

# A crusade to end slash-and-burn farming

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*Michael Marshall, environment reporter*



*(Image: Up in Smoke)*

Curling streams of smoke rise from a burning hillside. Swathes of chopped trees and undergrowth burn steadily, the orange of the flames blurred by the grey-white smoke.

This is the opening shot of [Up in Smoke](#), a documentary about the tragic consequences of [slash-and-burn farming](#), and one scientist's 25-year mission to put a stop to it.

Tropical ecologist [Mike Hands](#) is the undisputed hero of the film, endlessly slogging away at his ideas despite a chronic lack of funding, encouragement, or any good news whatsoever. He ran field studies on slash-and-burn in the 1980s, trying to find out why the soil lost its fertility so quickly after the trees were gone. After becoming convinced that the bare soils lose a key nutrient, phosphorus, he tried to invent a [sustainable way to farm in the tropics](#).

Hands' solution is a variant on [alley cropping](#), in which [crops are planted between rows of trees](#). His preferred trees come from the genus *Inga* and are known in Central and South America as "guama". The trees shade out weeds and hold the soils together, and their pruned leaves are used as mulch.

The film whisks through the science to get to the real meat of the story: Hands' Sisyphean

struggle to get his ideas implemented in the real world. Governments and funding organisations all turn a blind eye, and initially promising avenues turn into blind alleys. At one point Hands arranges to go to the [2009 Copenhagen climate change summit](#), to put the case for his techniques as part of Honduras' delegation - but that falls through when the [Honduran president is ousted in a coup d'état](#).

As Hands puts it, with surprisingly little bitterness, "Every time you've got something sorted, some bastard comes along and screws it up." Changing tack, he goes small-scale and convinces a few Honduran slash-and-burn farmers to try it out on their land, and begins the slow process of spreading it by word-of-mouth. As the film ends there are a few hopeful shoots, but Inga is by no means springing up everywhere.

Worthy environmental documentaries can be a slog, but *Up in Smoke* is delightful. Hands is undemonstrative but fascinating in his utter determination, and the vivid personalities of the Honduran farmers come through strongly. Although shot with hand-held cameras, the film steers clear of the [irritating wobbly-cam](#) that can plague such footage. At its best it succeeds in finding the beauty in a well-run farm, and putting it on the screen.

Speaking earlier this week at the [Royal Society of Arts](#) in London, UK, Hands explained that he wants to generate a "critical mass" of around 50 families using Inga on their farms. That, he says, should be enough to get others interested and for alley cropping to spread.

*Up in Smoke's* director Adam Wakeling had almost as tough a time making the film as Hands did with alley cropping. Wakeling spent more than four years following Hands back and forth to Honduras. On his first trip he accidentally burnt timecodes onto all the footage, rendering it unusable. He says the project has left him "hugely in debt".

Somebody, please, throw these guys a bone.