

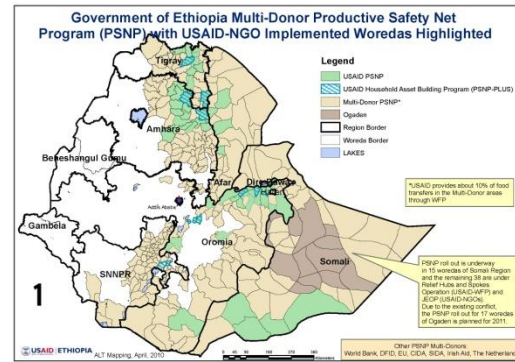
Benefit-Cost Analysis: A Sampling of 2009 MYAP Interventions in Ethiopia.

1. Background

The use of benefit-cost analysis (BCA) for selection of investments is a growing priority within USAID. This aspect of monitoring and evaluation helps the Agency to better understand the cost effectiveness of different types of interventions and of different partners' approaches to these interventions.

In July of 2009 the USAID/Ethiopia mission engaged in discussion and planning regarding appropriate tools for assessing the impact of the 2009-2011 Multi-Year Assistance Program (MYAP). During this process it was agreed that, among other monitoring and evaluation tools, USAID would require implementing partners to complete BCA of specified public works interventions for each of the three MYAP years. Benefit-cost analyses are useful for comparing the relative cost and benefit of projects, of similar type (e.g. potable water interventions) and of different type (e.g. potable water versus irrigation interventions).

The objective of USAID/Ethiopia's MYAPs is to complement the GoE-led Productive Safety Net Program (PSNP) in its effort to decrease the number of chronically food insecure Ethiopians. This is done by providing timely and predictable food transfers, which help the poor meet their food and cash needs, in exchange for a labor contribution, by the able bodied, to public works activities. Intended outputs are household asset protection and community asset creation. USAID's MYAPs are being implemented in 31 woredas Amhara, Oromiya, SNNP and Tigray Regions by five partner NGO's.



2. Methods

USAID used a randomized approach to site selection for BCA analysis. The Agency asked each partner to submit a list of all potable water, irrigation, hand dug well and area enclosure sites completed, or soon to be completed, under the current MYAP agreements. USAID then randomly selected one site, for each partner and project type, to be assessed.

USAID gathered information from BCA reports submitted to the Agency by MYAP implementing partners. The quality of submitted reports varied considerably among partners, in the level of provided qualitative information and justification for quantitative analyses.



PSNP hand dug wells can be linked with treadle pumps and drip irrigation for vegetable production (Tigray Region)

3. Results and Discussion- Irrigation

Benefit/cost ratios were 14, 10, 7.1, 3.3 and 0.9, with an average of 7 across implementers. Initial investments ranged from 36,850 (Partner A) to 466 (Partner B), with an average of 14,540 USD across implementers. Cost per household (includes upfront and recurrent costs) ranged from 4,623 (Partner A) to 138 (Partner B), averaging 1,168 USD, and 4,007 (Partner A) to 106 (Partner B) per hectare. After reviewing these numbers, USAID consulted implementers reporting unusually high or low values to better understand such deviations.

Produce sales income was 13,376 (PA), 312 (PB) USD/ha/year and investment in production was 1576 (PA), to 17 (PB) USD/ha/year, with income to investment ratios is 18:1 (PB) to 8:1 (PA). Returns per hectare were largely affected by the number of harvests per year – most small holder irrigated vegetable producers make two harvests - and the value assigned to produce.

4. Conclusions

This exercise provided evidence that benefit-cost analysis, or weighing the cost against the return of an intervention, is not a key determinant of activity selection among USAID's MYAP implementing partners. It was evident from the submissions that partners had not fully considered the cost-benefit equation for the selected activities prior to this assignment. Further, partners have very different interpretations of how to quantify costs and benefits.

Nonetheless, and despite use of questionable numbers, it appears that all interventions analyzed have a positive cost-benefit (*i.e.* benefit-cost ratio is greater than 0). Further, despite the significantly higher average initial cost of irrigation interventions, as compared to other activity types, their BCR was similar to

lower cost interventions. This indicates that more costly interventions can be worthwhile.



Irrigated vegetables with canal,

It may be further concluded that despite this report's inability to make a clear benefit-cost determination of the assessed activities, USAID and its implementing partners learned a great deal from the process. In particular, it is evident that more consideration, on the part of USAID and its partners, needs to be given to the cost efficiency of interventions.

5. Recommendations

The use of cost-benefit analysis (BCA) for selection of investments is a growing priority within USAID. This aspect of monitoring and evaluation helps the Agency to better understand the cost effectiveness of different types of interventions and of different partners' approaches to these interventions. Many of the Agency's implementing partners, however, do not prioritize cost-benefit as a key determinant of activity selection in the PWs activity selection. Consequently, it is USAID's responsibility to inform implementing partners of the importance of cost-benefit to the planning, monitoring and evaluation of USAID funded projects and to provide support in completion of such analysis.