

# Improved Cooking-stoves in Bangladesh

## *CDM Programme of Activities*



# SCENARIO

More than 3 billion people, around the world, cook and heat their homes using open fires and inefficient stoves, burning biomass (such as wood, animal dung and crop waste) and even coal. Most are poor, and live in low and middle-income countries. The reliance on these fuel types and inefficient cook stoves have many social and environmental impacts:



HEALTH PROBLEMS



INDOOR AIR POLLUTION



PRESSURE ON FORESTS & DEFORESTATION



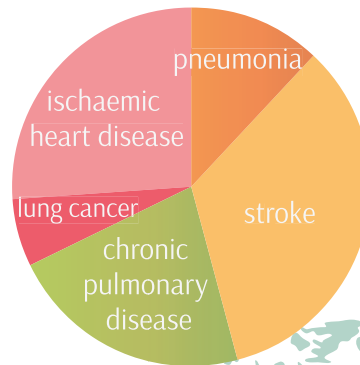
GHG EMISSIONS

The same story resonates among all under-developed nations around the world.

Bangladesh is recognized as one of the most vulnerable countries in the world to tropical cyclones and vulnerability to floods. With its summers becoming hotter, irregular monsoon, coastal erosion, outbreak of diseases, etc., It has already begun experiencing the adverse effects of global warming and climate change.

Being among the world's least developed nations, it continues to face high levels of poverty, increased population density and lack of access to energy which contributes to its low economic development.

4.3 million people around the world, each year, die from household air pollution-related diseases caused by the inefficient use of solid fuels for cooking (WHO, 2012). Illnesses such as pneumonia, stroke, chronic pulmonary disease, lung cancer and ischaemic heart disease.



## THE BURNING FACTS

Bangladesh, as a whole, burns over 52 million tonnes of organic fuel per year.



9 out of 10 families in Bangladesh still use biomass as fuel and traditional cook stoves for cooking.




14,000 women & 32,000 children (most often the girl child) die every year due to diseases caused by kitchen smoke.



THE PEOPLE'S REPUBLIC OF BANGLADESH

# THE PROJECT

 <a href="#">UNFCCC Google Search</a> <a href="#">About CDM</a> <a href="#">Governance</a> <a href="#">Rules and Reference</a> <a href="#">Methodologies</a> <b>Project Search</b> <a href="#">CDM co-Benefits</a> <a href="#">Programme of Activities (PoA)</a> <a href="#">Prior Consideration</a> <a href="#">Validation</a> <a href="#">Requests for Deviation</a> <a href="#">Post-Registration Changes</a> <a href="#">Renewal of crediting period</a> <a href="#">Issuance of CERs</a> <a href="#">CDM Registry</a> <a href="#">Stakeholder Interaction</a> <a href="#">Newsroom</a> <a href="#">Issues Quickfinder</a>	<p>Your location: Home &gt; Project Search</p> <p><b>PoA 4791 : Improved Cooking Stoves in Bangladesh</b></p>
	<p>PoA title</p> <p>Improved Cooking Stoves in Bangladesh</p> <ul style="list-style-type: none"> <li>- <a href="#">PoA design document</a> (1201 KB)</li> <li>- <a href="#">PoA registration request form</a> (378 KB)</li> </ul>
	<p>SDC description report</p> <p>Not Available. Please refer to our <a href="#">Further Information on SD-Tool</a></p>
	<p>CPAs</p> <ul style="list-style-type: none"> <li>- <a href="#">CPA design document</a> (863 KB)</li> </ul> <p>Initially submitted at the time of requesting registration of the PoA:</p> <ul style="list-style-type: none"> <li>- <a href="#">Improved Cooking Stoves in Bangladesh - CPA No.001: Grameen Shakti</a></li> </ul> <p><a href="#">(view all CPAs)</a></p>
	<p>Host Parties</p> <p>Bangladesh , Involved indirectly <a href="#">approval</a> (85 KB) <a href="#">authorization</a> (85 KB)</p> <p>Authorized Participants: SZ Consultancy Services Ltd. ; Grameen Shakti</p>
	<p>Other Parties Involved</p> <p>United Kingdom of Great Britain and Northern Ireland , Involved indirectly <a href="#">approval</a> (82 KB) <a href="#">authorization</a> (82 KB)</p> <p>Authorized Participants: J.P. Morgan Ventures Energy Corporation</p>
	<p>Coordinating/Managing Entity</p> <p>J.P. Morgan Ventures Energy Corporation</p>
	<p>DOE</p> <p>TUV SUD</p>
	<p>Sectoral scopes</p> <p>3 : Energy demand</p>
	<p>Activity Scale</p> <p>SMALL</p>
<p>Methodology Used</p> <p><a href="#">AMS-ILG, ver. 3 - Energy efficiency measures in thermal applications of non-renewable biomass</a></p>	
<p>Standardized baselines used</p> <p>N/A</p>	

