

## Case study summary

# Sustainable Green Fuel Enterprise (SGFE), Cambodia

2014 Ashden Award

“SGFE’s clever production of char from waste makes briquettes that are a real hit with cooks, as well as cutting deforestation and pollution.” Ashden judging panel

Cambodia has one of the worst rates of deforestation in the world. There are many pressures on its wood resources: much of the Cambodian economy depends on wood, for timber, heat and power generation, and about 80% of households use wood or charcoal for cooking.

The French NGO GERES had helped to reduce wood demand through its widely-used efficient charcoal stoves, and wanted to tackle charcoal supply too. In 2009, a partnership with children’s charity PSE enabled GERES to start SGFE, a business that produces char-briquettes from waste, replacing the need for wood charcoal, and thus cutting deforestation.

- Over 650 tonnes of briquettes produced to date, and increasing rapidly: 47 tonnes produced in March 2014 equals cooking needs of 1,250 households.
- SGFE produces char from waste coconut shells, using low-emission TLUD kilns, and also buys waste wood-char from electricity generators.
- Char is mixed with water and a binder and extruded into briquettes, which are dried using waste heat from the kilns.
- SGFE briquettes cut deforestation: about 6,500 mature trees saved to date.
- Briquettes cut greenhouse gas emissions by replacing non-sustainable wood with waste, and by production in low-emission kilns: 4,500 tonnes CO<sub>2</sub> emissions saved in 2013.
- ‘Premium’ briquettes (mostly from wood-char) cost about US\$0.34/kg: similar to wood charcoal, but users save money because briquettes burn more uniformly and with less waste.
- ‘Diamond’ briquettes (100% coconut char) cost about US\$0.70/kg: they burn very slowly and are in great demand from food vendors.
- Briquettes produce less smoke and fewer sparks when burning, so are safer.
- Factory employees are all in formal employment for the first time.
- Recent US\$0.3m grant from GACC will enable SFGE to double production capacity during 2014 to keep up with growing demand. Potential to double capacity again with private investment.

SGFE is a business owned and run by Carlo Figà Talamanca, who took it over from GERES in 2011. In 2013 it had 23 employees (15 men and 8 women) and an income of US\$165,000, over 70% from sales of products and carbon credits and the rest from grants.

### Key Facts

Cambodia lost 2.9 million hectares of forest (14% of its land) between 1990 and 2010.

A tonne of char-briquettes saves 10 trees.

### Location



“The briquettes took a bit of getting used to, but now we like them much more than the old stuff. The sparks used to burn your clothes, and get in the food. And it was smoky and dirty.”

Restaurant 28 owner



Cooking with the new briquettes in Restaurant 28

### Contact

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