Case Study: Micro-Hydro Project in Kenya

Transcript of Video Clip

[Adam Hart-Davis speaking throughout.]

Having seen the reality of drought in Massai lands, I travelled to a different part of Kenya to see another aspect of Practical Action's work. Here, they're tackling climate change by helping people develop sustainable, non-polluting forms of energy. This is a micro-hydro scheme I visited in the Mount Kenya region.

80 percent of people in sub-Saharan Africa do not have electricity, and decentralised, renewable options are often the most appropriate way to power remote rural communities.

I spoke to Practical Action's project officer, Daniel, and community leader, Joffri, who explained how the micro-hydro system works.

The river was dammed at the top of the Kibiri falls and a small fraction of the water diverted into a side channel at 200 litres per second. The water then travels 250 metres along the river bank to a pipe that drops twelve and a half metres down to the power house.

This is the power house. The water's coming down from that channel, through this pipe here – it's 30 centimetres in diameter – and it's travelling at a huge velocity because it's come 12 metres down the cliff. And it's spinning the turbine in here, making it spin round very fast, which is driving this belt, and that's running the generator in here, which is generating 14 kilowatts of power. That's about enough for 14 households in the west, or maybe 100 here.

It's an enormous amount of power, and the great thing is they're just borrowing the energy from the river: borrowing that water for about 5 minutes, and putting it back into the river again. Wonderful, renewable energy!

So this is entirely renewable energy. It makes no contribution at all to climate change. And the system itself was designed by Practical Action.