



Green Jobs for Youth:
Insights from Malawi Green Corps Project
Learning Study Report



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Disclaimer

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led policies and programs to drive broad-based agricultural transformation, diversification and improved smallholder incomes and nutrition in Malawi.

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TABLE OF CONTENTS

ACKNOWLEDGEMENT	i
LIST OF TABLES.....	v
LIST OF FIGURES.....	vii
ACRONYMS.....	viii
EXECUTIVE SUMMARY.....	x
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 Background	1
1.2 The Malawi Green Corps Project.....	3
CHAPTER TWO	4
DATA SOURCES AND METHODS.....	4
2.1 Study design.....	4
2.2 Sample size and sampling procedure.....	4
2.3 Data collection and analysis	6
2.4 Impact Indicators.....	7
2.5 Project impact estimation	7
CHAPTER THREE	9
STUDY FINDINGS	9
3.1 Project interventions.....	9

3.2 Characteristics of participants and non-participants.....	12
3.3 Process Evaluation.....	14
3.3.1 Recruitment and Selection Process.....	14
3.2.2 Administration and Management of Human Resources	17
3.2.3 Project coordination.....	19
3.4 Project Impact.....	23
3.4.1 Livelihoods of the youths	23
3.4.2 Youth income	25
3.4.3 Poverty among youths	27
3.4.4 Skills development	28
3.4.5 Business performance	35
3.4.6 Access to productive assets	41
3.5 Project Sustainability and replicability.....	42
CHAPTER FOUR	45
CONCLUSION AND RECOMMENDATIONS.....	45
4.1 Conclusion.....	45
4.2 Recommendations.....	46

LIST OF TABLES

Table 1: Sample size – target versus completed.....	5
Table 2: Malawi Green Corps Interventions	9
Table 3: Other related proposed interventions.....	11
Table 4: Youth demographic and socio-economic characteristics	13
Table 5: Knowledge about the project	15
Table 6: Selection into the project.....	15
Table 7: Satisfaction with the recruitment and selection process	17
Table 8: Payments of monthly allowance	18
Table 9: Adequacy and quality of PPEs and working materials.....	18
Table 10: Channels for handling complaints	19
Table 11: Support from other partners.....	20
Table 12: Past and present sources of livelihood among youths	24
Table 13: Mean livelihood diversification.....	25
Table 14: Estimated treatment effects of MGC project on income diversification.....	25
Table 15: Mean difference in income between MGC members and non-members	26
Table 16: Mean difference test in Income of MGC members and non-members before and after the MGC project.....	27
Table 17: Estimated treatment effects of MGC project on income.....	27
Table 18: Poverty Probability Index	27
Table 19: Estimated treatment effects of MGC project on youth poverty.....	28

Table 20: Estimated treatment effects of MGC project on number of training sessions attended.....	29
Table 21: Trainings and orientation programs attended.....	29
Table 22: Sources of training/orientation programs	30
Table 23: Social skills acquired	34
Table 24: Estimated treatment effects of MGC project on running a business	36
Table 25: Performance of various businesses run by youths.....	37
Table 26: Markets for youth’s products and businesses	39
Table 27: Youth’s access to credits and loans.....	40
Table 28: Sources of loans/credits for the youths.....	40
Table 29: Mean asset values by MGC membership	41
Table 30: Estimated treatment effects of MGC project on asset ownership.....	42
Table 31: Satisfaction with sustainability measures in place	43

LIST OF FIGURES

Figure 1: Perception about the selection process	16
Figure 2: Main challenges experienced by the youth	21
Figure 3: Usage of monthly allowances by the youth.....	23
Figure 4: Proportion of Youths receiving training/orientation programs.....	28
Figure 5: Satisfaction with the trainings	31
Figure 6: Knowledge the youths found more useful to environmental restoration.....	32
Figure 7: Knowledge youths found more beneficial to entrepreneurship	33
Figure 8: Skills being practiced/applied.....	34
Figure 9: Proportion of youths running businesses.....	35
Figure 10: Business types run by the youths.....	36
Figure 11: Business Characteristics	37
Figure 12: Percentage of youths using part of MGC proceeds as business capital	38
Figure 13: Proportion of youths borrowing credit for their businesses	41

ACRONYMS

ADC	Area Development Committee
ATE	Average Treatment Effe
ATT	Average Treatment on the Treated
BMCs	Block Management Committees
CRS	Catholic Relief Services
CSOS	Civil Society Organizations
DEC	District Executive Committee
DESC	District Environment Sub Committee
DFO	District Forestry Officer
DYO	District Youth Officer
ECAM	Employers Consultative Association of Malawi
EDO	Environmental District Officer
GoM	Government of Malawi
IPA	Innovations for Poverty Action
JCE	Junior Certificate of Education
KIIs	Key Informant Interviews
MGC	Malawi Green Corps
MSME	Micro, Small and Medium Enterprises
MSCE	Malawi School Certificate of Education
NRM	Natural Resource Management
NEEF	National Economic Empowerment Fund
NGO	Non-governmental organization

PPI	Poverty Probability Index
PPE	Personal Protective Equipment
PSLCE	Primary School Leaving Certificate of Education
PSM	Propensity Score Matching
SGBV	Sexually Based Gender Violence
UNDP	United Nations Development Programme
VNRMCs	Village Natural Resource Management Committee
VSLAs	Village Savings and Loan Associations
WM	Waste Management
YSL	Youth Savings and Lending

EXECUTIVE SUMMARY

This report unveils the intricate insights derived from the Malawi Green Corps (MGC) project, a pivotal initiative aimed at bolstering government endeavors to create sustainable income opportunities and enhanced employment prospects for the country's youth. The MGC project was implemented in ten districts by the Catholic Relief Services (CRS). The MwAPATA Institute carried out the study to generate knowledge and provide vital lessons for the effective scaling of the project. Furthermore, it also sought to formulate policy recommendations to amplify the impact of similar future youth-centric programs.

The study combined quantitative and qualitative methods to enhance comprehensive learning from the project. The study, involving 989 youths (628 MGC project participants and 361 non-MGC project participants), used phone surveys and Key Informant Interviews to assess the project's impact, employing regression analysis and Propensity Score Matching. Findings revealed the MGC project significantly enhanced participants' social, technical, and business skills, income, and overall welfare. Notably, MGC participants earned higher incomes and had a reduced likelihood of Poverty compared to non-participants. The project also positively affected business development, with a majority of youths starting profitable ventures. For instance:

- Participants in the MGC project had a significantly higher income (MK443,000 per year) than the non-MGC participants (MK296,000 per year).
- MGC members showcased a considerably lower probability of being in Poverty than non-members.
- Approximately 60% of youth actively engaged in profitable business enterprises, with a notable distinction between MGC members (75%) and non-members (30%).
- Further, the PSM results on the impact of the project on the share of youths starting businesses show that the project increased the proportion of youths engaged in businesses by 42%.

These outcomes provide valuable lessons for scaling the initiative and inform policy recommendations for future youth-focused programs but also identify key challenges such as delayed payments, resource scarcity, and poor coordination. To address these and enhance the program, recommendations include:

- (a) Enhance project implementation: Improve coordination, deploy local officers, conduct regular reviews, and allocate technical support budgets.

- (b) Administrative improvements: Ensure timely stipend disbursement, establish a transparent process with digital tracking and promote open recruitment with feedback mechanisms.
- (c) Widen project interventions: Incorporate environmental restoration and climate-smart farming and encourage peer learning.
- (d) Broaden green jobs/businesses: Support a variety of green jobs, such as fish and bee farming, horticulture, and irrigation.
- (e) Devise long-term sustainability measures: Extend the project period, involve local communities, and encourage the wider community to participate in waste management initiatives.
- (f) Financial inclusion: Encourage youth savings and lending groups, collaborate with financial entities for loans, and provide start-up resources.
- (g) Improve product quality and market access: Prioritize value addition, develop a strong brand, and create market linkages via youth groups.
- (h) Enhance youth incentives: Increase allowances and capital for business startups and introduce awards for outstanding performance.
- (i) Strengthen the MEAL component by building a thorough monitoring and evaluation framework, including a learning and impact assessment, and allocating resources for district staff oversight

In summary, the recommendations aim to improve and expand youth-focused environmental projects, building on the MGC project's success and addressing its challenges for greater community benefits.

CHAPTER ONE

INTRODUCTION

1.1 Background

Malawi continues to face significant developmental challenges, including high levels of youth unemployment, Poverty, environmental degradation and climate change (UNDP, 2020). According to the International Labour Organization (ILO) report, Malawi's youth unemployment has increased over the past decade, and it registered 7.7% in 2022 among the youth aged between 15 and 25. There have been several efforts, policies, programs and initiatives aimed at addressing youth unemployment in Malawi, however, their impact has been limited due to poor coordination and implementation, political interference, funding and sustainability (Gondwe et al., 2020).

There is no universally accepted definition of youth. The United Nations (UN), for instance, defines youth as any person aged between 15 and 24 years, whereas the African Union (AU) uses the 15-35 age cohort. The Government of Malawi (GoM), through its National Youth Policy (NYP) (2023), defines youth as all persons from the age of 10 to 35 years, and the study and MGC project adopted the definition by NYP. Malawi's population is largely youthful, with 80% of its population aged below 35. It is thus necessary for the country to implement initiatives that assist in harnessing demographic dividends from this youthful population. One of such initiative is the promotion of green jobs that seeks to strike a balance between economic growth and environmental sustainability.

Green jobs for youths have recently received global attention, including in Africa (Lijfering & Lacey, 2022; Mwaura & Glover, 2021), although there is no universal definition for green jobs. Green jobs are defined as work in agriculture, manufacturing, research and development, and administrative and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but not exclusively, this includes "jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high-efficiency strategies; de-carbonize the economy; and minimize or altogether avoid the generation of all forms of waste and pollution" (UNEP, 2008). Generally,

green jobs fall within several sectors, including agriculture, forestry, fisheries, renewable energy and green growth, tourism, clean technologies and waste management, transport, infrastructure and construction.

Success stories on green jobs for youth in Africa have been documented through the Challenge Fund for Youth Employment (CFYE), a flagship 7-year programme funded by the Netherlands Ministry of Foreign Affairs. The CFYE seeks not only to address the great challenge of youth unemployment but also to contribute significantly to environmental conservation and sustainable growth. So far, CYFE has worked with green entrepreneurs in Kenya (waste cycling for green products), Nigeria (manufacturing affordable and reusable sanitary pads for girls) and Uganda (renewable energy for cleaning cooking). This is a model that Malawi can also emulate in order to promote green jobs for youth in the country.

In an effort to address unemployment among the youths while steering the country towards a more sustainable, environmentally conscious future as outlined in the Malawi2063 vision, the Catholic Relief Services (CRS) implemented the Malawi Green Corps (MGC) project in 10 districts across the country. Thus, the MGC was launched to contribute to government efforts to create and expand sustainable employment opportunities. The project was aligned with the UN Decade on Ecosystem Restoration (2021-2030) and empowers the youth through skill development, as well as opportunities for sustainable livelihoods. Through the project, 2,000 youths between 18 and 30 years old were provided with employment opportunities by engaging them in environmental management and ecosystem-based adaptation.

The Malawi Green Corps project is nearly at its completion, and as such, there was the need to assess and document critical successes, challenges and opportunities for policy advice and future programming. To this end, MwAPATA Institute was commissioned to undertake the study to generate knowledge and provide lessons and policy recommendations to increase the chances of success and maximize the impact of future programming of similar youth programs. Specifically, the study sought to:

- a) Assess the performance of the MGC project.
- b) Document critical challenges in the implementation of the project.

- c) Evaluate the impact of the project on the livelihoods of the participating youths.
- d) Document valuable lessons on the implementation of the project that can be upscaled.

1.2 The Malawi Green Corps Project

The Malawi Green Corps, an environmental initiative spearheaded by the Malawi Government and financially supported by UNDP, sought to revitalize 5,000 hectares of degraded land and forests throughout Malawi. This ambitious project also aimed to repurpose waste into valuable products. The Catholic Relief Services (CRS) played a pivotal role as the primary implementing agency on behalf of UNDP, focusing on environmental restoration in critical hotspots within ten districts: Karonga, Mzimba, Lilongwe, Salima, Dedza, Ntcheu, Zomba, Machinga, Mangochi, and Blantyre.

The core objective of the MGC project was to empower youths by providing them with skills and opportunities for sustainable livelihoods. This was achieved through active involvement in environmental management and ecosystem-based adaptation, simultaneously nurturing their capacity and proficiency to pursue and establish green jobs independently. The project adopted a phased approach where youths were engaged in phases, each cohort lasting for four months for a period of two years. In each cohort, the youths were either involved in forest or waste management initiatives. Specifically, the project sought to;

- (a) Mobilize and recruit 2000 youths
- (b) Provide training and capacity-building initiatives on environmental and forestry management, entrepreneurship and forestry literacy, and cross-sectoral themes
- (c) Manage and rehabilitate 5000ha of environmental hotspots
- (d) Create mentorship, peer learning, and networking platforms for youth

CHAPTER TWO

DATA SOURCES AND METHODS

2.1 Study design

The study employed mixed methods, comprising quantitative and qualitative approaches. The quantitative techniques were useful for generating performance data to compare indicators at the end of the project between project participants and non-participants. To gain deeper insights into the phenomenon relating to the project's impact and effectiveness, we also used qualitative methods. (Barclay et al., 2017; Palinkas et al., 2015).

