

Evaluation of Biogas and Additional Activities

– By Gaurav Prateek



Methodology

- Tools developed, feedback taken, and tools agreed with PnP
- Evaluation Plan Developed, and agreed
- Field work undertaken in 30 villages across five blocks of Nainital (3) and Udham Singh Nagar (2)
- Tools used in Field work:
 - 125 household interviews,
 - 20 Key informant interviews
 - 6 Focus Group Discussions
- Presentation of initial findings from the field – PnP feedback taken and included
- Draft Report developed
- Learnings and Recommendations being presented for feedback



Stakeholder analysis

- **Government:** Uttarakhand Renewable Energy Development Agency, Uttar Pradesh New and Renewable Energy Development Agency, MNRE (GoI), KVIC state office, Uttarakhand Organic Commodity Board (UOCB)
- **Private sector:** Nature Bio Foods, Mahila Mandal, Contractors, Masons, Fitters, Traders, Shopkeepers
- **Communities:** Users of Biogas and Additional Activities, Participants and non participants of Organic Rice Programme, Primary Schools, Inter Colleges, Community Health Centres, Primary Health Centres
- **Other programmes, NGOs, INGOs:** Suvidha, Fair Farming Foundation and WWF India
- **PnP staff:** Both management and field staff

Findings: Relevance, Efficiency

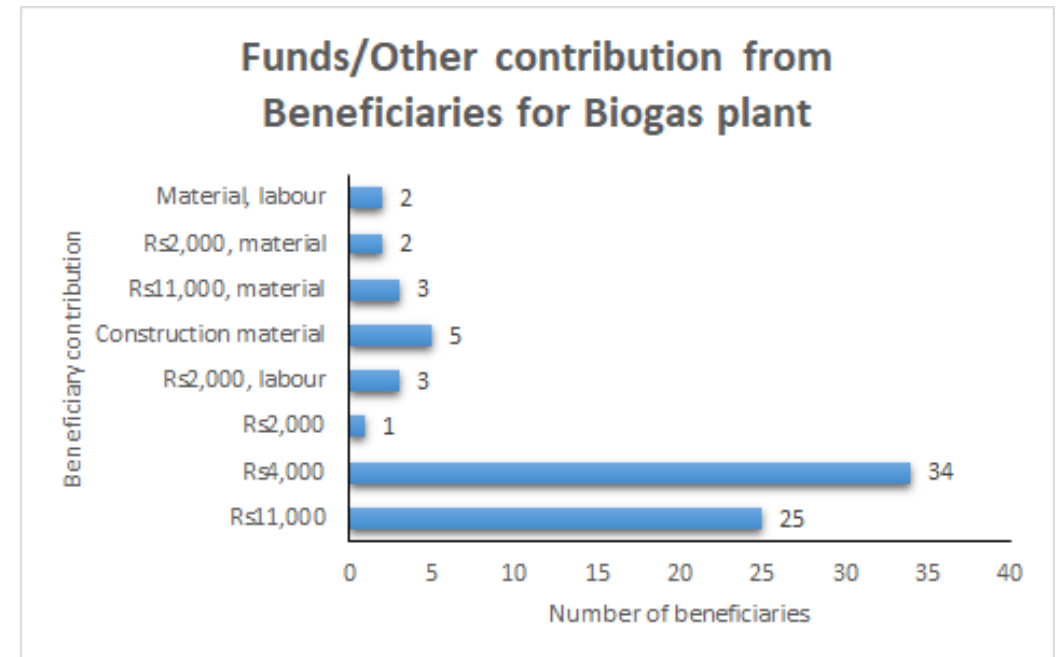
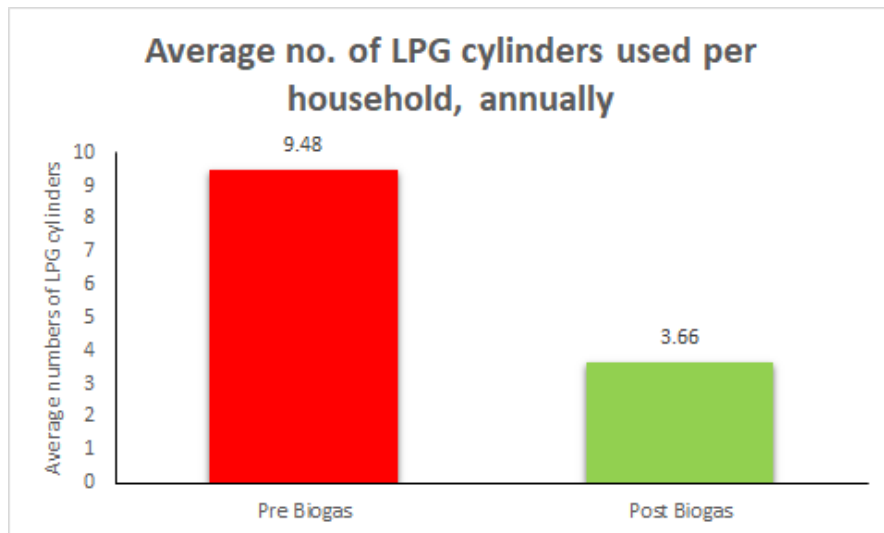
- **Government Policies:** The Biogas programme has nicely leveraged the policies and schemes
- **Private sector interface:** The programme has leveraged the existing supply chain of pvt intermediaries
- **Community interest:** Taken up by most, not accepted by those changing lifestyle
- **Climate change adaptation**
 - **Programme Delivery by PnP during COVID**

