



Effect of COVID-19 on forest dependent households in Kenya: Does access to forest resources act as a safety net?



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Introduction

- Forest communities are highly vulnerable to sudden shocks, whether due to social, political, economic or natural events (Dercon et al., 2005).
- COVID-19 could exacerbate the vulnerability situation for forest-dependent communities (FAO, 2020).
- This paper focuses on 2 questions;
 - What shocks did households face and what are the corresponding coping strategies
 - What are the impacts of COVID-19 on forest communities and what are the corresponding coping strategies?
- Understanding the impact of the pandemic on forest communities and their adaptation strategies could provide lessons to support rural communities cope with negative effects of COVID-19 and other shocks



Limited integration of trees in farms at Kopsiro, Mt Elgon Kenya

Methods & Conceptual framework

Used panel dataset of rural forest dependent households obtained from two survey waves during 2018–2022 (752 households) in Western Kenya

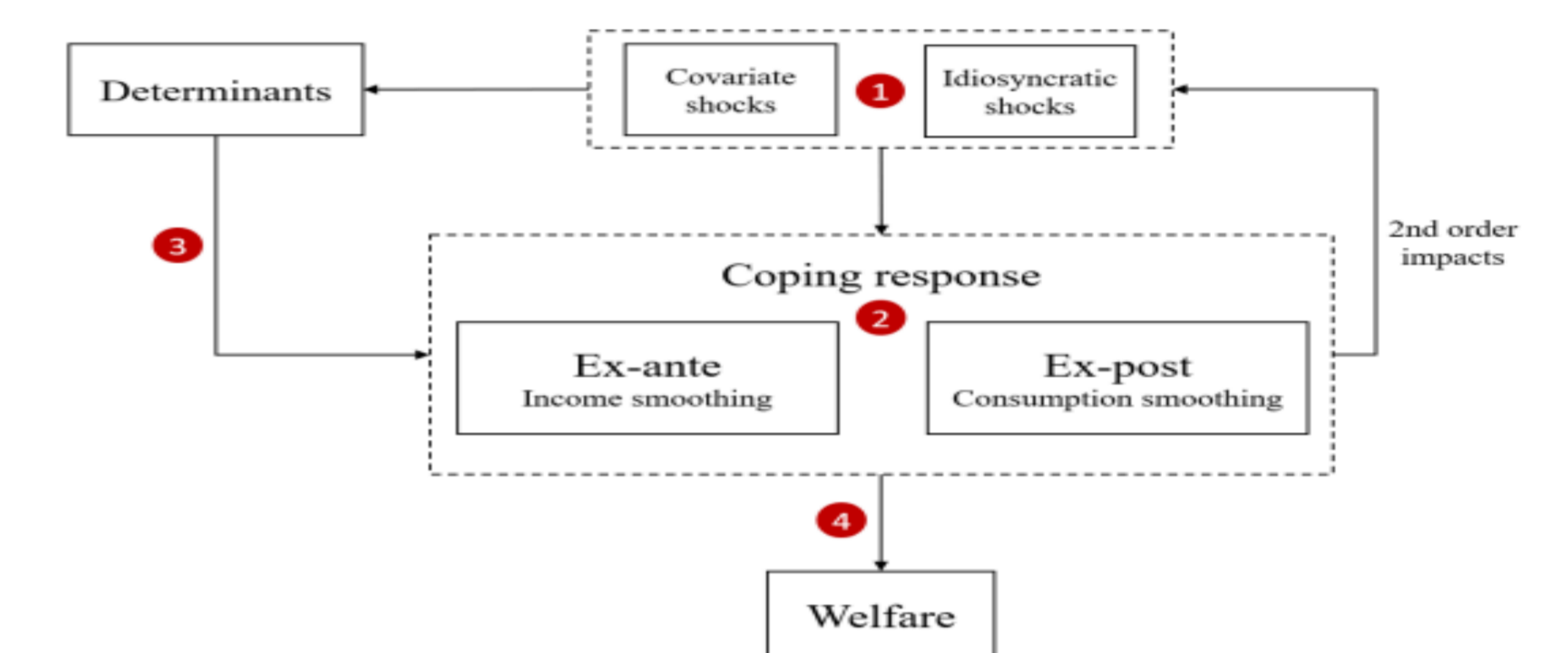
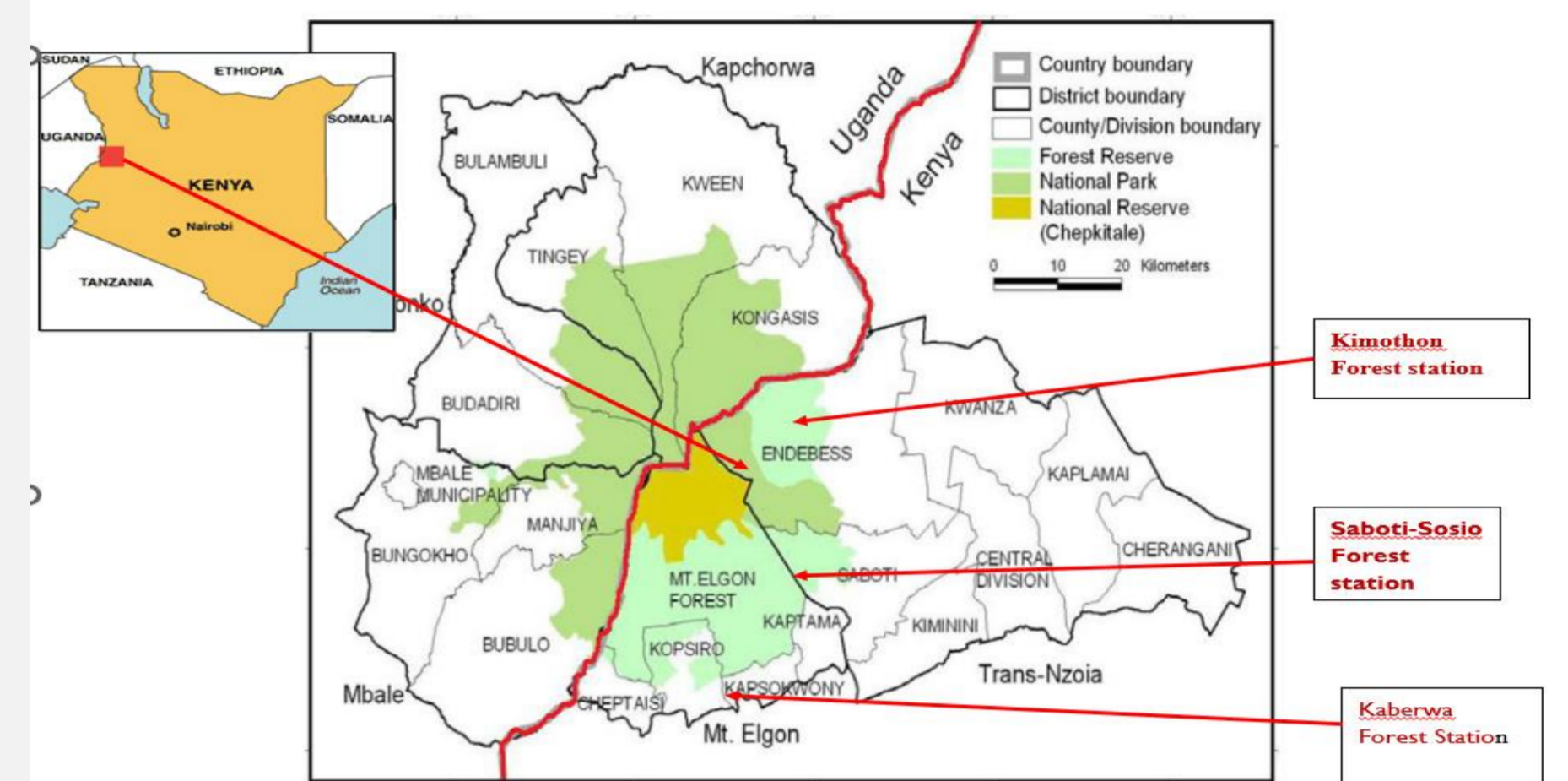