In measuring the impact of the MGC project interventions on the project beneficiaries, the critical challenge was to identify a group of beneficiaries and non-beneficiaries that are statistically identical in the absence of the project. Suppose we can find a group of identical individuals, except that one group benefits from the project and the other does not. In that case, we can attribute the differences in the outcomes to the project. To overcome this challenge, a Propensity Score Matching (PSM) technique was used. To enable us to use the PSM, we collected data from participating and non-participating youths in the participating districts.

Phone interviews were used to collect data due to time and financial constraints. The key informant interviews (KIIs) focused on the district staff (district forestry, environmental, and youth officers). The KIIs were done to better understand the overall project implementation issues, including the challenges, coordination, and sustainability.

2.2 Sample size and sampling procedure

The following standard formula as provided by Daniel & Cross (1999) was used to determine the representative sample size for the study.

$$n = \frac{z^2 p \cdot q \cdot N}{e^2} + Z^2 \cdot p \cdot q$$

Where: n is the sample size.

p is an estimate of the proportion of the youth population that has the major interest.

z is the z -value yielding to the desired degree of confidence.

$q = 1 - p$.

N is the youth population size (in the project districts).

e is the sampling error/margin of error.

Assume a 99%¹ confidence interval, an expected margin of error of 5 percent, and an assumed 25% proportion of the youths to be reached in the project districts, both directly and indirectly, the sample size for the project participants is 609 (after adding 10% for non-response). For the non-participants, with the same parameters as above but only considering 15% of the youths in the project districts, the sample size is 400. The total sample for the study was 1007, and district sample sizes were in proportion to the estimated number of beneficiaries/youths with membership to youth clubs, as shown in Table 1. At the end of the study, a sample size of 989 was achieved, representing 98% of the target.

Table 1: Sample size – target versus completed

District	MGC		Non-MGC		Total	
	Target	Achieved	Target	Achieved	Target	Achieved
Blantyre	64	68	46	53	110	121
Dedza	37	50	33	16	70	66
Lilongwe	63	69	73	48	136	117
Machinga	74	76	32	29	107	105
Mangochi	51	45	8	7	58	52
Ntcheu	64	65	48	56	112	121
Salima	64	63	55	64	119	127
Zomba	64	63	36	29	100	92
Karonga	64	64	44	39	108	103
Mzimba	64	65	24	20	88	85
Total	609	628	399	361	1,007	989

For the Key Informant Interviews (KIIs), a sampling frame of 28 informants, including the District Youth Officer (DYO), the Environmental District Officer (EDO) and the District

¹ 99% confidence level has an associated 2.576 Z-value.

Fisheries Officer (DFO), was obtained from the project in the ten participating districts. Eight districts contributed three officers (DYO, EDO and DFO), while no DYO and EDO were available from Lilongwe and Ntcheu, respectively. While the initial plan was to interview all 28 informants, at the end of the survey, 17 key informants (7 DFOs, 5 DYOs and 5 EDOs) were available for the interviews, representing 60% of the key informants (Table A1). The individual respondents (both the participants and non-participants) were randomly selected from all ten districts by using Stata 18.

2.3 Data collection and analysis

Data was collected from 14th to 28th June 2023 through phone interviews with the sampled youths. Pretested data collection instruments (structured questionnaires and checklists) were employed to collect the information. Dedza district was selected for pretesting because of the high numbers of both participating and non-participating youths from the sampling frame.

Through the survey team, supervisors made prior bookings two days earlier to all the youth in a particular district through their cohort leaders. This ensured that they had their phones fully charged and positioned themselves in a location with a good mobile phone network. In addition, youths without mobile phones were advised to provide alternative phone numbers to reach them. The cohort supervisors were also on standby to allow other sampled youths without access to mobile phones to be reached through the supervisors' phones. In Salima and part of Lilongwe, face-to-face interviews were conducted due to the proximity of the two districts.

Collected data were subjected to daily quality checks by a team of data quality controllers before final approval. Data analysis was done in Stata 18, where descriptive statistics such as means and standard deviation were used to quantify the various indicators and variables of interest. Comparative analyses (participants and non-participants) were done, and statistical tests were necessary.

2.4 Impact Indicators

The study measured the impact of the MGC project on youth income, the average number of income sources, and the probability of Poverty. Income was calculated as the sum of revenue realized by the youths from on-farm and off-farm activities. The number of income sources was used to measure the extent of income diversification among the youth. Households with more income options are classified as more diversified, and those with only one income source are classified as not diversified.

We used the poverty probability index (PPI) to measure household poverty. The PPI measures the probability that a household lives below the poverty line using a list of questions about household characteristics and assets (IPA, 2020). Some of the characteristics and assets used include household size, district of residence, roofing material of the household's dwelling unit, floor material of the dwelling unit, and assets ownership of a bed and table. Responses to the various assets and other household characteristics are as follows: A weighted sum of these scores for each household is generated and calibrated with the 2020 PPI lookup table to determine the poverty probability of a household.

2.5 Project impact estimation

The study employed the PSM and the non-parametric regression approaches to estimate project impact. Non-parametric estimation approaches were used to triangulate the results from the OLS regression methods. The primary explanatory variable of interest is participation in the MGC project (treatment). Using the PSM, we estimated the Average Treatment Effect (ATE) and Average Treatment on the Treated (ATT). The propensity score matching method involved balancing the observed covariates between the participants and the non-participants. Details are contained in Rosenbaum and Rubin (1983) and Caliendo and Kopeinig (2008). The PSM was adopted in our study to estimate project impact in the absence of a properly designed randomized control trial for the project. As explained in the program participation section, we believe that selection in the program was not random because the youths were given equal chances to participate in the project or not. The study used nearest

neighbor Kernel, Mahalanobis and Local Linear Regression matching techniques. Tests were then conducted to select the matching method that produces the best match. In general, there must be no statistically significant difference between the matched treatment and control (comparison) groups' mean of each observable characteristic and the overall mean. Such a situation implies that the treated group has observations that are identical to those of the untreated group. In the end, the only difference is participation in the program. Test results are presented in Table A2 to Table A4.

CHAPTER THREE

STUDY FINDINGS

This chapter presents the study's results. It compares the characteristics of the MGC and non-MGC youths, project implementation issues related to the recruitment and selection process, administration and management of human resources, project coordination and challenges, among others. Later, the chapter presents the study findings on the impact of the MGC project on the youths' skills development (business, technical and soft skills), welfare, income and livelihood diversification.

3.1 Project interventions

Table 2 presents findings of MGC activities in the intervention areas: Natural Resources Management (NRM) and Waste Management (WM). 81% of the MGC participants indicated that they were involved in NRM interventions, with tree planting intervention reported by 78% of the participants, followed by weeding forest area (59%), nursery activities (57%) and fire management activities (52%). On average, the number of sites restored was 2, with an average of 163 hectares² of land restored per hotspot. This compares to the estimated project output of restoring up to 5,000 ha of degraded environmental hotspots and waste management activities. For those MGC participants who raised tree seedlings in nurseries, an average of 28,000 seedlings were raised. With respect to WM interventions, making organic manure was the most reported intervention by the youth (82%), followed by making briquettes (74%) and Clean-up exercises (72%).

Table 2: Malawi Green Corps Interventions

Description	Mean	SD	N
Type of Interventions (NRM)	0.81	0.39	628
NRM Interventions			
<i>Tree planting</i>	0.78	0.42	510
<i>Enrichment planting</i>	0.35	0.48	510

²The area reported in this study is based on the area reported by the supervisors interviewed

<i>Nursery activities</i>	0.57	0.49	510
<i>Fire management</i>	0.52	0.50	510
<i>Pruning</i>	0.35	0.48	510
<i>Weeding</i>	0.59	0.49	510
<i>Enrichment management</i>	0.25	0.43	510
<i>Number of sites restore</i>	2.37	1.18	27
<i>Land area restored (Ha)</i>	162.30	124.53	27
<i>Number of seedlings raised</i>	28465	52328	37
Waste management interventions	0.19	0.39	118
<i>Clean-up campaigns</i>	0.35	0.48	118
<i>Clean-up exercise</i>	0.72	0.45	118
<i>Briquettes making</i>	0.74	0.44	118
<i>Soap making</i>	0.05	0.22	118
<i>Organic manure making</i>	0.82	0.38	118
<i>Glass/Plastic recycling</i>	0.38	0.49	118
<i>Textile wastes and scraps</i>	0.37	0.49	118
<i>Volume of recycled materials (tons)</i>	2585	17079	118
Number of months engaged	5.51	3.02	628
Continuation of voluntary MGC work	0.76	0.43	574
Cohort enrollment	26.00	10.12	37
Female cohort enrollment	13.78	5.95	37
Cohort dropouts	1.90	1.45	10
Cohort members with businesses	11.84	7.71	37
Time taken to travel to hotspot (Minutes)	68.06	48.63	628
Place of interventions (NRM)			
Government Forest Reserve	0.68	0.47	510
Village Forest Area	0.36	0.48	510
Homestead	0.12	0.33	510
Lake/River	0.03	0.18	510
Place of interventions (WM)			
Homestead	0.37	0.49	118
Public places (Schools, Hospitals etc.)	0.32	0.47	118
Waste dumping sites	0.28	0.45	118
Markets	0.64	0.48	118

Source: MGC Survey 2023

While the project engaged youths for a period of 4 months of paid work, the average period the youths undertook MGC work regardless of pay was six months, with 76% of the youth reporting to have continued with activities voluntarily. The average enrollment per cohort per hotspot was 26, with more females enrolled (14) than males. There was an average of 2 dropouts per cohort, citing sickness, migration to other areas, lack of seriousness from the participants, and attending to marriage/household as the main reasons. Participants took just over an hour to travel to the hotspot.

The NRM activities took place in government forest reserve areas (68%), Village Forest areas (36%), and around their homestead (12%). For waste management interventions, activities were mainly taking place in market places (64%), homesteads (37%), public places such as schools and hospitals (32%) and waste dumping sites (28%). While the youths' main activities were limited to NRM and waste management interventions, it is important to understand other aspects related to NRM and waste management that are of interest to the youth and could be included in future program design. Table 3 summarizes the interventions proposed by the youths that can be considered when designing similar projects. A notable thing amongst most of the interventions is that they have an economic value attached that would benefit the youth in the shortest time possible. This shows that projects that aim at attracting youths to participate in green jobs should provide financial incentives for the participants. Honey production was the most reported intervention by 34% of the youth. The possible reason for this was the fact that the youth wanted to benefit economically from the restored forest areas, and one way to do so was through bee farming. Farming-related interventions reported by the youth include irrigation farming (29%), horticultural production (13%), fish farming (13%) and livestock farming (5%).

Table 3: Other related proposed interventions

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
Honey production	0.37	0.48	0.27	0.45	0.34	0.47
Irrigation	0.28	0.45	0.31	0.46	0.29	0.45
Horticultural crops	0.11	0.31	0.18	0.39	0.13	0.34

Fish farming	0.12	0.33	0.13	0.34	0.13	0.33
Fruit orchard	0.11	0.31	0.07	0.25	0.09	0.29
Soil and water conservation	0.07	0.26	0.12	0.33	0.09	0.29
Waste products making	0.08	0.28	0.07	0.26	0.08	0.27
Livestock	0.08	0.27	0.00	0.00	0.05	0.22
Biogas production	0.02	0.15	0.02	0.15	0.02	0.15
Maintain current interventions	0.06	0.23	0.00	0.00	0.04	0.18

Source: MGC Survey 2023

3.2 Characteristics of participants and non-participants

The average age of both project participants and non-participants is 25 years, and 46% of them were males, as shown in Table 4. With respect to marital status, 33% of project participants were never married compared to 49% of non-participants. At the same time, 54% of project participants and 37% of non-participants were married. The proportion of youths who are household heads is higher among project participants (48%) than non-participants (36%). The average household size is 5, with youth-led households without parents having an average of 4 household members, compared to 6 household members for households with youths staying with parents. 95% of the youth are able to read and write. The proportion of youth with no formal qualification is higher for project participants at 36% compared to 33% for non-participants, while few project participants hold PSLC (27%) compared to non-participants (31%).

About 96% of project participants belong to a youth club, against 86% of non-participants. The results also show that the highest proportion of the youths (30%) undertook NRM interventions at their respective youth clubs. More project participants (22%) benefit from social protection programs against 18% of non-participants. Similarly, more of the project participants (17%) hold a position in the community against 13% of the non-participants, with local community structures (ADC, VDC) leadership positions, religious positions, and youth club positions as the most reported leadership positions held by the youth. There are also more project participants (26%) related to someone with a community position than non-participants (24%). The findings show that participants and non-

participants are different, which justifies the need to use matching techniques when measuring the impact.