Relevance

- **Value for Money:** Leveraged Govt subsidy of Rs3.85 cr or CHF491,899

Efficiency

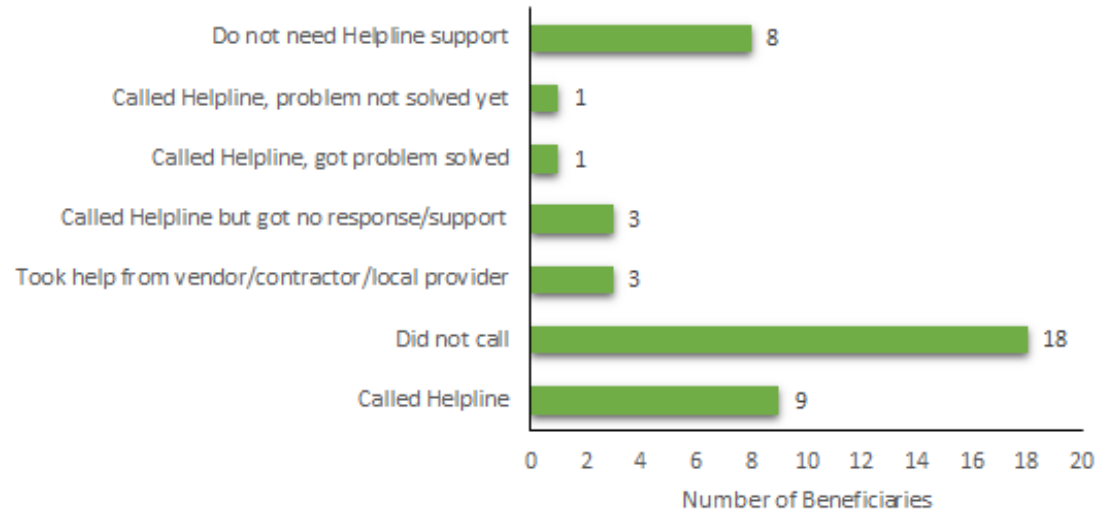
- **Community Contribution:**
 - **Return on Investment**



