosky, Ph.D.
Director, Louisiana Forest Products Development Center
Crosby Land & Resources Endowed Professor of Forest Sector Business Development
Room 227, School of Renewable Natural Resources
Louisiana State University, Baton Rouge, LA 70803
Phone (office): (225) 578-4527; Fax: (225) 578-4251; Mobile Phone: (225) 223-1931
Web Site: www.LFPDC.lsu.edu



President-Elect, Forest Products Society; President-Elect, WoodEMA i.a.