Table 4: Youth demographic and socio-economic characteristics

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
Sex	0.49	0.50	0.41	0.49	0.46	0.50
Age of youth	25.41	4.05	23.67	4.34	24.77	4.24
Marital status						
<i>Never married</i>	0.33	0.47	0.49	0.50	0.39	0.49
<i>Married</i>	0.54	0.50	0.37	0.48	0.48	0.50
<i>Divorced</i>	0.09	0.28	0.10	0.30	0.09	0.29
<i>Separated</i>	0.04	0.19	0.03	0.18	0.04	0.18
<i>Widowed</i>	0.01	0.09	0.01	0.09	0.01	0.09
Youth is the household head	0.48	0.50	0.36	0.48	0.43	0.50
Youth is literate	0.95	0.21	0.94	0.24	0.95	0.22
Highest education obtained						
<i>None</i>	0.36	0.48	0.33	0.47	0.35	0.48
<i>PSLCE</i>	0.27	0.44	0.31	0.46	0.28	0.45
<i>JCE</i>	0.21	0.41	0.21	0.41	0.21	0.41
<i>MSCE</i>	0.13	0.34	0.13	0.34	0.13	0.34
<i>Tertiary - Certificate</i>	0.02	0.15	0.01	0.12	0.02	0.14
<i>Tertiary - Diploma</i>	0.01	0.11	0.01	0.07	0.01	0.10
<i>Tertiary - Degree</i>	0.00	0.04	0.01	0.07	0.00	0.06
Youth from urban areas	0.06	0.23	0.07	0.25	0.06	0.24
Household size	4.66	2.02	4.91	2.09	4.76	2.05
<i>Household size with no parent</i>	3.86	1.39	3.63	1.42	3.79	1.40
<i>Household size with parents</i>	5.78	2.21	5.99	1.94	5.87	2.10
Youth a member of the youth club	0.96	0.19	0.86	0.35	0.93	0.26
Youth participate in Social Protection programs	0.22	0.41	0.18	0.39	0.20	0.40
Youth holds a position in the community	0.17	0.38	0.13	0.33	0.15	0.36
Position currently held						
<i>Headman</i>	0.04	0.19	0.04	0.21	0.04	0.19

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
<i>Spouse of headman</i>			0.02	0.15	0.01	0.08
<i>Counselor to headman</i>	0.03	0.17			0.02	0.14
<i>Local structures leader</i>	0.53	0.50	0.46	0.50	0.51	0.50
<i>Religious position</i>	0.22	0.42	0.26	0.44	0.24	0.43
<i>Youth club position</i>	0.13	0.34	0.17	0.38	0.14	0.35
<i>Other positions</i>	0.05	0.21	0.04	0.21	0.05	0.21
Youth related to someone with a community position	0.26	0.44	0.24	0.43	0.25	0.44
Position of relation						
<i>Headman</i>	0.50	0.50	0.44	0.50	0.48	0.50
<i>Counselor to headman</i>	0.11	0.31	0.13	0.34	0.12	0.32
<i>Local structures leader</i>	0.28	0.45	0.28	0.45	0.28	0.45
<i>Religious position</i>	0.08	0.27	0.11	0.31	0.09	0.29
<i>Other positions</i>	0.02	0.15	0.04	0.20	0.03	0.17
Religion						
<i>Christian</i>	0.79	0.41	0.87	0.33	0.82	0.39
<i>Islam</i>	0.20	0.40	0.12	0.32	0.17	0.37
<i>Traditional</i>	0.01	0.08	0.00	0.05	0.01	0.07
<i>None</i>	0.01	0.08	0.01	0.09	0.01	0.08
<i>No response</i>	0.00	0.04			0.00	0.03
Number of youths	628		361		989	

Source: MGC Survey 2023

3.3 Process Evaluation

3.3.1 Recruitment and Selection Process

Knowledge about the MGC project

Findings from Table 5 show that more project participants than non-participants knew about the project through their youth clubs or networks (70% vs 47%), friends (29% vs 9%) and the community structures (27% vs 12%).

Table 5: Knowledge about the project

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
VDC/ADC	0.27	0.44	0.12	0.33	0.21	0.41
Through a friend	0.09	0.29	0.29	0.45	0.16	0.37
CRS meetings	0.05	0.21	0.02	0.16	0.04	0.19
Youth groups/network	0.70	0.46	0.47	0.50	0.61	0.49
I did not know about the project	0.00	0.00	0.16	0.37	0.06	0.23
Through the government/NGO office	0.01	0.08	0.01	0.09	0.01	0.08
Others	0.00	0.00	0.00	0.05	0.00	0.03
Number of youths	628		361		898	

Source: MGC Survey 2023

Selection and recruitment process

Regarding the selection process, 70% of the MGC participants indicated that their youth clubs seconded them. About 22% of the youth had gone through an open interview, while 6% were recommended by the community leadership, as shown in Table 6. Others indicated they had replaced a friend or relative who had dropped out for various reasons. When asked if they made any payments to be considered for recruitment, only 1% of the youth recruited indicated that they paid money to get recruited, averaging MWK3,525. In general, the findings show that the selection process was not uniform.

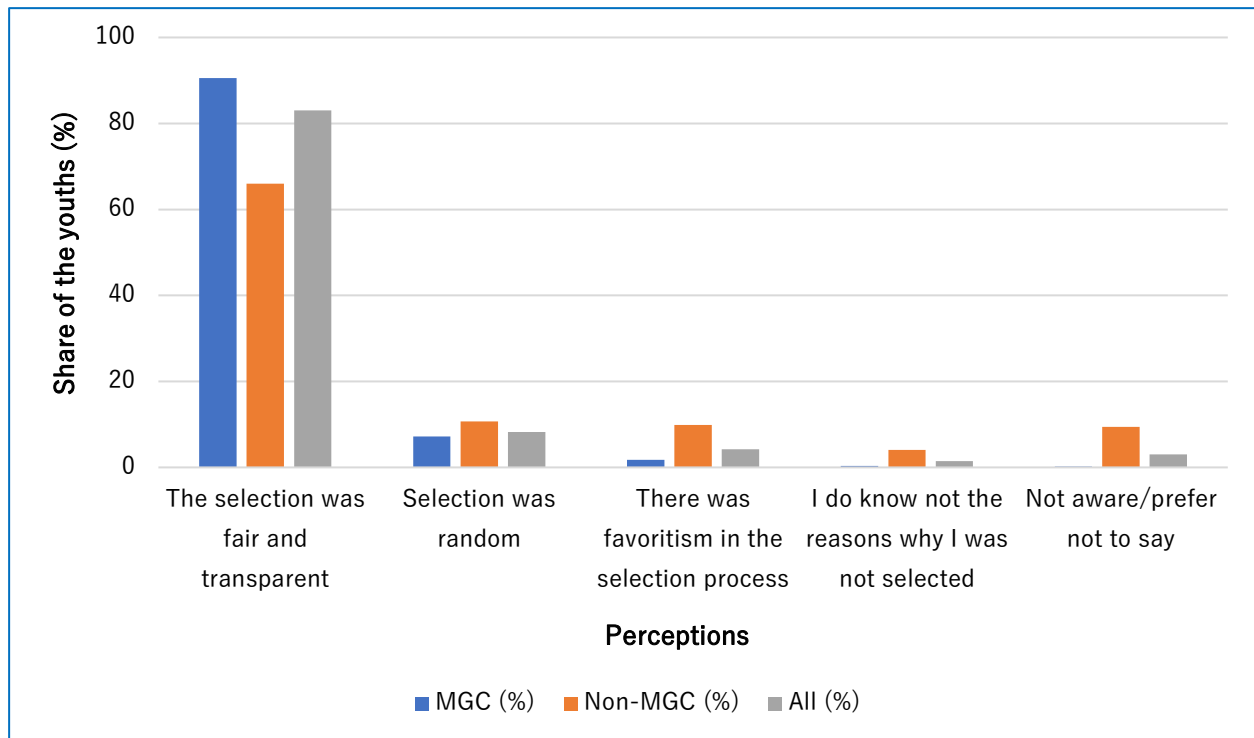
Table 6: Selection into the project

Selection into MGC	MGC (%)	Non-MGC (%)	All (%)
Seconded by the youth club	70.06	17.73	50.96
Through an open interview	22.29	2.49	15.07
Recommended by community leadership	6.21	1.94	4.65
Others	0.48	0.83	0.61
Do not know	0.48	0.55	0.51
Seconded by supervisor	0.48	0.28	0.4

Source: MGC Survey 2023

Results of the youths' perceptions towards the selection process are presented in Figure 1. About 91% of the project participants and 66% of the non-participants feel the selection process was fair and transparent. However, 2% of the participants and 10% of the non-participants felt some favoritism in the selection process. This implies that a higher proportion of non-participants than the participants expressed dissatisfaction with the selection process.

Figure 1: Perception about the selection process



Source: MGC Survey 2023

Overall, both the participants and non-participants expressed satisfaction with the way in which the messages regarding the project were relayed, deliberate efforts by CRS/community structures to engage more females, the openness of the recruitment process, the way medical examination and screening were conducted, and the length of the recruitment process (Table 7). This was part of the recruitment and selection process. The level of satisfaction was observed to be higher among the participants compared to the non-participants for all the steps in the recruitment and selection process.

Table 7: Satisfaction with the recruitment and selection process

Rate of satisfaction regarding:	MGC					Non-MGC					All				
	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
Messages of the project	64	35	1	0	0	50	33	14	1	1	60	34	5	0	1
Efforts to engage more females	59	38	1	1	0	49	35	15	1	0	56	37	5	1	0
The balance between males and females	57	37	2	4	0	44	38	16	3	0	53	37	6	3	0
Openness of the recruitment process	56	41	1	1	0	44	36	15	4	1	52	39	6	2	0
Medical examination and screening	57	35	4	3	0	39	37	24	0	0	52	36	10	2	0
Length of the recruitment process	54	42	2	2	0	31	41	21	6	1	47	42	8	3	0

Source: MGC Survey 2023

3.2.2 Administration and Management of Human Resources

Payments of monthly allowances

On average, the project participants indicated it took 19 days to receive their monthly payment after fulfilling all the necessary paperwork, compared to the recommended ten days stipulated in the project manual. This shows that there was a delay in processing the payments, as highlighted by 82% of the respondents (Table 8). In addition, 18% of the respondents indicated they had not received their monthly allowance for some months.

Table 8: Payments of monthly allowance

Description	Mean	SD	N
Length of time to receive payment (days)	18.99	9.29	627
Any months they did not receive payment	0.18	0.38	628
Any months with delays in payment	0.82	0.39	628
Communication by CRS for delays in payment	0.77	0.42	514

Source: MGC Survey 2023

Adequacy and quality of PPEs and working materials

Table 9 shows the results on the perceptions of the MGC youths towards adequacy and quality of personal protective equipments (PPEs) and working materials provided by CRS. About 89% of the youth indicated that they were provided with adequate PPEs, such as work suits, gumboots, reflector jackets and gloves, while 91% indicated that the PPEs provided were of high quality. Concerning the working materials, such as hoes and slashers, 76% of the youth indicated that the working materials were adequate, and 91% stated that the working materials were also of high quality.

Some quality issues cited on PPEs include oversized or undersized clothing, such as gumboots and work suits, and non-durable (substandard) materials that lasted only a short time. Regarding the quantity of PPEs, some cohort members never received the PPEs as they were supplied in low numbers. With respect to working materials, respondents indicated that tools were either delivered or not delivered on time, such that they were using their personal equipment for the work. In some instances, the previous cohorts failed to submit the working materials to the succeeding cohorts.

Table 9: Adequacy and quality of PPEs and working materials

Description	Mean	SD	N
Adequate PPEs	0.89	0.31	628
Quality PPEs	0.91	0.29	628
Adequate working materials	0.76	0.43	628
Quality working materials	0.91	0.28	628

Source: MGC Survey 2023

Grievance handling

About 75% of the project participants who had grievances reported through their supervisors, 20% through the CRS project officer, 10% using the CRS' Toll-free line, and 5% through their extension workers (Table 10). Despite using these channels, 20% of the respondents felt dissatisfied with how their grievances were handled, citing reasons such as lack of response or feedback to their grievance and that the status quo (delayed payments, no PPEs and working materials etc.) remained the same.

Table 10: Channels for handling complaints

Description	Mean	SD	N
CRS's toll-free line	0.10	0.30	296
Accident/Incident form	0.00	0.06	296
Through the supervisor	0.75	0.44	296
Through the Extension Officer	0.05	0.23	296
Through the CRS Project Officer	0.20	0.40	296
I never lodged a complaint	0.05	0.23	296

Source: MGC Survey 2023

3.2.3 Project coordination

Project implementation at the district level was coordinated by the CRS' project officer (stationed at CRS headquarters in Lilongwe) with support from the government staff at the district, with either the EDO/DFO/YO as designated project desk officer, depending on their initial arrangement by the district council. At the hotspot level, the project participants worked closely with the local village leadership structure (ADC, DEC and VDC), as reported by 41% of the youth (Table 11). In addition, other NGOs/CSOs and Community Environmental Structures were also vital in supporting youth interventions, as reported by 32% and 20% of the youth, respectively. There was also support from chiefs (18%), other youth clubs (12%), private sector players and individuals (8%).

