

GTZ HERA – Sustainability Factors

GTZ HERA has developed a list of factors influencing the sustainability of cook stove interventions.

They are based on:

- experiences, studies and lessons learnt during the last 25 years of GTZ's cooking energy projects
- experiences of other development organisations like the World Bank or ITDG
- Energising Development (EnDev) Sustainability Criteria for project proposals
- results of the working group on sustainability during the REAP Meeting in 2007

The overall aim of cook stove interventions is to achieve sustainable market introduction of energy efficient and clean burning stoves and to develop sustainably functioning markets.

Therefore the list is divided into factors regarding production and sales, factors on demand and usage and finally role of public sector. It provides an overview over sustainability factors, in the following, each factor is specified, it is specified, what to measure, the source of information and example questions.

Therefore this list can serve as a basis for sustainability assessments of cooking energy interventions.

1. Sustainability Factors and Assessment Questions

Sustainability Factors	Specification of Factors	What to measure? considering the previous GTZ HE project "Women & Energy" (examples)	Who to ask:	Questions (examples)
Overall: Sustainability of market introduction of energy efficient stoves Key question: Will the project create or enter a self- sustaining market where cost recovering mechanisms are ensured for the long term?				
Self-sustaining market	<ul style="list-style-type: none"> - continuation of producers after 5 years - continuous demand after 5 years - increase of establishment of producers/stockists - dependence/ independence of stove production from project - fully commercial dissemination approach existing - ownership and responsibility by the producers - innovation capacity - plans for expansion and product diversification 	<ul style="list-style-type: none"> - % of producers still in business, trained in previous GTZ HE project - % of replacement and new demand - consideration of commercial approach in project strategy/ since beginning - association of producer with his own business - risk taking and investment by producers - producers perception of their own business - producers have plans for expansion or diversification to react on market dynamics 	PT & P P P & U PT	<ul style="list-style-type: none"> - How many producers are still in business after ... years? - How many new customers did you get? - How many customers bought stove for replacement? - Was a commercial approach considered and the basis for the strategy since the beginning? - How do you estimate the degree of market satisfaction? Or market coverage? - Are you offering different products? - Do you have plans to expand to other regions or markets?
a) Sustainability of production and sales				
Stove dealers maintain their technical skills	<ul style="list-style-type: none"> - continuous quality and durability of production after five years - Ability of producers to manage the stove production by them-selves after the end of the project - continous training of producers through other stakeholders (e.g. NGOs, Government, in vocational training centers) in technical skills 	<ul style="list-style-type: none"> - quality of production - % of producers still able to demonstrate their technical skills (production, installation, fuel management, maintenance, quality control, ...) - considering external effects like lack of raw material - professional training structure is established and maintained (e.g. training courses, vocational training centers) - access to training is provided 	P P P PT & P P P P & U P P	<ul style="list-style-type: none"> - Which material do you use? - How is the availability? - Would you like to introduce new models to your production set? - Do stoves correspond to dimensions developed? - What do you know about QC? Who does control it? - Who did train you? Where could you learn this profession? - How long does a stove last? - How high is the rate of damages, breaking, destroyed stoves? In your case? - Where can you get trained? - How do you access training courses?

Sustainability Factors	Specification of Factors	What to measure? considering the previous GTZ HE project "Women & Energy" (examples)	Who to ask:	Questions (examples)
Stove dealers have business skills	<ul style="list-style-type: none"> - increase in business creation and income generation - profitability of stove production (prices cover costs and create profit) - increase in job creation (m/w) - expansion of business 	<ul style="list-style-type: none"> - number of businesses - constant or increasing income - % of producers able to demonstrate their business skills (bookkeeping, financial management, sales, marketing, ...) 	P P P P	<ul style="list-style-type: none"> - Do you actively promote your product? - To whom do you sell your products? - How many stoves were sold? - How many employees do you have?
	<ul style="list-style-type: none"> - continuous training of producers through other stakeholders (e.g. NGOs, Government, in vocational training centers) in business skills 	<ul style="list-style-type: none"> - professional training structure is established and maintained (e.g. training courses, vocational training centers) - access to training is provided 	P P	<ul style="list-style-type: none"> - Where can you get trained? - How do you access training courses?
	<ul style="list-style-type: none"> (access to production credits) - stove dealers are able to pay back the loans in given time 	<ul style="list-style-type: none"> - producers access to credits to establish or extend their businesses 	P & PT	
	<ul style="list-style-type: none"> - stove dealers association defending interests of their members 	<ul style="list-style-type: none"> - producer association existing 	P	
Viable network of raw material providers	<ul style="list-style-type: none"> - access to network of raw material suppliers - raw material price developments - stability/flexibility of supplier network 	<ul style="list-style-type: none"> - knowledge about supplier network - access to supplier network - risk of price increase - risk of withdrawing suppliers and flexibility of producer to cope with the risk 	P	<ul style="list-style-type: none"> - Do you depend of raw material suppliers? - Which are them? - Do you have a network of suppliers? - How did the price for raw material develop over years? - How would you react if one withdraws?
Stove Promotion activities	<ul style="list-style-type: none"> - increasing involvement of producers/traders into marketing activities - increasing knowledge of producers about their customers satisfaction 	<ul style="list-style-type: none"> - number of producers/traders actively involved in marketing or carrying out own marketing activities - marketing skills of producers (marketing slogans, messages, tools) 	P & PT P & PT P & PT P	<ul style="list-style-type: none"> - Who takes care of the marketing activities? - Are producers involved? To which extent? - Which marketing and promotional skills were trained to producers - Any feedback of clients

