


India, Treadle Pumps

<p>Location</p>	<p>Jharkhand State, India</p> 
<p>Partner</p>	<p>International Development Enterprises - India</p>
<p>Overview</p>	<p>Treadle pumps are human powered water lifting devices used to irrigate fields in India. The pumps replace diesel driven pumps, saving CO₂, improving agricultural yields and empowering the rural poor.</p>
<p>Setting the scene</p>	<p>Diesel powered pumps are used to irrigate small-holdings across India. Pumps are generally hired for short periods, meaning that the fields have to be flooded which wastes water, washes away top soil and is costly. Human powered treadle pumps are affordable and can be used in areas where the water table is higher than 30ft. Pumps can be used to irrigate fields year round in a cost effective manner. An extra crop can often be achieved in a year. Men often have to go to the city in the dry season to earn a living, but with the treadle pump more income can be earned at home, so that they can spend more time with their families.</p>
<p>Project</p>	<p>The project aims to introduce and transform the market for treadle pumps. IDE-I is facilitating this process by organising manufacturers, distributors, agents and field engineers, as well as marketing the pumps to villages.</p>

description	Villagers pay for the pumps, which typically have a life of over 10 years. Cost savings are soon made by removing need to buy diesel, while improved crop yields increase household income.
Baseline	The baseline is diesel. The Energy Resources Institute (TERI), one of India's leading scientific research institutions, has fully assessed the baseline. The Simplified PDD for Small Scale Projects is being used, applying methodology "Type 1 Renewable Energy Projects: 1B Mechanical Energy for the User"
Additionality	The additionality is measured against the small scale CDM guidelines. Treadle pumps are not used widely and there are numerous barriers to overcome in making this market. Carbon finance gives the NGO a long term source of income, reducing the need for the donor funding upon which it has relied to date and allowing it to massively expand its operation.
Emissions savings	It is expected 3,000 – 5,000 pumps will be installed each year, so the number of operational pumps (and therefore emissions reductions) rises over time. Emissions calculations are currently being independently validated.
Standard	Voluntary Carbon Standard.
Current Status	The project is currently being validated to the Voluntary Carbon Standard by a Designated Operational Entity (DOE).
Social, economic, environmental benefits	<p>Social: Jobs will be created as part of this project through the supply chain as a market is created.</p> <p>Economic: Farmers can irrigate in a more timely manner, and can grow different crops, often doubling their income.</p> <p>Environmental: Treadle pumps do not produce emissions and have less impact on soil erosion than higher pressure diesel pumps.</p>