Table 11: Support from other partners

Description	Mean	SD	N
Non-governmental organizations/CSOs	0.32	0.47	90
Private sector players (Hotels, banks, businesses)	0.08	0.27	90
Community development structures (ADC, DEC, VDC)	0.41	0.49	90
Community Environmental Structures (BMCs, VNRMC, DESC)	0.20	0.40	90
Schools and school clubs	0.01	0.11	90
Individuals (such as HHs)	0.08	0.27	90
Other youths/youth clubs	0.12	0.33	90
Chiefs	0.18	0.38	90

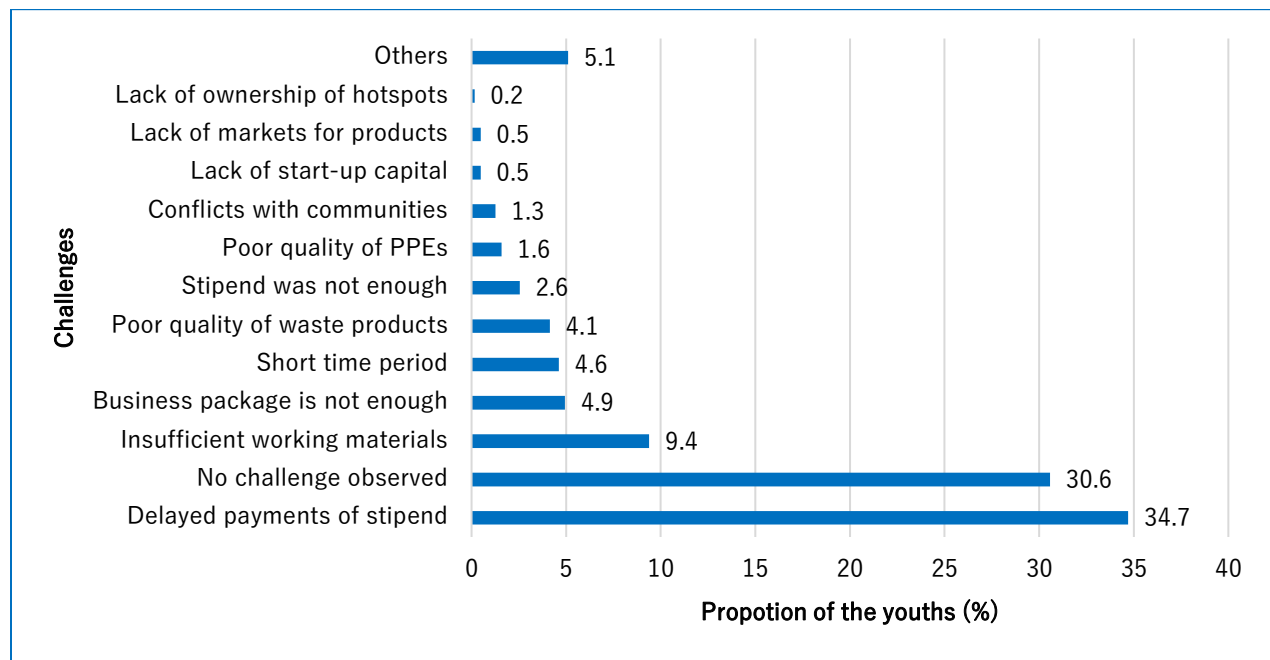
Source: MGC Survey 2023

3.2.4 Challenges

Challenges faced by the youths

The study also documented the challenges that the youth faced while engaging in the MGC project. The main challenges reported among the youth are late payments of the monthly allowance, insufficient working materials, inadequate business packages, short duration of the project period, and poor quality of waste products, as shown in Figure 2. About 31% of the youth indicated no challenges in the project implementation.

Figure 2: Main challenges experienced by the youth



Source: MGC Survey 2023

The main challenge observed and reported by around 35% of the youth was late monthly allowance payments. As already highlighted, it took an average of 19 days for the youth to receive their monthly payments. The findings also showed that working equipment, shoes, and slashers were not enough for all the youths, such that some of them resorted to using their own personal equipment. The third main challenge was inadequate business packages, reported by 5% of the youth. At the onset of the project, youths were not supposed to be provided with start-up business capital. In the course of implementation, this was thought to be key for youths undertaking entrepreneurial activities that require equipment such as the making of briquettes, bricks and other jewelry, as well as bee-keeping. The business package was provided at the end of the cohort period. There was also an indication of the short duration of the project period (roughly two years), such that it was difficult to effectively see the benefits of some of the restoration interventions that were undertaken. In addition, critical activities in restoration, such as tree pruning and fire break construction for the vast areas of land restored, are recurring, which requires the youth labor force to be

implemented effectively. A cohort period of at least 12 months would ensure that the youth complete a full cycle of most restoration activities.

Major challenges reported by district staff

The study also sought the government staff's views on the challenges they incurred during project implementation.

Poor coordination and communication between the district staff and CRS officers: The district staff interviewed highly mentioned that poor coordination between the district staff and CRS officers, especially on implementation arrangements, was the main challenge they encountered during project implementation. This was partly caused by poor communication (flow of information) between CRS project staff and government officers. The officers interviewed bemoaned that, in most cases, monitoring and supervision depended on the project officers' planned activities, which were all based in Lilongwe. Further, there were no regular work plan reviews (monthly or quarterly). In some districts, some officers were not even aware of what was happening on the ground because CRS staff were working directly with the cohort supervisors without the knowledge of the government officers.

Lack of district operational budget: The study has revealed that the district staff had some constraints in monitoring and supervising the project implementation activities and progress due to the lack of a district operational budget. Monitoring and supervisory visits could have given district staff an opportunity to measure the progress of the project implementation periodically and, in some cases, identify and address challenges affecting the project before they negatively impact the overall service delivery of the project.

The project period was too short: The MGC project lasted two years (August 2021 to August 2023). The government officers indicated that two years was relatively short for forest restoration projects, and such projects require five or more years to achieve the intended benefits.

The project has no sustainability strategy/plan: During the interviews, most government staff indicated that the project has no sustainability strategy or plan. The staff cited that limited involvement of the district staff is likely to lead to a lack of ownership of the project

by the district staff, and this, in the long run, affects the sustainability of the interventions implemented by MGC.

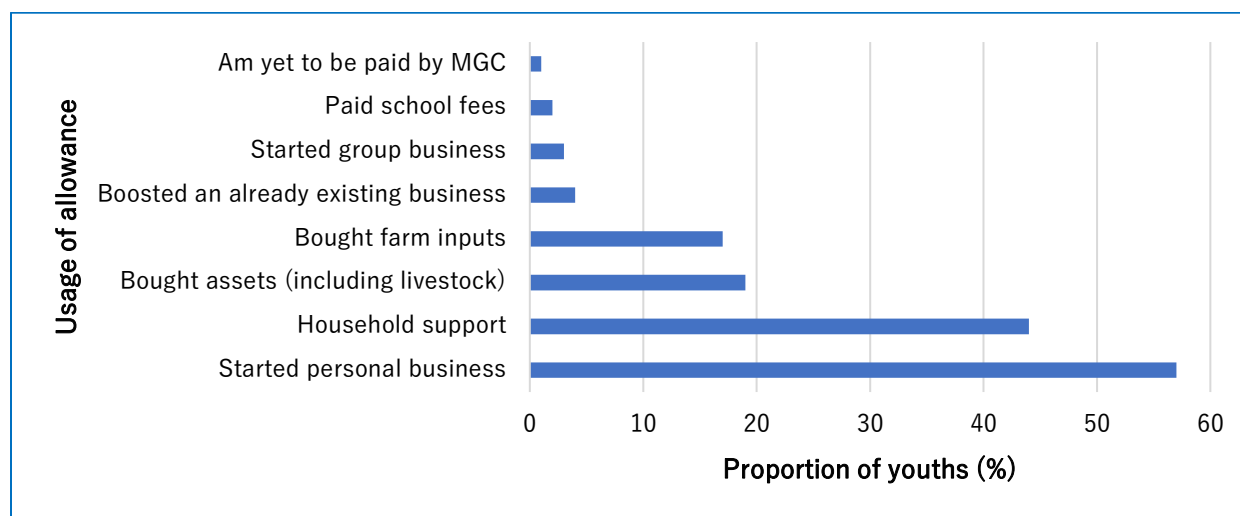
3.4 Project Impact

3.4.1 Livelihoods of the youths

Usage of monthly allowances received from MGC.

The monthly allowances received were used for various purposes (Figure 3). Some of the MGC youths used their allowances to start their personal business (57%), supported their families (44%), bought assets (19%), and farm inputs (17%).

Figure 3: Usage of monthly allowances by the youth



Source: MGC Survey 2023

Main livelihood sources

The MGC project's thrust was to improve income-earning opportunities for the youth, thereby increasing the youth's income. The current assessment sought to establish the sources of income/livelihood among youths. Table 12 below shows the various sources of income among the participating and non-participating youths before and after the MGC project. Our results reveal that youths' most common sources of Livelihood are farming, petty trading, and agricultural wage labor. Interestingly, we note an increase in the percentage of

project-participating youth engaging in petty trading, self-employment in skilled work, fishery/aquaculture production, and honey production after the MGC project. There is a decline in the percentage of youths engaging in farming after the MGC project. Among the non-participating youths, there is no change in the number of youths with farming as their main livelihood source. This shows that in the current context, the youth participate in farming because of the lack of preferred income-generating activities. Participation in agricultural and non-agricultural wage labour has increased among the non-project youths, while there is a drop in petty trading and salaried work as their main sources of livelihood.

Table 12: Past and present sources of livelihood among youths

Income source	Prior income source		Current income sources	
	MGC	Non-MGC	MGC	Non-MGC
Farming (crop and livestock production)	31.3	29.9	29.2	29.4
Petty trade (reselling other products)	20.4	20.4	34.6	15.7
Agricultural wage labour	16.8	20.4	3.8	16.3
Non-agricultural wage labour	12.8	12.8	8	15.7
Self-employment in skilled work (hairdressing etc.)	6.7	7.3	9.8	8.7
Others, specify	5.6	5.5	7	6.4
Salaried work	1.4	1.5	3.4	1.7
Remittances	1.1	0.7	0.8	2.3
Wage labour in forestry and natural resources	0.9	0.4	0.4	0.6
Gifts/inheritance	0.9	0	0.7	1.5
Fishery/Aquaculture production	0.9	0	1.2	0.6
Sale of wild/forest products	0.7	0.7	0.7	0.6
Honey production	0.2	0.4	0.4	0.3
Rental of land, house, room	0.2	0	0.1	0

Source: MGC Survey 2023

Livelihood Diversification among Youths

The study also estimated livelihood diversification among youths. In our study, livelihood diversification measures the richness of a youth's livelihood options. Generally,

households with more livelihood options are classified as more diversified, and those with only one livelihood option are classified as not diversified.

The results show that the MGC project has positively improved livelihood diversification by increasing the number of youths with more than one livelihood option. Further, the study disaggregated livelihood diversification by MGC membership. Table 13 below shows that the mean number of livelihood options among MGC members statistically significantly rose from 1.3 before the project to 1.4. Furthermore, non-MGC members have retained the same number of livelihood options status over the same period.

Table 13: Mean livelihood diversification

Beneficiary status	Before MGC			Current			T-stat	p-value
	N	Mean	SD	N	Mean	SD		
Non-Beneficiaries	211	1.3	0.6	259	1.3	0.5	0.0000	0.5000
Beneficiaries	416	1.3	0.7	559	1.4	0.7	2.2062	0.0138
Total	627	1.3	0.6	818	1.4	0.6		

Source: MGC Survey 2023

However, the results from the PSM (Table 14) show that participation in the MGC project did not significantly increase the diversification because the number of income sources for the matched treated and control samples are similar.

Table 14: Estimated treatment effects of MGC project on income diversification

Variable	Sample	Treated	Controls	Difference	S.E.	t-stat	p-value
Current income diversification	ATT	1.363803	1.393053	-0.02925	0.059145	-0.78	0.436
	ATE			-0.02723			

3.4.2 Youth income

The study estimated youth's income from the various livelihood sources before and after the MGC project to understand the project's impact. Table 15 below shows no

statistically significant difference in income of MGC members and non-members before the MGC project. However, the results show a statistically significant higher income for MGC members compared to non-members after the implementation of the project.

Table 15: Mean difference in income between MGC members and non-members

MGC membership	Before MGC			Current		
	N	Mean	SD	N	Mean	SD
Non-MGC members	211	257,460	595,887	259	296,014	593,065
MGC members	416	289,846	373,317	559	443,244	710,333
Overall	627	278,947	460,154	818	396,627	678,516
t-stat		-0.8325			2.8999	
p-value		0.2027			0.0019	

Source: MGC Survey 2023

The mean current annual income among MGC members was estimated at MK443,000, while that of non-members was estimated at MK296,000.00. We also tested whether there were changes in income across beneficiaries and non-beneficiaries over time. In doing this, we are interested in checking whether the MGC project has positively contributed to raising the incomes of MGC members over time (Table 16). The study confirms that the project has significantly contributed to raising the income of MGC members. The results also show that the incomes of non-MGC members have not risen significantly before and after the implementation of the MGC project. Results of the ATE and ATT estimation agree with this result by showing an increase in the current income of the youth by about MK104,000 per year (Table 17), which is lower than the treatment effects from a simple comparison (MK147,000). The findings show that MGC participants made MK104,000 higher income than the non-participants at the end of the project.

Table 16: Mean difference test in Income of MGC members and non-members before and after the MGC project

Variable	MGC members			Non-MGC members		
	N	Mean	SD	N	Mean	SD
Before MGC	397	29,6194.1	37,8245.4	180	27,8055.6	63,8563.5
Current	397	48,0372.4	70,3452.4	180	31,9308.3	57,5182.7
Diff	397	-18,4178.3	54,9474.2	180	-41,252.78	55,9917.1
t-stat		6.6786			0.9885	
p-value		0.0000			0.1621	

Source: MGC Survey 2023

Table 17: Estimated treatment effects of MGC project on income

Variable	Sample	Treated	Controls	Difference	S.E.	t-stat	p-value
Current income	ATT	437612.7	333190.1	104422.6	69017.12	2.6	0.009
	ATE			104117.1			

3.4.3 Poverty among youths

On average, the PPI for MGC and non-MGC members is 57%, which reflects a high incidence of Poverty. The PPI for MGC members (56%) was lower than the PPI for non-MGC members (60%). Although the simple test shows that the PPIs are statistically different (Table 18), the matching technique shows that the PPIs for the two groups are statistically similar (Table 19).