Figure 1: Conceptual framework linking shocks (COVID-19) with welfare outcomes (Based on Heltberg et al., 2012)

Results:

Shocks experienced by households

- No significant difference in shocks related to agriculture and those relating to social dimensions such as conflict, clashes and burglary experienced in 2018 and 2021.
- Statistically significant difference in health weather, economic, price shocks,

Table 1: Household shocks

	Total sample	2018/19	2021/22	Difference (0)-(1)	
	mean	mean	mean	b	p
Weather shocks	0.66	0.69	0.63	0.07	0.01
Agriculture shocks	0.68	0.68	0.69	-0.01	0.70
Price shocks	0.54	0.51	0.57	-0.06	0.02
Economic shocks	0.23	0.18	0.27	-0.09	0.00
Demographic shocks	0.27	0.18	0.36	-0.18	0.00
Health shocks	0.22	0.02	0.42	-0.40	0.00
Social shocks	0.01	0.01	0.01	-0.00	0.80
Observations	1492	746	746	1492	

Highlights

- Households faced higher economic, price and health shocks in 2021/22 compared to 2018/19
- Reducing household expenses & selling assets are key coping strategies
- COVID-19 mainly affected access to inputs, difficulty in output marketing
- Forest extraction and reducing expenses key coping strategies

Table 2: Coping strategies 2021/22

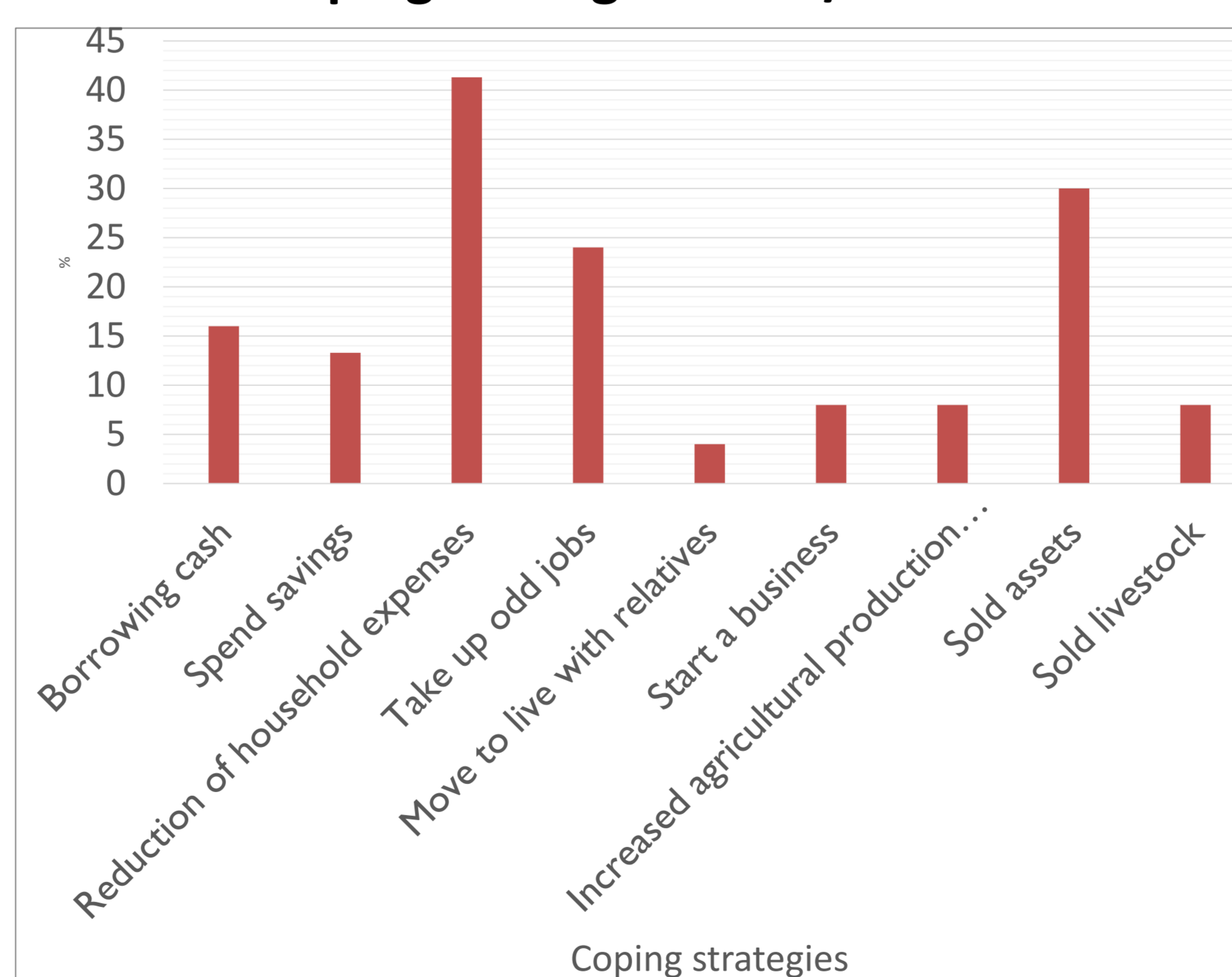


Table 3: COVID-19 effects on households

Type of effect	Mean
Household members stopped working	5.0
Agricultural production reduced	67.0
Difficulty accessing inputs	79.0
Difficulty in selling agricultural produce in the market	82.0
Inability to access usual markets	50.0
Selling products at reduced prices	60.0
Reduced number of buyers	39.0
Inability to deliver produce to market	21.0
Inability to sell agricultural produce	3.0
Difficulty in accessing farmer training	33.0
Difficulty in accessing NTFPs	27.0
Negative overall life change	81.0
Negative effect of covid restrictions on livelihoods	79.0
N	746

Table 4: COVID Coping strategies 2021/22

Coping strategy	mean
Borrowing cash	16.0
Spend savings	13.0
Reduced expenses	41.0
Taking up odd jobs	24.0
Lived with relative	0.00
Starting a business	8.0
More home agricultural production	30.0
Selling assets	6.0
Selling livestock	8.0
Extraction of forest products	56.0
N	746

Table 5: Changes in household incomes

Outcome indicators	1 st Wave (2018)	2 nd Wave (2021)	P-value
Household income (absolute)	104,305	39,588	0.000
Agricultural income	52,491	30,010	0.000

Summary

- COVID-19 negatively affected agricultural production, access to seeds, ability to sell produce in the market, farmer training and household livelihoods.
- Decline of household incomes from KES 104,305/annum in 2018/19 (\$802) to 39,588 (US\$ 304) representing a 62% drop.
- Key coping strategies include; extracting forest food products such as vegetables, honey and wild fruits and reduced household expenses, especially on food
- Forest products collection aids consumption smoothing while protecting asset depletion in the wake of covariate shocks