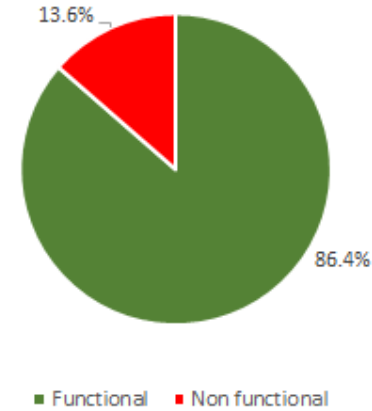
Findings: Effectiveness

- High number of plants operational
- Helpline

Helpline Use Analysis

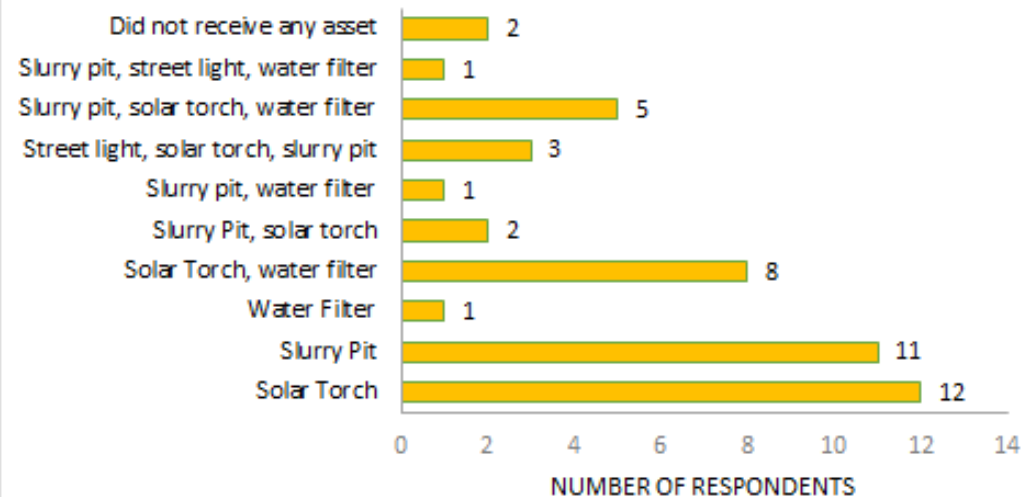


Status of surveyed biogas plants



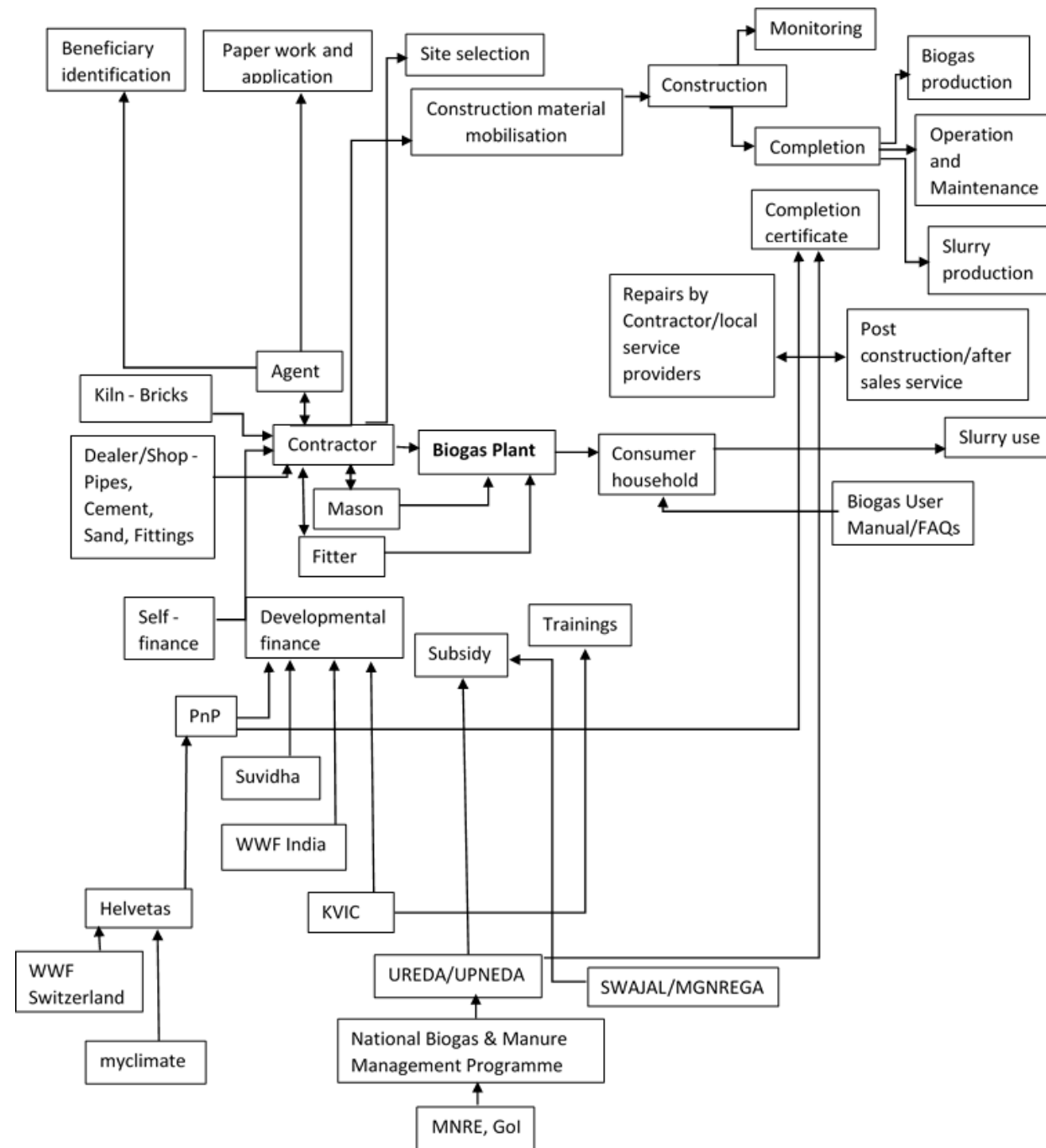
- Additional Activities

Figure D.2.2.6 Additional activities - Assets received



Findings: Effectiveness

Value Chain Map



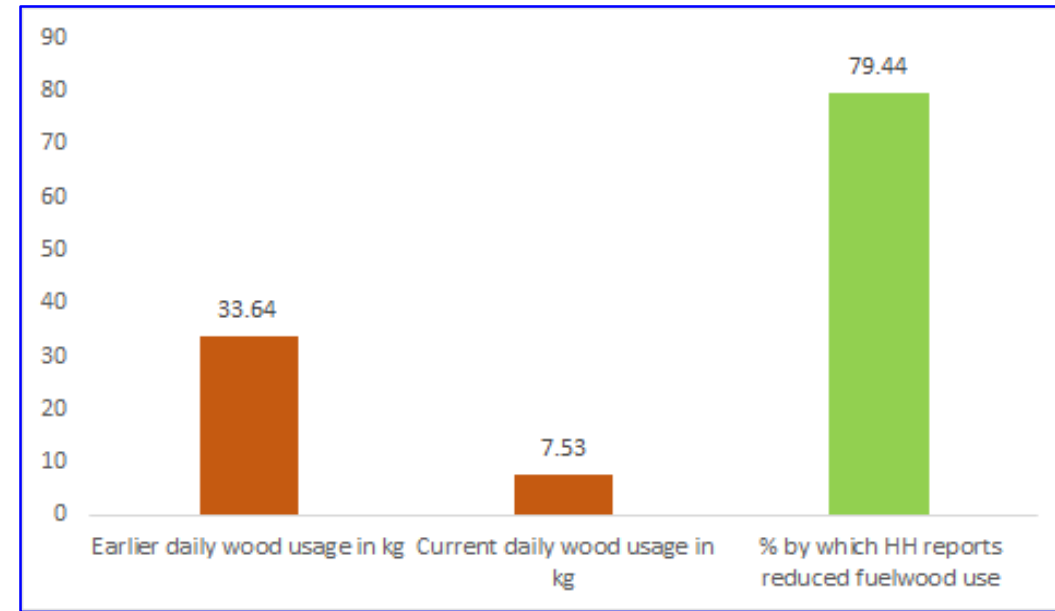
Findings: Impact

Environmental impact

- Soil quality improved and found as a scientific evidence
- reduction in use of firewood
- Farm Production increased through use of slurry
- reduction in the use of chemical fertilizer from 20% to 50%
- solar lights were useful to communities
- better quality of life among the households created employment opportunities for suppliers and service providers.

Socio-economic Impact

- Around 3,900 Biogas Plants came up
- opportunities of growth and transformation of the ecosystem
- brought down fuelwood use to 20% of the original
- reduced drudgery of fuelwood headloads
- farmers saved money by using improved techniques suggested by the project
- Irrigation Infrastructure Repaired
- Voluntary Cleaning of Canals by WEGs.



Findings: Sustainability

- Success in establishing a strong linkage with government schemes, and service providers
- Economic Feasibility that can be further scaled-up
- Communities are willing to contribute to their long-term development if it becomes an integral part of the project design.
- The biogas programme contributed to the Goal 13 of Sustainable Development Goals, which is Climate action, to work on emission reductions.



Lessons learnt and recommendations for future design phase

- Understand community needs and securing and enhancing livelihoods
- Develop context specific plans to increase local capacity, establish linkages with market traders, and collaboration with networks and similar interventions,
- Apply market-based solutions for renewable energy,
- Collaborate with local actors, private sector, and the government to develop a shared approach to develop the renewable energy sector, and
- Enhance human capital through market skills development; social capital by linking traders and communities and maintaining existing markets during crises; and financial capital by providing financial support.