Table 18: Poverty Probability Index

Beneficiary status	N	Mean	SD	Min	Max	t-stat	p-value
Non-MGC members	361	59.8	20.9	6.4	93.9	2.6216	0.0044
MGC members	628	56.1	21.5	4.4	89.6		
Total	989	57.5	21.4	4.4	93.9		

Source: MGC Survey 2023

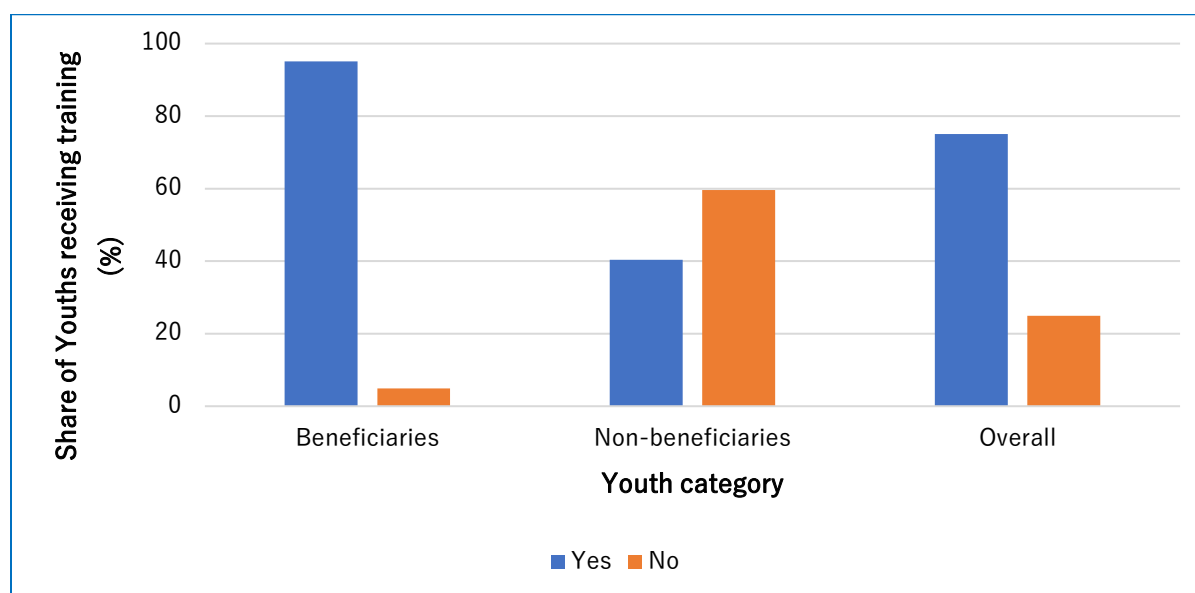
Table 19: Estimated treatment effects of MGC project on youth poverty

Variable	Sample	Treated	Controls	Difference	S.E.	t-stat	p-value
PPI	ATT	56.3023	55.06081	1.241493	2.08075	1	0.319
	ATE			-0.47324			

3.4.4 Skills development

Training and orientation programs for the youth were an essential component of the MGC project. The MGC project intervention involved the development of entrepreneurial and business skills through which youths would engage in gainful income-earning opportunities. Developing skills in youths were direct project outputs expected to translate into impacts. The current study, therefore, sought to assess the extent to which the project imparted skills to the youth. Figure 4 shows the proportion of youths who received training and orientation programs. The results reveal that about 95% of the youths participating in the MGC project had received some training or orientation program. On the other hand, only about 40% of non-MGC members had received training or orientation programs in their youth clubs. This shows that the MGC program was a significant source of community youth engagement.

Figure 4: Proportion of Youths receiving training/orientation programs



Source: MGC Survey 2023

Estimation of the treatment effects of participation on the number of trainings attended by the youths shows that, on average, MGC project participants attended three more trainings than non-participants (Table 20). This shows that the project exposed the youth to more skills, which would likely impact their livelihood activities and outcomes such as income.

Table 20: Estimated treatment effects of the MGC project on the number of training sessions attended

Variable	Sample	Treated	Controls	Difference	S.E.	t-stat	p-value
Number of trainings	ATT	3.386473	0.742351	2.644122	0.146388	24.66	0.000
	ATE			2.646939			

As evidenced by Table 21, the project participants have attained more skills in various aspects compared to the non-participants. Skills in entrepreneurship have been reported by 59% of the project participants, followed by nursery establishment and management (47%), afforestation (39%), reforestation (38%), firebreak construction and maintenance (24%) and managing regenerants (21%). Among the non-participants, the most reported trainings attended include Sexual and reproductive health and rights (15%) and HIV/AIDS (11%)

In terms of the sources of the training/orientation programs, results show that most entrepreneurial and business training, including nursery establishment, reforestation, entrepreneurship, and waste management, was provided by the MGC project or fellow MGC members (Table 22). On the other hand, most social development trainings on COVID-19, HIV/AIDS, and sexual and reproductive health were provided by government institutions and other NGOs.

Table 21: Trainings and orientation programs attended

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
Safeguarding practices (including sexual and GBV)	0.13	0.33	0.05	0.22	0.10	0.30
COVID-19	0.06	0.23	0.09	0.29	0.07	0.25

Workplace code of conduct	0.14	0.35	0.00	0.00	0.09	0.29
Feedback and complaints reporting	0.09	0.29	0.01	0.07	0.06	0.24
Remuneration and payment methodology	0.12	0.32	0.01	0.07	0.08	0.26
Soil and water conservation	0.16	0.37	0.04	0.20	0.12	0.32
Nursery establishment and management	0.47	0.50	0.02	0.16	0.31	0.46
Reforestation	0.38	0.49	0.03	0.16	0.25	0.43
Afforestation	0.39	0.49	0.04	0.20	0.26	0.44
Entrepreneurship	0.59	0.49	0.03	0.17	0.39	0.49
Managing regenerants	0.21	0.41	0.00	0.05	0.14	0.34
Waste management	0.20	0.40	0.04	0.19	0.14	0.35
Firebreak construction and maintenance	0.24	0.43	0.01	0.10	0.16	0.37
Social accountability	0.01	0.10	0.00	0.00	0.01	0.08
HIV/AIDS	0.06	0.24	0.11	0.31	0.08	0.27
Civic engagement	0.01	0.10	0.01	0.10	0.01	0.10
Sexual and reproductive health and rights	0.07	0.25	0.15	0.35	0.10	0.29
Other trainings	0.09	0.29	0.11	0.32	0.10	0.30

Source: MGC Survey 2023

Table 22: Sources of training/orientation programs

Training	MGC project	Government	NGOs	Fellow MGC/Youth member	Others
	%	%	%	%	%
Safeguarding practices	68	3.1	15.5	10.3	3.1
COVID-19	11.8	38.2	38.2	11.8	0
Workplace code of conduct	96.7	1.1	1.1	1.1	0
Feedback and complaints reporting.	96.7	0	1.6	1.6	0
Remuneration and payment methodology	97.3	1.3	1.3	0	0
Soil and water conservation	79.5	7.7	7.7	5.1	0
Nursery establishment and management	94.4	2.3	1.6	1.6	0
Reforestation	91.1	3.2	2.8	2.4	0.4
Afforestation	91.5	2.7	2.7	3.1	0
Entrepreneurship	91.6	4.2	2.4	1.8	0
Managing regenerants	98.5	0.7	0.7	0	0
Waste management	87.8	1.7	3.5	6.1	0.9

Firebreak construction and maintenance	93.6	3.2	1.9	1.3	0
Social accountability	66.7	0	16.7	16.7	0
HIV/AIDS	1.3	27.6	50	17.1	3.9
Civic engagement	30	20	50	0	0
Sexual and reproductive health and rights,	4.2	20	54.7	16.8	4.2
Others, specify	36.8	21.7	29.2	7.5	4.7
Total	79.9	6.3	9	4.1	0.7

Source: MGC Survey 2023

The study also checked if the youths were satisfied with the training they received, and the results are presented in Figure 5. Satisfaction was measured in terms of training content, mode of delivery and duration of the training. Overall, there was general satisfaction (more than 50%) with the content, mode of delivery and duration of the training. Less than 10% of the youth were dissatisfied with the training. There were concerns about the short duration of the training not matching the training content. The participants also indicated that they were not provided with the training materials for future reference.

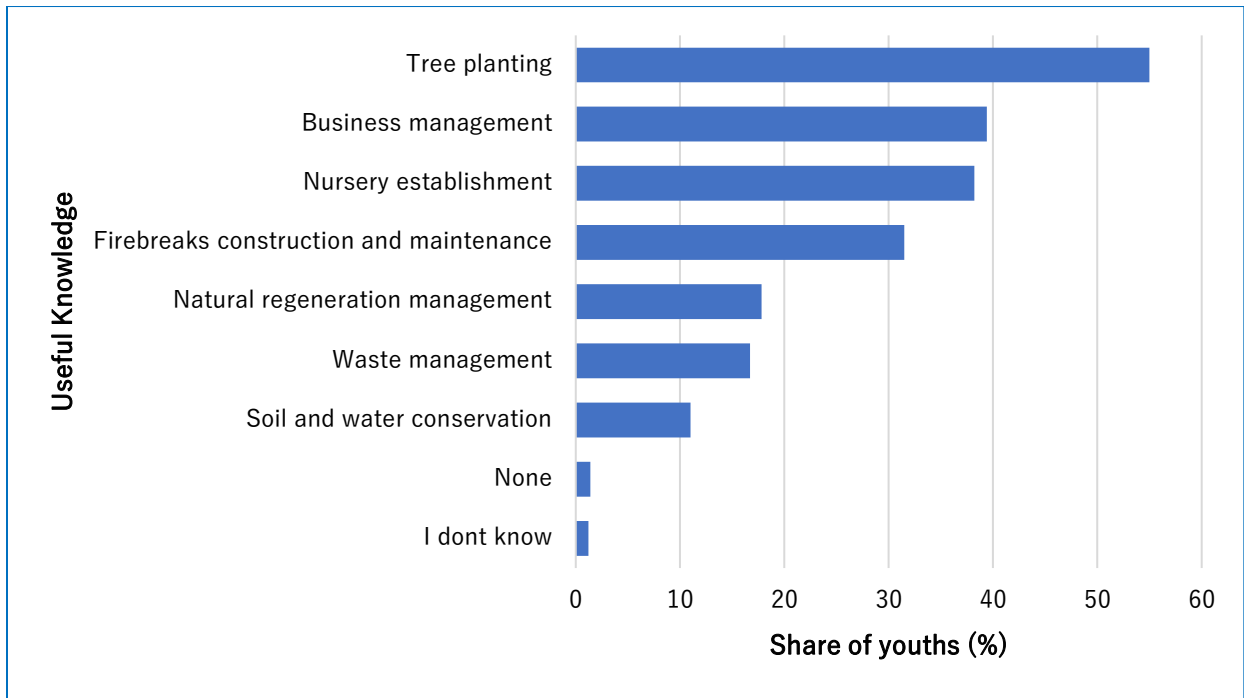
Figure 5: Satisfaction with the trainings



Source: MGC Survey 2023

The assessment specifically zeroed in on knowledge valuable for environmental restoration to understand what types of knowledge youths found more useful. Figure 6 below shows that youths found training in tree planting, business management and nursery establishment pivotal to environmental restoration. Interestingly, training on Environmental restoration has a business orientation, making them more attractive to the youth.

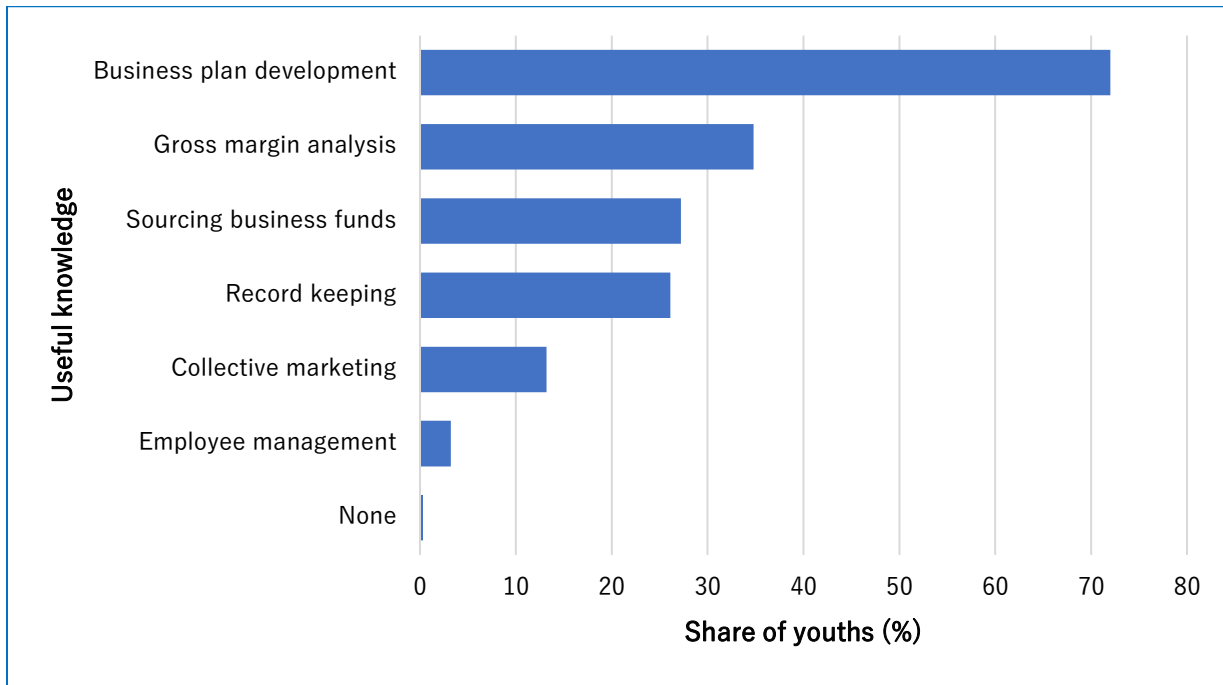
Figure 6: Knowledge the youths found more useful to environmental restoration



Source: MGC Survey 2023

In addition, the assessment asked the youth about the kinds of knowledge they perceived as more beneficial to developing entrepreneurial skills. Figure 7 below shows that business plan development, gross margin analysis and sourcing of business capital were more critical to developing entrepreneurial skills in the youths.