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Effective dissemination channels – sales persons	<ul style="list-style-type: none"> - increased scope of dissemination - sales persons make sufficient profit - selling points visible and known producers and costumers 	<ul style="list-style-type: none"> - number of stoves disseminated in which time via disseminators/traders - establishing an effective 'partnership' with the commercial sector - establishment of selling points and presentation/store producers 	P (Sales person)	<ul style="list-style-type: none"> - How many stoves did you sell to traders? - How much income to traders/sales person make?
After-sales structure exists	<ul style="list-style-type: none"> - increasing number of stove dealers providing after sales services (repair and spare parts and replacement) 	<ul style="list-style-type: none"> - number of cases, producers or providers had to repair a stove - existing structure (stores and producers) 	P & U P & U	<ul style="list-style-type: none"> - How many customers came to ask you for after sales service xy? - Who provides after sales services?
Quality control of services and products is ensured	<ul style="list-style-type: none"> - institutionalised quality control system within association - increasing number of labelled products 	<ul style="list-style-type: none"> - number of producers/traders actively involved in marketing or carrying out own marketing activities - marketing skills of producers (marketing slogans, messages, tools) 	P & PT P & PT P & PT P	<ul style="list-style-type: none"> - Who takes care of the marketing activities? - Are producers involved? To which extent? - Which marketing and promotional skills were trained to producers - Any feedback of clients
b) Sustainability of demand and usage				
Attractive and affordable products and services	<ul style="list-style-type: none"> - continuous or increasing willingness and ability to pay for stoves - variety of products and producers increases competition and decreases prices - increasing absorption of stoves - products and services respect traditions and customs and meets local demand 	<ul style="list-style-type: none"> - user's willingness and ability to pay - different stoves for different ability to pay - % of hh who bought the stove with credit or on hire purchase - technology meets purchasing power of consumers - gain prestige within the community through stove purchase - products in line with cooking habits and demands 	U U & P U & P U & P U U	<ul style="list-style-type: none"> - How much money would you spend on a better stove? - Do producers/traders offer different products? Which of them would you buy? - How much does an improved stove cost? - Are hh able to buy it at once? - Do you like stove from asthetic point of view? - Do neighbours visit you more oftenly? Are they interested in the efficient stove?

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Stove usage	<ul style="list-style-type: none"> - increase in number of household using stoves - frequency of usage - correct usage of stoves 	<ul style="list-style-type: none"> - number and % of households using stoves - % of daily usage 	U	<ul style="list-style-type: none"> - How often do you use your stove?
Stove maintenance assured	<ul style="list-style-type: none"> - increasing number of hh maintaining their stove - increasing number of hh making use of after sales services 	<ul style="list-style-type: none"> - number and % of hh spending time to maintain their stove - number of hh requesting after sales services from producers/installers - lifespan of stoves 	U U U U & P	<ul style="list-style-type: none"> - Do you protect and maintain your stove? - Did you already repair your stove? Regularly? - How long does the stove last with/without maintenance? - How many years does the stove last?
Replacement of broken or old stoves	<ul style="list-style-type: none"> - increasing number of stove replacements 	<ul style="list-style-type: none"> - number and % of hh that replaced broken or old stoves - number and % of cases producers sold a replacing stove to a family 	U U U	<ul style="list-style-type: none"> - Have you ever replaced your stove? - After how much time did you replace it? - Why? What was your motivation?
User awareness of benefits	<ul style="list-style-type: none"> - increase in number of well informed users <ul style="list-style-type: none"> - about stove quality - stove prices - increasing number customers satisfied - health 	<ul style="list-style-type: none"> - quality of feedback from users about benefits, quality and prices of stoves - number of customers communicating about stove and its advantages in the community 	U U U	<ul style="list-style-type: none"> - What do you like about your improved stove? - What do you dislike? - What is important for you in terms of quality
c) Contribution to sustainability from public sector				
Public sector support provided	<ul style="list-style-type: none"> - HE intervention contributes to achieving policies - lobbying work during intervention time to promote successes 	<ul style="list-style-type: none"> - National Energy Policy - Poverty Reduction Strategy Paper - Economic Recovery Strategy - promotion material addressed to public sector 	PP & PT	

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Political framework is supportive	- legal framework contributes to achieving cooking energy efficiency	- Strategies with positive contribution to project implementation	PP & PT	
Public awareness raising	- public sector is providing awareness campaigns or supports others (e.g. NGOs) to carry out campaigns - household energy as part of the educational sector	- financial support for awareness campaigns concerning cooking energy - school curricula dealing with household energy and efficient stoves	PP & PT	
Research and Development	- research institutions and universities dealing with energy issues cover household energy	- improved stoves are a relevant part of research and development	PP & PT	
Quality control of services and products is ensured	- support of public sector to quality control is provided	- contribution of public sector to maintain quality (control)	PP & PT	
Low risk credit schemes	n.a. (relevant for institutional stoves in social institutions and for productive use)			
Public support with subsidies provided only with clear exit strategy	- Long term viability of products without subsidies - Local contribution - exit strategy existing	Are you talking of the old or new project here? There does not seem to be a clear distinction or I overlooked it. It seems, we are talking of the on-going project, right?	PP & PT	
International support (e.g. VER/CER) with clear exit strategy				
Public support of alternative products				

To be asked:

project team (PT); public partners (PP); producers (P); users (U)