

F. Time, socio-economic and other impacts



NIGEL BRUCE

What does this type of evaluation tell us?

This aspect of evaluation is concerned with understanding the short-term, visible impacts of interventions on people's lives. Many women identify time and money savings resulting from fuel efficiency as the most important outcomes of interventions. Other impacts on their status, the cleanliness of their homes, and further indirect effects are also often reported. Unlike CO emissions or stove efficiency, these impacts are directly observable. This makes them key to people's willingness to adopt, pay for and maintain improved cooking practices.

Evaluation of socio-economic impacts can also contribute to economic analysis.¹ For example, cost-benefit analysis considers all costs and benefits of interventions including impacts on health, household livelihoods and the environ-

¹ Details of WHO's work on economic analysis relating to household energy can be found at www.who.int/indoorair/interventions/cost_benefit/.

ment. Many household energy interventions lead to important paybacks in terms of prevented illness and death, reduced expenditure on health care and fuel (where applicable) and time savings.

Socio-economic impacts include:

- **Time use.** An improved cooking stove which consumes less fuel will usually result in less time spent on collection for those who gather wood or other biomass fuels. Equally, shorter cooking times (for example when moving from a one-pot to a two-pot stove) also free up time. Saved time can have further effects: perhaps it will be spent in school or engaged in an income-generating activity.
- **Changes in expenditure.** In situations where fuel is purchased, fuel savings will result in lower expenditure on fuel. Occasionally, such as when users shift from using gathered wood to LPG, expenditure on fuel may increase – but hopefully be offset by time savings and other benefits. Purchase and maintenance costs must also be considered. Like savings in time, financial savings may have additional indirect effects, such as increased expenditure on food and therefore better nutrition.
- **Prestige and status.** A cleaner house due to less smoke or the prestige of owning a modern stove can result in a perceived rise in status of users. For example, using a modern stove could improve a woman's self-confidence, and a cleaner house may encourage visitors. These can both contribute to an individual's or family's empowerment, i.e. political, social and/or economic strength as well as confidence. Perceived prestige and status of interventions can also be used in promotional activities.
- **Other impacts – including problems.** Users will often identify benefits not foreseen by the implementing organization. Examples include improved portability of the cooking device, the ease of keeping it alight, or less blackened pots to wash. Users may also identify drawbacks of using the intervention, and it is important to understand these. The removal of smoke from homes is sometimes

perceived to have negative impacts, including fear of snakes living in the smoke-free thatched roofs, reduced protection against malaria-carrying mosquitoes¹ or termites, no longer deterred by smoke, attacking the wooden structure of the house.

Key questions

- What impact has the intervention had on time allocation for women, children, men and the elderly (e.g. fuel collection, cooking, childcare)?
- What impacts has the intervention had on women's status, self esteem, decision-making power or other aspects of empowerment? What have these been due to (e.g. kitchen cleanliness, decision-making power, visitors)?
- What impacts has the intervention had on the household economy? Have women engaged in income-generating activities as a result of extra free time?
- What other impacts (both positive and negative) have been reported by women and men as a result of the intervention (e.g. effect of smoke reduction on insects, kitchen cleanliness, number and types of meals prepared)? How important are these perceived to be?

What are the challenges?

Assessing changes in time allocation and household expenditure lends itself to quantitative evaluation, and can be assessed using questionnaires or time-charts. Many of the other broad-

er impacts are best assessed through qualitative methods, such as focus group discussions and open-ended questions. One of the most effective methods of gathering information on women's work is observation. Ideally this is undertaken in circumstances which reflect normality as much as possible, and by a known and trusted observer who has explained the purpose of the assessment. Gathering time-activity data on children can be particularly challenging but is most valuable, in particular with regard to their location. Gathering accurate information on socio-economic impacts relies on skilled researchers. This is discussed further in Chapter 5.

Available methods











Available methods to evaluate time, socio-economic and other impacts are listed in Table 8. There are also a number of basic questionnaires for understanding socio-economic impacts of interventions, including:

- IAP survey questions, World Bank, Bangladesh;
- Impact assessment questionnaire, GTZ/ProBEC, Africa; and
- Evaluation questionnaire, Trees, Water and People, United States.

The University of Liverpool is developing a standardized process for designing health and socio-economic studies to contribute to comparability between studies. Further information and example questionnaires are available at <https://liv.ac.uk/hehevaluation/>

¹ Biran A, Smith L, Lines J, Ensink J, Cameron M. 2007. Smoke and malaria: are interventions to reduce exposure to indoor air pollution likely to increase exposure to mosquitoes? *Transactions of the Royal Society of Tropical Medicine and Hygiene* 101:1065–1071.

Table 8 Evaluating time, socio-economic and other impacts

ID	Method	Organization	Relevant section of method	Rating
Recommended methods				
D1, D2, D3	IAP post-monitoring questions	IAP team, UCB	All	
D5	House, household and monitoring	Practical Action/ University of Liverpool	Post-monitoring questionnaire (Section C)	
D7	Household energy practices, indoor air pollution and health perceptions survey	Winrock International	Post-monitoring questions (Section H)	
E2	Guidelines for evaluating the impacts of household energy programmes	University of Liverpool	All	 
Additional methods				
D7	Focus group discussion guide	Winrock International	All	 
F1	Energy policies and multitopic household surveys	World Bank	Questions on fuel consumption, collection and purchase for different uses	
Y5	Methodology for participatory assessment	ARECOP	All	 

A – Adoption; B – Market development; C – Performance; D – Pollution levels and personal exposure; E – Health and Safety; F – Time and socio-economic impacts; G – Environmental impacts; Y – Generic methods.