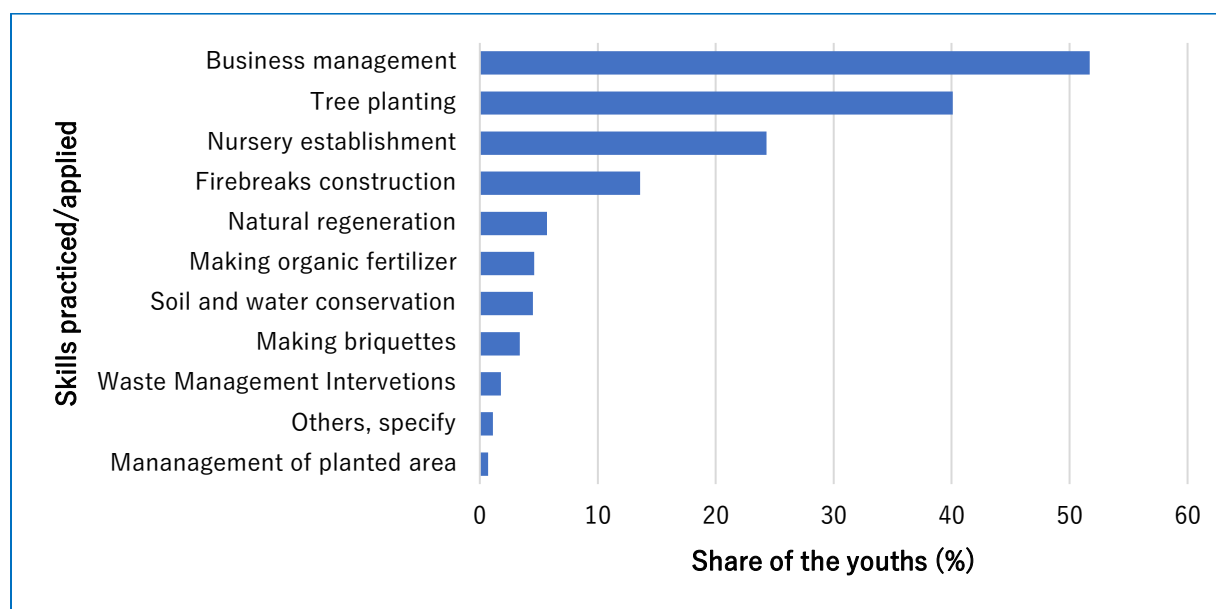
Figure 7: Knowledge youths found more beneficial to entrepreneurship



Source: MGC Survey 2023

To measure skills acquisition among youths, the assessment asked the youth about the skills that they are currently practicing. Figure 8 shows that over 50% of the youth practice business management skills, and about 40% are in tree planting. Other youths are involved in environment restoration activities, including nursery establishment and firebreak construction. However, only some (less than 5%) youths are involved in waste management.

Figure 8: Skills being practiced/applied



Source: MGC Survey 2023

In addition to the technical skills acquired, the project participants also indicated that the interaction among the youth in the cohorts improved their social skills, with cooperation skills reported by 65% of the youth Table 23. Others include listening to others skills (60%), respecting others (58%), teamwork (58%) and being responsible (44%).

Table 23: Social skills acquired

Description	Mean	SD	N
Cooperation	0.65	0.48	597
Listening to others	0.60	0.49	597
Being responsible	0.44	0.50	597
Respecting others	0.58	0.49	597
Patience	0.34	0.47	597
Advocacy	0.17	0.38	597
Problem-solving	0.27	0.45	597
Communication	0.34	0.48	597
Teamwork	0.58	0.49	597
Other skills	0.03	0.16	597

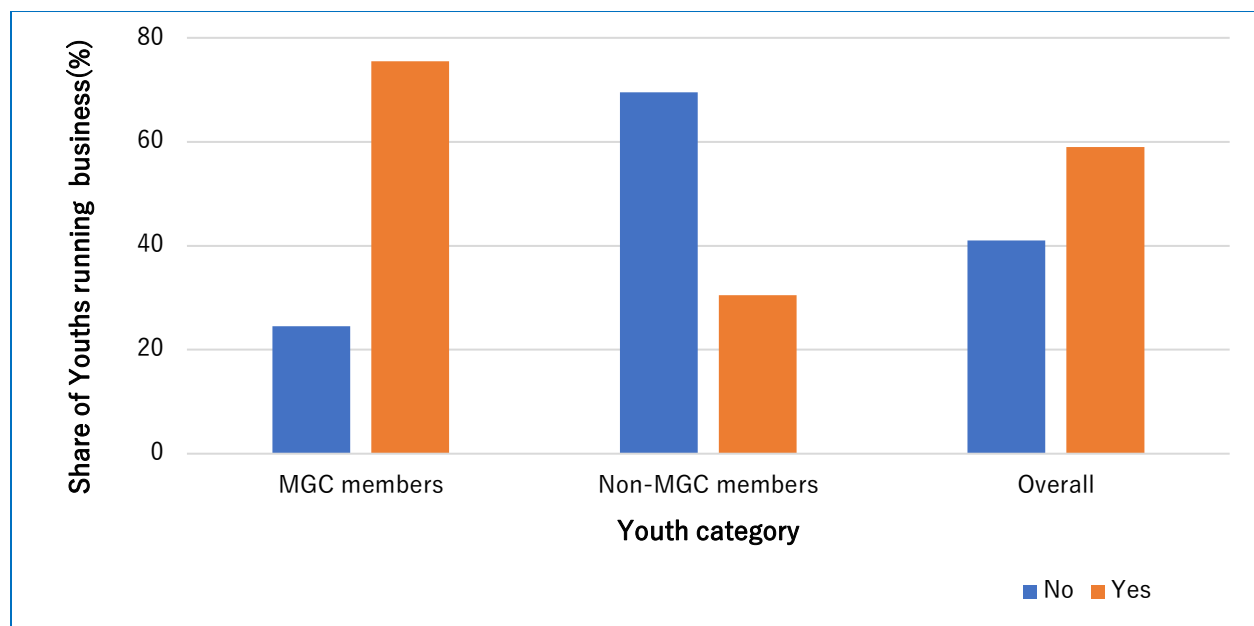
Source: MGC Survey 2023

3.4.5 Business performance

3.4.5.1 Impacts of MGC project on business development

The impact of business training can be seen in the establishment of small and medium enterprises among the youth. The assessment, therefore, checked the proportion of youths currently running businesses, as shown in Figure 9. The results show that, in general, approximately 60% of the youths are engaged in gainful business enterprises. Furthermore, 75% of MGC and 30% of non-MGC members are running businesses. Our PSM results on the impact of the project on share youths starting businesses shows that the project increased the proportion of youths engaged in businesses by 42% (Table 24). This shows the potential that youth programs have in inducing entrepreneurship.

Figure 9: Proportion of youths running businesses



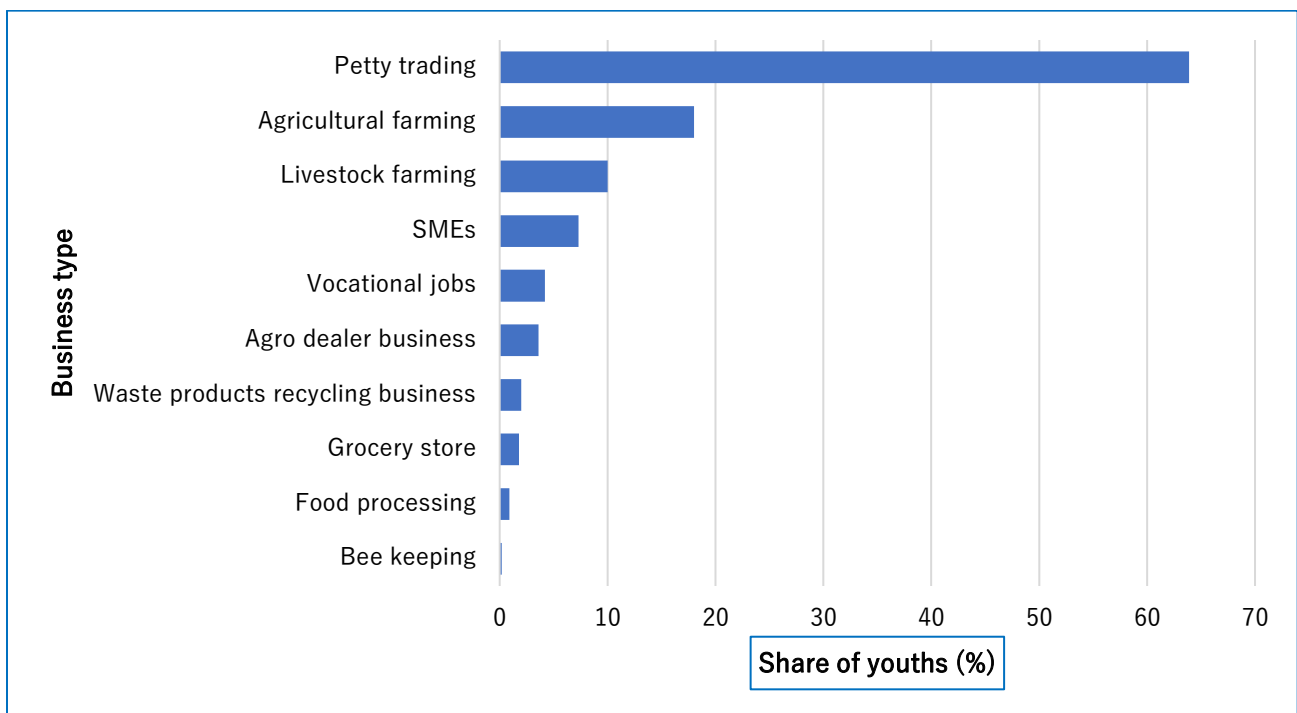
Source: MGC Survey 2023

Figure 10 shows the types of businesses being run by the youths. More than 60% of the youth are involved in petty trading, including selling fish, food, crops, and other goods. About 18% are involved in agricultural production. Very few businesses are involved in environmental restoration and waste management or, simply put, linked to MGC activities. Most of the businesses are individually owned, as shown in Figure 11. Only about three percent of the businesses are group-owned.

Table 24: Estimated treatment effects of MGC project on running a business

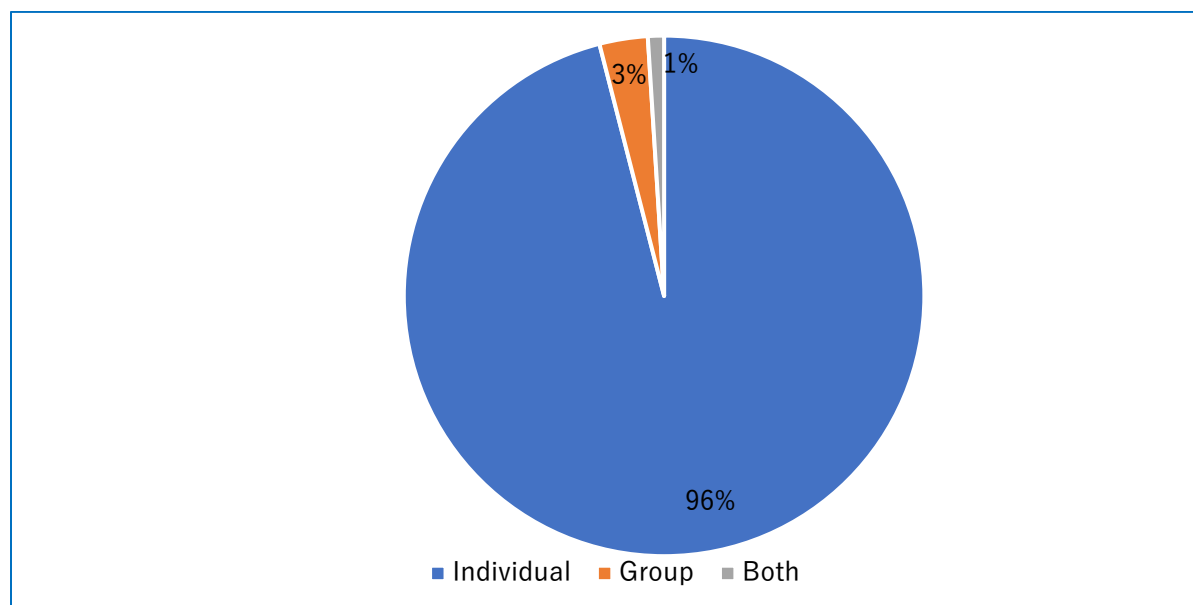
Variable	Sample	Treated	Controls	Difference	S.E.	t-stat	p-value
Share of youths in businesses	ATE			2.646939			
	ATT	.750402	.352657	.397745	.043385	9.17	0.000
	ATE			.422448			

Figure 10: Business types run by the youths



Source: MGC Survey 2023

Figure 11: Business Characteristics



In terms of business performance, the results in Table 25 show that the agro-dealer business has the highest monthly gross revenue of MK94, 786 followed by the vocational business (MK81,250) and salon and barbershop business (MK75,067).