DISSEMINATED TO OVER  
500,000 HOUSEHOLDS



# THE BENEFITS

## Employment Opportunities

This programme has given rise to employment opportunities for new technicians, assistants, office staff and other related jobs.

## Additional Time

Reduction in wood consumption implies relief from drudgery and more opportunity for productive activity, arising from less time spent collecting fuel.

## Mitigation of Climate Change

One of the many goals of the project is to reduce greenhouse gas emissions through the dissemination of these improved cook stoves.

## Human & Institutional Capacity

The programme as part of its large-scale promotion and advertising has facilitated capacity development among the employed staff through trainings and workshops

## Conservation of Biodiversity

Impact on Bangladesh's biodiversity is improved as the programme reduces pressure on the remaining forest reserves in Bangladesh.

## Technical Self Reliance

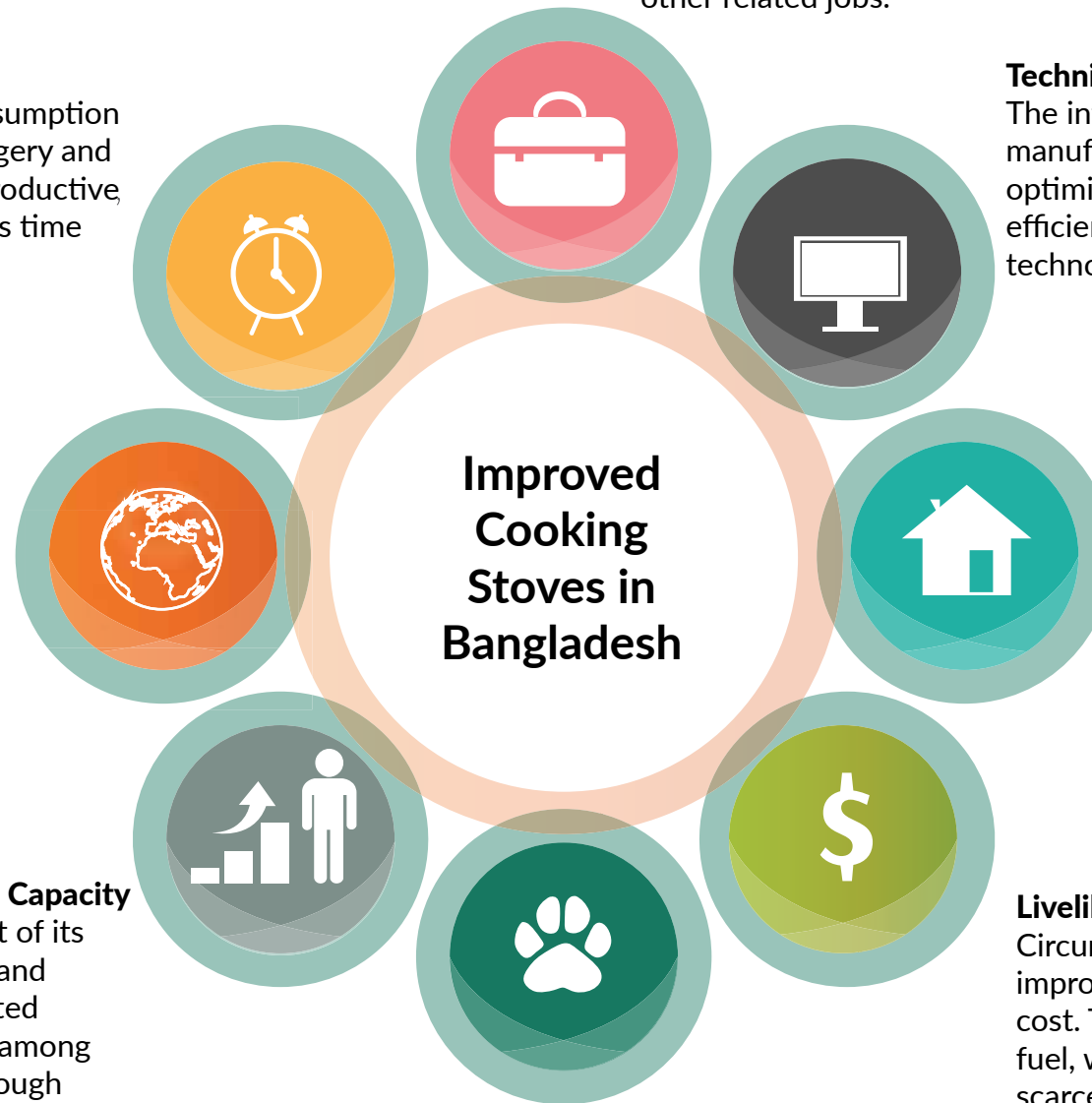
The introduction of this locally manufactured technology with optimized energy efficiency helps to build technological self-reliance.

