

## Extended Abstract

Please do not add your name or affiliation

<b>Paper/Poster Title</b>	<b>Measuring changing preferences for support for land degradation control: Evidence from multiple interventions in Southern Ethiopia</b>
---------------------------	---

**Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.**

<b>Abstract</b>	<i>200 words max</i>
<p>Land and soil degradation is a major problem across sub-Saharan Africa but particularly in Ethiopia. A key part of the Ethiopian government's strategy to reduce land degradation risk is the establishment of "exclosure" areas to restore degraded common lands. It is recognized that land restoration initiatives such as exclosures need to be better designed to improve short run benefits for local communities order to increase community support.</p> <p>This paper measures the impact on local attitudes to exclosures of a project designed to enhance the local benefits of an exclosure in Southern Ethiopia. Specifically, the project trained, handed out resources, and gave access to exclosures to selected youth and women to undertake new activities in beekeeping or livestock management. The impact evaluation applied a Difference in Difference (DID) design applying a repeated DCE experiment across treatment and control areas with 500 farmers in in 2021 and 2023.</p> <p>The survey data is analysed using a mixed logit model. The results provide evidence of preference change linked to the project interventions, with increasing preference for exclosure management options associated with the interventions. There is also evidence that an individual's knowledge of the interventions played an important role in the change in their preferences.</p>	
<b>Keywords</b>	e.g. Bioenergy, Energy Efficiency
<b>JEL Code</b>	e.g. Energy: Demand and Supply Q41 see: <a href="http://www.aeaweb.org/jel/guide/jel.php?class=Q">www.aeaweb.org/jel/guide/jel.php?class=Q</a> )
<b>Introduction</b>	<i>100 – 250 words</i>
<p>Land and soil degradation is a major problem across sub-Saharan Africa but particularly in Ethiopia. Recent estimates put the area of degraded land at more than one-quarter of the entire country, affecting nearly a third of the population. The impacts of degradation and measures to restore land are inherently unequally distributed across the population in time and space, reflecting the many interdependences at the local level between community and individual decisions and the physical environment.</p>	

A key part of the Ethiopian government’s strategy to reduce land degradation risk is the establishment of “exclosure” areas to restore degraded common lands. However, groups with little access to other sources of firewood and communal grazing can be severely affected. Exclosures may aggravate the degradation of remaining communal grazing lands that are important in local livelihoods as a source of organic fertiliser, labour and ‘insurance’ in times of adversity. Exclosure areas have benefits, e.g. firewood & grass quotas, improved water resources, and disbenefits, e.g. of wildlife attacks on crops, that are unequally distributed amongst households depending on factors like land holding size and location. It is recognized that land restoration initiatives such as exclosures need to be better designed to improve short run benefits for local communities and for marginal groups in particular in order to increase community support and therefore their long-term viability.

**Methodology**

100 – 250 words

The main idea underlying the design is that support for exclosures is more likely to improve where the local benefits of exclosures are increased. However, which specific types of interventions will be successful in increasing support cannot be judged beforehand as the experience of how interventions work in practice benefit is likely to change how they are viewed as studies suggest that experience of the good matters for preferences.

The repeated DCE surveys (baseline and endline surveys) are used to measure the impact of the experience of the interventions on individual preferences in the community. To allow change in preferences across attributes to be identified, the survey data is analysed using a mixed logit model with a DID structure in preference parameters as follows

$$U_{knjt} = \beta_{kn}x_{njt} + \varepsilon_{knjt}$$

$$\beta_n = \beta_o + \beta_1 D(1) + \beta_2 k + \beta_3 D(1)k$$

where the trend effect  $k = 0,1$  and Treatment Area Effect  $D(1) = 0,1$

**Results**

100 – 250 words

The descriptive analysis of the DCE choice data show substantial evidence of instability of preferences across the two surveys, with significant trend effects but limited evidence of treatment effects. The mixed logit estimation results provide clearer evidence of preference change linked to the project interventions, with increasing preference for exclosure management options associated with the interventions. There is also evidence that an individual’s knowledge of the interventions played an important role in the change in their preferences.



--

<b>Discussion and Conclusion</b>	<i>100 – 250 words</i>
----------------------------------	------------------------

The research adds to the evidence on preference stability in DCE experiments and specifically the impact of experience of a public good on individual preferences. In terms of the specific context, it shows that experience of interventions which allow local vulnerable populations to access exclosures so influence the preferences that exists for the management of exclosures within local communities. This suggest that interventions which increase short run local benefits are likely to increase the level of community support for further exclosures, supporting rtign the Ethiopian government’s policy objectives.