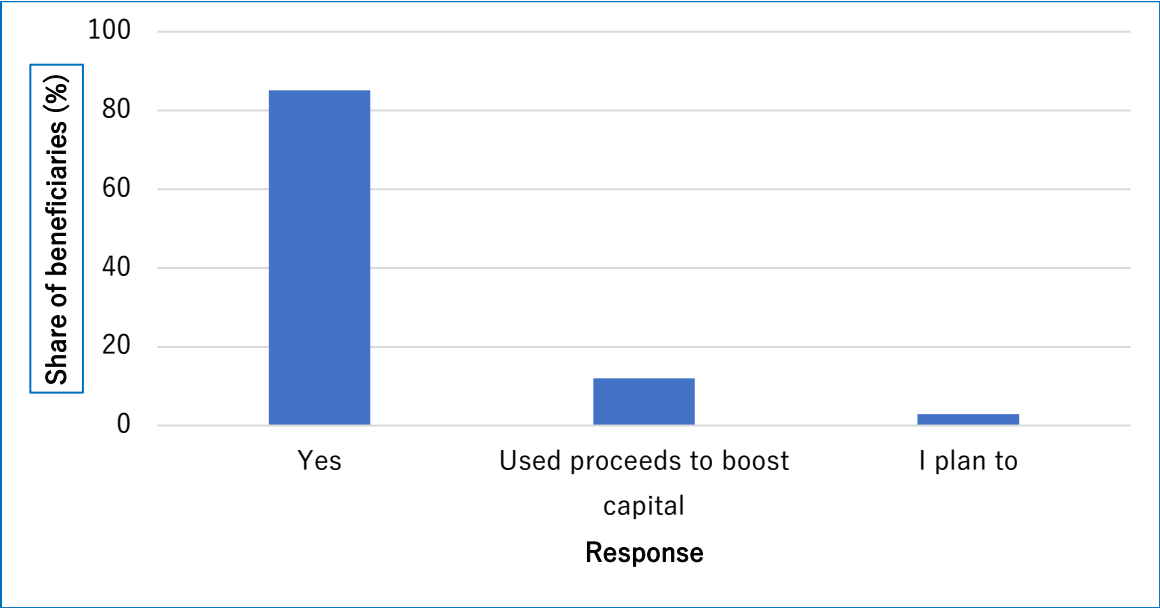
Table 25: Performance of various businesses run by youths

Type of Business	Mean	SD	Min	Max	N	%
Agro dealer	93,786	89,251	5,000	280,000	14	3
Vocational business	81,250	53,182	30,000	200,000	16	4
Salon and barbershop	75,067	116,082	12,000	624,000	30	7
Food processing (Jam, juice)	66,667	72,342	20,000	150,000	3	1
Crop farming	57,658	82,126	0	500,000	61	14
Petty trading	54,724	63,801	1,500	400,000	248	58
Waste products recycling business	53,333	41,155	15,000	120,000	9	2
Livestock farming	51,077	65,804	0	250,000	39	9
Grocery store	33,667	17,851	10,000	50,000	6	1
Bee-keeping	20,000	.	20,000	20,000	1	0
Other businesses	258,000	342,240	16,000	500,000	2	0
Total	59,123	74,553	0	624,000	429	100

Source: MGC Survey 2023

Even though most of the businesses are not linked to MGC interventions, the majority (85%) of the youths running businesses have used part of the money they received from the MGC project to start businesses, and about 12% used the proceeds to boost their already established businesses as shown in Figure 12.

Figure 12: Percentage of youths using part of MGC proceeds as business capital



Source: MGC Survey 2023

3.4.5.2 Access to markets

With youths trained in entrepreneurship and provided with business start-up capital, access to reliable markets for their products is critical for the sustainability of their businesses. Businesses established by the youths sell their products to various customers. In our findings, 90% of the businesses had customers from within their village/community, 43% from outside their village/community, and only 5% from outside their district Tables 26 and A5. When asked if they were linked to new markets, 10% of the project participants and 5% of the non-participants indicated they had been linked to new markets. The reported new markets were primarily from outside their village (69% of participants and 83% of non-participants), outside the district (16% of participants), and new customers from within the village were reported by 14% of the project participants.

Table 26: Markets for youth’s products and businesses

Description	MGC (%)	Non-MGC (%)
Market outside the village	68.63	83.33
Market outside the District	15.69	0.00
New customers within the village	13.73	0.00
ADMARC	1.96	0.00
JTI Company	0.00	16.67
Number of youths	51	6

Source: MGC Survey 2023

3.4.5.3 Access to financial institutions and loans

Access to finance is a critical input into businesses, particularly for start-up capital and investment reinjection. Financial institutions that are key in capitalizing the rural economies are rarely found. Our study found that only 2.5% (2.5% of project participants and 2.7% of non-participants) of the respondents had access to financial institutions, primarily providing access to credit, training and incubation, and markets (Table 27). It is worth noting that MGC project participants have been exposed to various financial service providers, including commercial banks, unlike their counterparts whose access to financial service providers is limited to NGOs and local institutions such as VSLAs. Very few businesses are linked to government-owned financial instruments like AGCOM and MAIIC, yet most seek credit from financial institutions.

Table 27: Youth's access to credits and loans

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
Private sector (banks)	0.08	0.29	0.00	0.00	0.07	0.26
Government institution	0.17	0.39	0.00	0.00	0.13	0.35
Projects (AGCOM, MAICC)	0.08	0.29	0.00	0.00	0.07	0.26
NGOs (World vision, etc.)	0.42	0.51	0.33	0.58	0.40	0.51
Local institutions (VSLAs)	0.33	0.49	0.67	0.58	0.40	0.51
Number of youths	12		3		15	

Source: MGC Survey 2023

Regarding access to loans and credit, 13% of the project participants and 15% of the non-participants had access to loans. Informal institutions are the most important sources of loans in Malawi. About 59% of the project participants and 41% of non-participants reported accessing the loans through village banks (Table 28). Other important lenders are relatives/friends, reported by 17% of the participants and 41% of the non-participants, and moneylenders, reported by 5% of the participants and 12% of the non-participants. The findings also demonstrate that VSLAs are a vital tool for delivering financial Access to the youths, particularly those in remote rural areas. The average loan amount borrowed by a project participant and non-participant is MwK88,000 and MwK53,000, respectively.

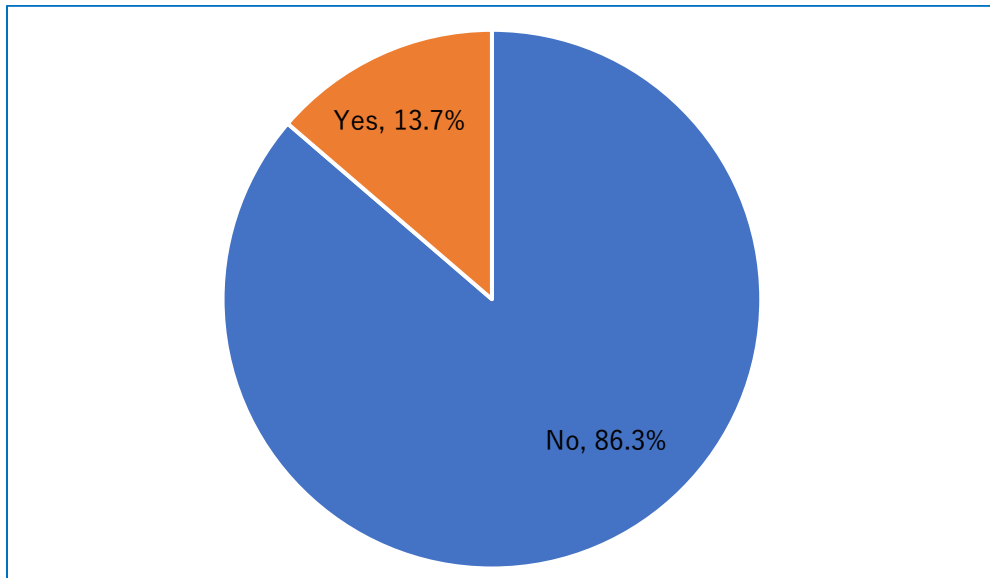
Table 28: Sources of loans/credits for the youths

Description	MGC		Non-MGC		Overall	
	Mean	SD	Mean	SD	Mean	SD
Relative, neighbor, or friend	0.17	0.38	0.41	0.51	0.23	0.42
NGO	0.03	0.18	0.00	0.00	0.03	0.16
Moneylender (katapila)	0.05	0.21	0.12	0.33	0.06	0.24
Bank (Commercial)	0.03	0.18	0.00	0.00	0.03	0.16
Village Bank	0.59	0.50	0.41	0.51	0.55	0.50
NEEF	0.08	0.27	0.00	0.00	0.06	0.24
Input supplier/Agro-dealer	0.02	0.13	0.00	0.00	0.01	0.11
Other lenders	0.05	0.21	0.12	0.33	0.06	0.24
Number of youths	63		17		80	

Source: MGC Survey 2023

The assessment also checked if the credit was borrowed for business purposes. Only about 14% borrowed for business purposes (Figure 13). The youths borrowed an average of MK81,000 for business purposes. Some borrowed a maximum of MK1.5 million.

Figure 13: Proportion of youths borrowing credit for their businesses



Source: MGC Survey 2023

3.4.6 Access to productive assets

Access to productive assets and resources is a critical factor in youth empowerment, as it is widely believed that access to productive access, such as land, livestock, and farm equipment, plays a significant role in improving the welfare of rural households. The assessment sought to understand the kinds of assets and productive resources that youths own. Tables A6 and A7 present the assets and productive resources owned by the youths. In addition, Table 29 below shows the mean value of all assets owned by the youth across the two groups. The results reveal that MGC members had significantly higher asset mean asset values compared to non-MGC members. Our PSM results also show that participation in the project significantly increased the youth's value of assets by MK43,769 (Table 30).

Table 29: Mean asset values by MGC membership

MGC Membership	N	Mean	SD	Min	Max
Non-MGC Members	261	79,411	219,371	300	2,495,000
MGC Members	541	137,420	401,608	500	5,870,000
Total	802	118,542	353,687	300	5,870,000
t-stat		2.1814			
p-value		0.0147			

Source: MGC Survey 2023

Table 30: Estimated treatment effects of MGC project on asset ownership

Variable	Sample	Treated	Controls	Difference	S.E.	t-stat	p-value
Value of assets	ATT	126824.5	86703.13	40121.43	22597.06	1.78	0.012
	ATE			43769.55			

3.5 Project Sustainability and replicability

The project participants had signed voluntary work contracts that ensured the continuity of activities after the paid period. At the time of this study, 91% of the respondents had completed their paid months of work, with 76% of these indicating that they are continuing with MGC activities voluntarily. The voluntary work activities being implemented are still within and around the ongoing restoration activities, with some focus also on the personal businesses they started. Those who were not engaged in voluntary work cited the end of the 4-month contractual agreement as the main reason why they ceased working. Their interpretation of the end of the contract implied handling the activities to the succeeding cohort and paving the way for the other cohorts to undertake the activities.

The majority of the youth indicated that they will continue volunteering to ensure the operations' sustainability. In addition, the youth indicated plans to ensure the sustainability of operations, such as engaging the community leaders, creating community awareness and sensitization of the benefits of the restoration activities, training and orientation to fellow youths and community members, and pursuing nature-based business enterprises.

In regard to the level of satisfaction with sustainability measures put in place, the findings show that the youth generally agreed that the knowledge and skills acquired by the youth in participating in the project were beneficial to their households and communities (Table 31). The youth were also in agreement that they would orient other community members on the knowledge and skills acquired during this project and continue taking care of the hotspots even after the end of the project. Similarly, the youth agreed that there are established community structures and community rules and regulations governing the hotspot's management after the project's end.

Table 31: Satisfaction with sustainability measures in place

Rate of satisfaction regarding:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Beneficial knowledge and skills for their household	70	29	1	0	0
Beneficial knowledge and skills for the community	65	34	1	0	0
Orient other people of knowledge and skills gained	65	35	0	0	0
Continue taking care of the hotspot	65	35	0	0	0
Existing community structures for continuation of activities	57	37	3	2	0
Existing community rules and regulations for the management of hotspots	56	41	2	0	0

Source: MGC Survey 2023

Some key informants from the districts indicated a lack of a proper project sustainability plan from the onset of the project, with some hinting that the use of government officers and other community structures in the project was meant to sustain the operations. However, the shortfall came as these structures were not fully supported and engaged in the course of project implementation. Pertinent sustainability issues were being discussed during the project closure meetings, with the district project staff indicating that they had no immediate solution on how to sustain some of the large-scale activities that were implemented by the youth. Others also argued that the project only implemented interventions already in the district plans, such that the sustainability of such interventions

should also have been highlighted in the plans. There were also arguments that some of the entrepreneurship training and other trainings provided to the youth were meant to sustain the activities as the youth will see the economic benefits of the interventions. Most youths' lack of pursuance of green ventures might have defeated the essence of sustainability. According to USAID, green jobs are defined as more climate-resilient jobs that help drive the change for systems to become more inclusive and lower-carbon, including but not limited to those requiring less land and water (USAID, 2022).