## Indoor Air Quality

Family members will be exposed to fewer air pollutants by the reduced emission of carbon dioxide, carbon monoxide & particulate matter.

## Livelihood Benefits

Circumstances of poor families has improved since the stoves reduce fuel cost. The new cookstove uses less fuel, which in many areas can be a scarce resource or very expensive to buy; Users have found the cookstove more convenient as it also shortens the cooking time.





## Aligned to the SDGs



**People living on less than \$1.25/day who have financially benefited from the project**

- Reduction in wood consumption and fuel cost
- Entrepreneurial opportunities for local communities in the form of making, selling & maintenance of the stoves



**Health condition of people using the cookstoves have improved due to the project**

- 500,000+ users, especially women and children have benefited from eliminating risks of respiratory borne diseases.



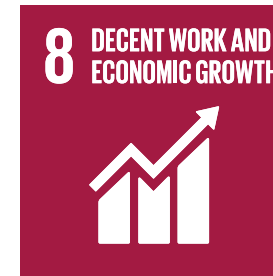
**The project has women as the primary driver of the initiative.**

- The time added to the days have significantly encouraged enhanced economic activity for women & education for girl children



**Amount of energy savings achieved by the project**

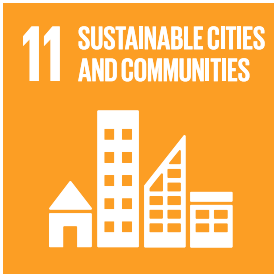
- Energy saved by each stove ranges between 0.003 - 0.060 GWh/year



**All the ICS are built by local entrepreneurs. Each cluster of 5 or 6 villages has a 5 to 7 member maintenance team, that is trained by the implementing NGO to handle new ICS as well as maintenance. These people are from the local villages and helps in providing a source of income to the community. More than 1500 partners and entrepreneurs are part of this program employing more than 5000 people**



# SDG ALIGNMENT



## Long term health benefits and mitigation measures for climate change

- Improved health conditions in households help improve the living conditions of people and help local climate action



## The project helps mitigation of climate change by reduction of emissions

- The stoves reduces 400,000 tCO<sub>2</sub>e/year.
- Increased forest cover which is crucial for Bangladesh, being one of the most vulnerable to climate change



## The project leads to effective reduction of firewood & deforestation

- Biomass saved by each stove ranges from 0.6 tonnes/year to 14.38 tonnes/year
- The project substantially reduces the stress on forests.



The project and its implementation partners strengthen the means of implementation and revitalize the global partnership for sustainable development. SZ here forges partnerships with the entrepreneurs and communities. The local administration plays a facilitative as well as supportive role to the program.

