



Efficient Cookstoves for The Mamize Nature Reserve China

Improving community health, reducing
deforestation and protecting giant panda habitat



This project in South China's Sichuan province provides families in the Mamize Nature Reserve – an area renowned for its biodiversity and giant panda population – with firewood-saving cook stoves (FCSs). Replacing less-efficient conventional cooking methods with FCSs improves community health, eases pressure on the Mamize Nature Reserve, and protects the habitat of China's beloved giant panda.

The Context

The Mamize Nature Reserve in South China's Sichuan province is known for its abundant biodiversity as a gene bank for plant and animal species. It is also on the southern edge of giant panda habitat, which is threatened as surrounding communities encroach on forests to gather firewood for their cooking needs.

The Project

Over two years, this project replaces 400 conventional open fire stoves (such as three stone fires and mud stoves) with firewood-saving cook stoves (FCSs) for communities in the Mamize Nature Reserve area. The new stoves are 75-80 cm high, and feature two 80cm-diameter pots; one for cooking, and another for animal forage. Unlike conventional cookstoves, which are inefficient and produce indoor smoke, the FCSs have an additional air flow system. This chimney and grate system combusts firewood more completely, filtering smoke out of the house via a 3-4 m chimney.

The Benefits

Their increased thermal efficiency means that the new FCSs require less fuelwood to cook, reducing emissions by as much as 10 tCO₂ per stove annually. Not only does this help mitigate climate change, ease pressure on forests and protect giant panda habitat – it also improves community health, as the FCSs dramatically reduce the amount of harmful indoor smoke created by cooking.

By reducing the amount of firewood needed for cooking, the firewood-efficient cook stoves create benefits for local families, pandas and the environment



**60-70%
less smoke**

produced by the FCSs, compared to conventional cooking methods, reducing respiratory illnesses and improving household health



**400
households**

supplied with efficient FCSs, which deliver affordable, reliable and sustainable energy for cooking each day



**5,000
tCO₂e**

reduced on average each year, thanks to FCSs which are more thermally efficient and require less firewood for cooking

For more information on the UN Sustainable Development Goals, please visit: <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

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