

atmosfair GmbH Experience with the cook stove PoA in South Asia (India/Nepal)

EB side event at COP26: 15 years of PoA

Wednesday, 03 Nov 2021, 18:30—19:45
Clyde Auditorium



About atmosfair

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Effective, transparent, non-profit

- atmosfair develops, funds, and manages **renewable energy projects** in the Global South in order to decrease CO₂ emissions and, simultaneously, promote sustainable development in host communities
- **Ranked No. 1** in all vendor benchmarks with highest quality standards
- Financed by **voluntary donations** from consumers and corporations
- Our approach to credible climate protection: **mitigate → reduce → compensate**
- Our services for carbon footprint reduction: **consulting – reporting software – mitigation projects**
- **Solid scientific methodology:** founded as a spin-off of a research project of the Federal Ministry for the Environment in 2004
- Ongoing supervision by **advisory board** consisting of representatives of the German Federal Ministry for the Environment and NGOs



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

GREENPEACE



High-level patrons from politics and science:



Prof. Dr. Hartmut Graßl

Former Director of Max Planck
Institute for Meteorology in
Hamburg



Prof. Dr. Klaus Töpfer

Former Executive Director of
the UN Environment Program
(UNEP)



Prof. Dr. Mojib Latif

Leibniz Institute for Marine
Sciences at Kiel University

PoA structure: Household level projects benefit

Projects on the household level:

- PoA structure allows for a steady distribution of small units like cookstoves or biogas units.
 - Additional households may steadily be included in the project framework.
 - Through quick process of CPA inclusion easy expansion of the project activities.
 - Possibility to include host countries
 - Possibility to include exclusive CPAs for certain donors.
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- Household project activities benefit a lot from the PoA structure
 - The PoA structure is important especially for technology transfer to bottom of the pyramid.



United Nations
Framework Convention on
Climate Change

Co-Benefits: Sustainable development goals

- atmosfair PoAs do address the SDGs:
- In all our PoAs: 1,2,3,5,7,8,13
- Most prominent:
 - SDG 7: atmosfair sells technology at a subsidized prize.
 - SDG 3: Ruanda health study SDG 3
 - SDG 8: India hundreds of new jobs created



PoA 9572 : Nepal Biogas Support Program- PoA










SDG:

https://edmundsarc.net/programmeOfActivities/poa_db/7BSCYZMH2U05TWXFKELND18PRQ96Q/view?cp=1

PoA 9572 : Nepal Biogas Support Program-PoA

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Project partner	Alternative Energy Promotion Centre (AEPC), Biogas Sector Partnership - Nepal, over 200 microfinance institutions, over 100 biogas plant builders nationwide
Target group	Local rural population
Technology	Biogas plants replace wood and fossil fuels for energy supply
CO ₂ reduction	appr. 350,000 t/year (Ø over 10 years)
Local co-benefits	Conservation of biodiversity, avoidance of deforestation, job creation, reduction of respiratory diseases, production of high-quality fertilizer
      	
Status	In operation since 2013, 10 CPAs included
Further information	www.atmosfair.de/en/climate-protection-projects/biogas-biomass/nepal/



Gold Standard
for the **Global Goals**



United Nations
Framework Convention on
Climate Change

Monitored Co-Benefits: Health and hygiene benefits



- Reduction in indoor air pollution
- Reduction in health problems like eye infection, respiratory disease, cough and fire related injury

- Increase of hygiene standard, when households connect the toilet to the biogas unit.



Monitored Co-Benefits: Time saving



- Reduction in firewood collection time

- Reduction in cooking time for the women



Monitored Co-Benefits: Increase of productivity and income generation

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- Reduction in use of chemical fertilizers (Urea, potash, DAP) and switch to bio-slurry.
- Increase in productivity due to bio-slurry use from Biogas.

- Jobs created in more than 100 biogas construction companies all over Nepal
- Regular training for masons
- About 13.000 direct and indirect jobs created in Nepal through the project.



PoA 10516:
Improved cook stoves and sustainable charcoal
initiative



Project partner	Sapient (small business from Calcutta)
Target group	Household in the regions of India
Technology	Cookstove saves >50% wood and replaces inefficiently produced charcoal
CO ₂ reduction	96,000 t CO ₂ /year (Ø over 10 years)

Local co-benefits Avoidance of deforestation, protection of mangrove forests, increase of disposable household income, reduction of respiratory diseases, local added value, creation of local jobs



Status In operation since 2013, 1 CPA included

Further information https://www.atmosfair.de/en/climate-protection-projects/energy_efficiency/india/



Monitored Co-Benefits: Benefits for the households

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- Health benefits:
 - Reduction in production of harmful smoke during cooking

- Income generation:
 - Sales of charcoal generated during cooking
 - Additional income of about 1 months salary per year



Benefits for the households



Twenty-two stoves users from West Bengal:

- They pooled the money from the charcoal sales
- Hired two vans for their children to be able to go to a regular school.
- The money is also used for buying text books and stationery for the children.
- They also plan to purchase a community computer, so that their children can learn computer basics.

Monitored Co-Benefits: Job creation



- Stove Production and sales:
 - As of now 40 Jobs created in Production and sales
 - Mainly women employed in production

- Charcoal Collection and Processing:

- As of now 235 Jobs created



Job creation



Dipu Doloi (left), Charcoal Field Assistant:

“I live with my wife and my 3 year old son. Before I joined the project, I was unemployed and in deep financial distress. With my regular salary of INR 12000, that I earn in the project, I can finally can support my family and my son will be able to go to school”.

Siddhartha Naskar charcoal Field Assistant:

During the Corona lockdown in India Siddhartha's father and his elder brother unfortunately lost their jobs. The whole family of seven members could survive for >5 months just because Siddhartha had this job in the project and kept receiving his salary.



Co-Benefits in times of Corona



- Mrs Sabita Pal from Alinan village in West Bengal:

Usually the family buys the firewood for cooking but due to the lockdown, there was no supply.

“We could do proper cooking because the TLUD needs very less wood to do cooking.”

Bablu Makhal, Charcoal field Assistant

He and his wife got infected with Covid. Only his colleague's family (another FA from our team) was willing to take care of Babul Makhal's girl child during the entire period of the couple's recovery.





Contact us!

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SPECIAL PoAs in times of a crisis

Biogas Repair Project: Repair of Damaged Biogas Plants

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- Strong earthquake in 2015 with thousands of dead people
- Large number of biogas plants was damaged

- atmosfair initiated “Biogas Repair Programme”
- Until today \approx 700 plants were repaired from atmosfair



Nepal quantification of benefits

Users' perception on reduction in health problem:

- Eye infection: 92%-100%
- Respiratory disease: 87%-99%
- Cough: 86%-99%
- Fire related Injury: 87%-96%

Users' perception on reduction in indoor air pollution: 96-100%

Users' perception on reduction in use of chemical fertilizers and use of bio-slurry

- Farmyard manure: -23% - -40%
- Bioslurry: +100%,
- Urea: -13% - -55%
- DAP: -2% - -36%
- Potash: 0--45%

Users perceived increase in productivity due to bio-slurry use from
Biogas: 72%- 89%

Calculated as % of households connected the
toilet to the biogas.
70-97%

% HH perceived reduction in cooking time
women 95%-99%