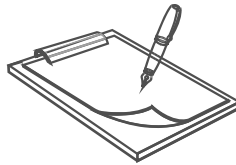


# YOUR INVOLVEMENT

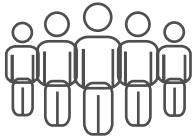
In continuation of SDG 17, we are looking to forge partnerships for carbon finance support. The sale of carbon offset credits will provide the revenue needed to ensure the project's long-term sustainability. The funds brought in goes towards activities such as:



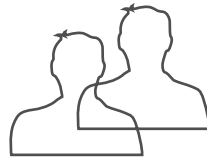
TRAINING FOR  
SELF-RELIANCE  
OF THE LOCALS



ANNUAL  
MONITORING OF  
COOKSTOVES



INCREASE IN  
PENETRATION  
REACHING  
30 MILLION  
HOUSEHOLDS  
ACROSS 8800  
VILLAGES



MANAGEMENT &  
MAINTENANCE  
OF THE PROJECT



OVERALL  
SUSTAINABLE  
DEVELOPMENT  
IN BANGLADESH



INCENTIVE  
PAYOUTS TO  
ENTREPRENEURS



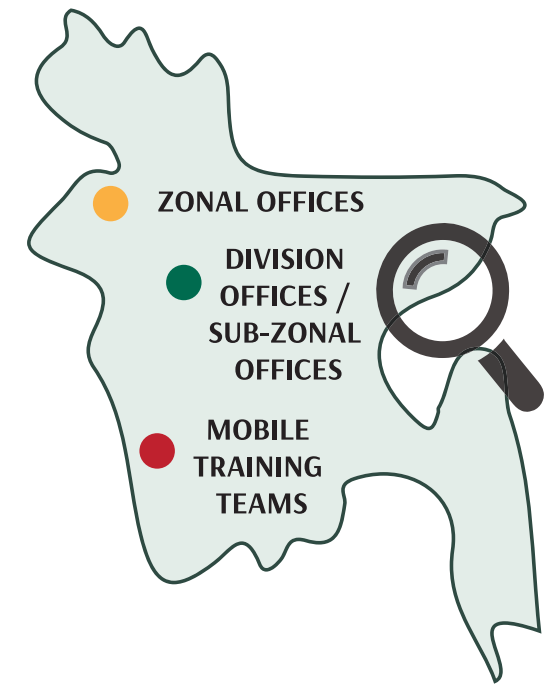


# IMPLEMENTATION PARTNER: SZ BANGLADESH

## ORGANISATION & PROCESS

Mission : To implement low-carbon and clean energy projects across Bangladesh  
As part of this project, SZ has been disseminating the “Bodhu Chula” since 2012.

SZ has team members across numerous locations in Bangladesh. Locations are characterised as Zones and sub-zones called Divisions. Each zone has about 20 members on the field. SZ has an ERP system in place to manage and store their project data. Hard copies exist only in sub-zones.



# MAIN OBJECTIVES



To provide a whole-scale solution



To build technological self-reliance through training



To optimize energy efficiency and fuel usage



To protect the ecological component of Bangladesh



Video Preview



Improved Cookstoves (ICS) used for the project

# TRAINING

SZ conducts theory and hands-on practical training for all team members. New trainees are expected to learn how the product is made. They are also required to stay at the sites allocated to them to dispense and educate new users. SZ team members and trainees also train new entrepreneurs to take forward the concept and and manufacture the product locally. Training exercise includes awareness-building for the locals (potential users) as well as training and trouble-shooting.



## CASE STUDY

Community empowerment and long-term sustainability of the project by building capacity. Users can undergo the Bondhu Foundation's "Entrepreneur Programme" training and start their own cookstove building and maintenance business.

### SHAHIDA BEGUM'S STORY

Shahida volunteered for the Bondhu Foundation and soon underwent the "Entrepreneurship" training. Today, she is more successful than other entrepreneurs in the Munshgonj zone. Currently she sells about 30-40 cookstoves a month. The maintenance and sale of cookstoves gives her an income of about 20-25,000 Bangladeshi Taka (about 250 -3,00 USD). With this income she is able to send her 3 sons and 1 daughter (currently in 9th grade) to school.





## VNV ADVISORY

VNV Advisory Services has been at the forefront of working with climate change and livelihoods. Our decade-long experience has seen us develop low-carbon projects that support these communities in getting their basic needs while adapting to and mitigating the harsh impacts of climate change. We work in areas of clean cooking, social forestry, sustainable agriculture, rural energy access and many other related community based technologies. With support from over 40 NGOs and implementation partners, our work encompasses over 4 million rural households and 50,000 hectares of forest areas under management across the South Asian (India, Bangladesh, Nepal, Laos, Myanmar and Sri Lanka) region. We have also been able to engage with businesses to address issues of Social Responsibility, Environmental Sustainability and Carbon Neutrality.



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