In regard to synergies with ongoing programs or projects, most key informants from the districts indicated that there are no synergies with other ongoing projects or activities that will ensure the sustainability of the large-scale operations done by the youth. In some districts, plans are in place to synergize with similar projects, such as the Titukulane project, though they are currently being implemented in different sites. There is also hope that other programs will emerge that can support the interventions that were started. This is on the basis that in some districts, the youth that were engaged under the MGC project were previously engaged in other initiatives, such as the Malawi Youth Forest Restoration Program. Nevertheless, the district implementation staff indicated that the sustainability of the activities would entirely depend on the commitment of the youths to continue with the activities, as well as the support from the already existing community structures such as the DESC, the BMCs and VNRMCs.

CHAPTER FOUR

CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The lessons from the MGC project implementation are key in deepening and broadening our understanding of the role of youth in sustainable environmental management through waste management initiatives and rehabilitation of degraded forest hotspots. While there were some shortfalls in the design and implementation of the project, the study's findings clearly show that the project benefited the young people, the communities and the district at large in areas of environmental management and economic development. Key among the many positive lessons from this study are:

- The project supported the country's efforts in implementing environmental restoration plans, with the selected hotspots aligned to existing national priority plans on environmental restoration.
- The project improved the economic well-being of the youth through the monthly allowance they receive. Most youths have used the monthly allowance and the business start-up capital to venture into personal businesses that support their living welfare.
- The training and orientation programs provided the youth with the necessary entrepreneurship and environmental management skills. In addition, the interaction among the youth from various clubs improved their social cohesion and promoted peer learning.
- Overall, there is a general satisfaction regarding the delivery of the project deliverables, including project sustainability measures amongst the youth, with the project being perceived to have vastly improved the welfare of the youth.

While the project offered some critical insights that can be replicated elsewhere, there is also a need to work on some shortfalls.

- There is a lack of ownership of the project at the district level, with district staff not provided with an operational budget for implementing activities such as supervision, monitoring and evaluation.
- Late payments of allowances to the youths, poor quality of equipment for personal protection, especially gumboots, insufficient working equipment, little monthly allowance and business start-up capital were some key challenges indicated by the youth.
- The project period was too short compared to the selected environmental restoration initiatives, which require a considerable time period to take shape.
- Although the youth were introduced to “green businesses” in the project, their entrepreneurial activities were not in the green economy.
- The project sustainability plan was unclear from the onset of the project, with the district project staff indicating that they had no immediate sustainable project exit strategy for the large-scale activities being implemented by the youth.

4.2 Recommendations

The findings from this learning study provide a number of recommendations that are key in improving future program designs of a similar nature and also lessons for successful replication of the project interventions elsewhere. These recommendations are outlined below.

Improve project implementation arrangements.

Improving coordination and communication between project staff and government officers is crucial. This can be achieved by deploying district-based project officers and conducting periodic reviews and planning meetings. District structures and local community structures should also be included. Additionally, government staff should be allocated budgets for technical backstopping, supervision, and monitoring of activities.

Improvement in administrative-related issues

Timely disbursement of monthly allowances is crucial for the success of the project and to motivate the youths. CRS should establish an efficient and transparent disbursement

process, design an effective digital system, and minimize bureaucratic delays. The recruitment process should be open and transparent. Feedback mechanisms should be provided to address complaints and concerns raised regarding project implementation, and the toll-free line should be extended to non-participating members.

Widen the scope of project interventions

The concept of forest/land restoration should be holistic in nature by including other interventions such as land and soil water conservation practices (this was only implemented in Salima district). Considering that the majority of the youth were engaged in farming activities, related environmental restoration interventions can be incorporated into farming activities, such as climate-smart technologies (integrated crop-livestock management, minimum tillage and crop rotation etc). Including a component of exchange learning visits (as part of peer learning) where the youths implementing similar activities learn from each other and share experiences would also be critical.

Broaden and diversity green jobs/businesses

There is a need to broaden and diversify the businesses the youths are into. Most of the youths are doing petty trading. Our study has shown that our youths are also interested in other green jobs or businesses such as fish farming, organic farming, agroforestry, renewable energy, bee farming, horticultural farming and irrigation farming.

Improve the youth's access to credit and capital

The lack of credit has been noted to be a challenge amongst the youth, hence the need for future program design to partner with the private sector and other financial service providers such as NEEF to support the youths with loans to undertake their preferred ventures at the project's onset. In addition, start-up equipment/materials to enable the youth to effectively start businesses effectively are a must. These include equipment necessary for processing wastes into briquettes, manure, bricks, and other products, as well as bee-keeping equipment.

Devise long-term project sustainability measures

The project period needs to be lengthened. Some of the project interventions, including environmental restoration, take longer for one to see their benefits and impact. Further, there is a need to incorporate a component of public awareness of the benefits of

appropriate waste management and forest restoration. Other essential activities, such as tree pruning and fire break construction for the vast areas of land restored, will require the support of the youths. Engaging established local structures in communities such as VNRMCs and BMCs and the community at large from the onset of the project should be considered, too.

Encourage youths to participate in village savings and loan associations

The study has established that none of the youths invested their money in village savings and loan associations, and only 13% of the MGC youths had access to credit and loans. Thus, most of the project youths could not access loans or other lines of credit. Participation of the youths in VSLAs not only promotes access to finance but also instills financial discipline and accountability among youths, thereby increasing their savings capacity. Future programming should encourage the creation of youth saving and lending (YSL) groups among the youth clubs. This is crucial for the development of sound financial skills among the youth.

Improve the quality of the products produced and link the youths to new and reliable markets

To improve the prospects of youth-led businesses, there is a need to enhance the quality of their products and create a strong brand identity. Scaling-up value-addition, creating appealing packaging, and forming associations or cooperatives can help youths to access better markets, bigger loans, and more appropriate financial services.

Improve the design of the incentive package for the youths

The MGC project provides a monthly stipend and business start-up capital of approximately Mk20,000 and MK80,000, respectively. The low monthly allowance and business start-up capital are some of the challenges highlighted by the youths. There is a need to incentivize the youths by increasing the monthly allowances and business start-up capital because the cost of living has gone up due to the massive local currency devaluation and inflation, among others. The project can also introduce 'Awards' programs for the youths in order to motivate those who are doing exceptional work in the management of forests and waste.

Improve monitoring, evaluation, accountability and learning (MEAL) component

The study has established that the MGC project lacked the MEAL aspect of the project. District staff meant to implement the project on the ground had no resources to supervise or monitor the activities and progress of the project. Future programming should consider designing a comprehensive monitoring and evaluation framework as well as a learning and impact evaluation component. The stakeholders involved in the project need to learn from the project and its activities throughout the implementation.

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ANNEX

Table A1: Key informants (district staff) interviewed

SN	District	Name	Department	Position
1	Dedza	Ms. Violet Msukwa	Forestry	DFO
2	Dedza	Ms. Twesa Mwamlima	Youth	DYO
3	Blantyre	Ms. Edna Ndalama	Forestry	DFO
4	Blantyre	Mr. Mbulaje	Environment	EDO
5	Blantyre	Mr. Peter Mizedyia	Youth	DYO
6	Lilongwe	Ms. Kawalewale	Forestry	DFO
7	Salima	Mr. Adam Jason	Forestry	DFO
8	Zomba	Ms. Sharon Chiromo	Youth	DYO
9	Zomba	Mr. Cleopas Lameck	Environment	EDO
10	Machinga	Mr. Davie Mulama	Forestry	ADFO
11	Machinga	Mr. Hamuza	Environment	EDO
12	Mangochi	Mr. Kamangadazi	Forestry	DFO
13	Mangochi	Mr. Kathumba	Environment	EDO
14	Mangochi	Mr. Kumbukani Manda	Youth	DYO
15	Mzimba	Mr. Dziwapo	Forestry	ADFO
16	Mzimba	Mr. Musokwa	Youth	DYO
17	Karonga	Mr. Mbeye	Environment	EDO

Table A2: Test of matching quality for current income, previous income, current income diversification, previous income diversification and PPI outcome variables

Matching technique	Sample	Ps R2	L.R. chi2	p>chi2	MeanBias	MedBias	B	R	%Var
Kernel	Unmatched	0.034	35.3	0.006	10.9	8.9	44.6*	1.11	67
	Matched	0.01	15	0.524	5.5	4.4	23.2	1.52	100
Mahalanobis	Unmatched	0.036	29.16	0.023	11.1	9.7	46.0*	1.03	67
	Matched	0.013	14.7	0.546	2.9	1	26.6*	1.36	67
Mahalanobis	Unmatched	0.034	35.3	0.006	10.9	8.9	44.6*	1.11	67
	Matched	0.011	17.65	0.412	2.8	0.5	25.1*	1.58	67
Kernel	Unmatched	0.036	29.16	0.023	11.1	9.7	46.0*	1.03	67
	Matched	0.015	16.73	0.403	5.3	4.5	28.5*	1.1	33
Mahalanobis	Unmatched	0.053	68.26	0	12.8	7.6	55.1*	0.83	67
	Matched	0.011	18.7	0.346	2.5	0.4	24.3	1.59	67

Table A3: Probit regression of participation in the project

Variable	Coefficient	Std. err.	z	P>z
Sex	0.169926	0.097849	1.74	0.082
Age	0.031523	0.011793	2.67	0.008
Household head	0.014887	0.111734	0.13	0.894
Household size	0.005575	0.023583	0.24	0.813
Literacy	0.214076	0.195327	1.1	0.273
Education level				
<i>PSLCE</i>	-0.11672	0.110793	-1.05	0.292
<i>JC</i>	-0.04824	0.122091	-0.4	0.693
<i>MSCE</i>	-0.09446	0.142226	-0.66	0.507
<i>Tertiary Certificate</i>	0.385225	0.334415	1.15	0.249
<i>Tertiary Diploma</i>	0.625002	0.486791	1.28	0.199
<i>Degree</i>	-0.71101	0.774802	-0.92	0.359
Marital status				
<i>Married</i>	0.291327	0.114722	2.54	0.011
<i>Divorced</i>	0.100472	0.177551	0.57	0.571
<i>Separated</i>	0.192942	0.253226	0.76	0.446
<i>Widowed</i>	0.448623	0.501335	0.89	0.371
Religion	0.282308	0.093908	3.01	0.003
Land access	0.245039	0.094537	2.59	0.01
Constant	-1.34691	0.35369	-3.81	0
Number of observations	989			
LR chi2(17)	68.26			
Prob > chi2	0			
Pseudo R2	0.0526			

Table A4: Results of common support assessment

Variable	Sample	Common support		
		Off support	On support	Total
Current income	Untreated	2	261	263
	Treated	8	547	555
Current income diversification	Untreated	2	261	263
	Treated	8	547	555
PPI	Untreated	2	359	361
	Treated	7	621	628
Number of trainings	Untreated	2	359	361
	Treated	7	621	628
Share of youths starting businesses	Untreated	2	359	361
	Treated	7	621	628
Value of assets	Untreated	0	260	260
	Treated	5	527	532

Table A5: Local markets/customers for the business

Business Type	From within the village		From outside the village		From outside the district	
	No.	%	No.	%	No.	%
Livestock farming	33	8.5	24	13	1	4
Agricultural farming	56	14.4	31	16.8	4	16
Agro dealer business	11	2.8	7	3.8	3	12
Petty trading	213	54.9	84	45.4	10	40
Salon and barbershop	6	1.5	5	2.7	0	0
Bee-keeping	1	0.3	0	0	0	0
Food processing	2	0.5	2	1.1	0	0
Grocery store	7	1.8	2	1.1	0	0
Waste products recycling	7	1.8	2	1.1	1	4
Vocational jobs	14	3.6	8	4.3	2	8
Other, please specify	38	9.8	20	10.8	4	16
Total	388	100	185	100	25	100

Table A6: Asset values (MK)

Asset	N	Mean	SD	Min	Max
Mortar/pestle (m	209	4,452	3,813	100	25,000
Bed	171	46,810	50,787	1,500	450,000
Table	140	17,515	17,433	1,156	150,000
Chair	191	30,487	58,155	500	400,000
Fan	10	36,500	21,350	5,000	70,000
Radio	192	21,727	27,791	1,000	185,000
Tape or CD/DVD p	15	69,133	79,236	10,000	300,000
Television	25	147,280	168,383	10,000	680,000
VCR	1	150,000	.	150,000	150,000
Sewing machine	11	108,091	71,966	15,000	240,000
Kerosene/paraffin	2	18,875	22,804	2,750	35,000
Electric or gas	6	54,667	49,160	8,000	150,000
Refrigerator	9	288,889	172,297	120,000	550,000
Bicycle	219	68,292	47,068	4,000	300,000
Motorcycle/scoot	16	677,500	345,205	40,000	1,200,000
Car	3	2,500,000	500,000	2,000,000	3,000,000

Beer-brewing dru	11	12,727	10,011	2,000	30,000
Upholstered chai	9	333,333	233,185	150,000	800,000
Coffee table (fo	8	33,125	32,263	1,500	90,000
Cupboard, drawer	5	83,000	93,782	30,000	250,000
Lantern (paraffin	10	2,100	1,542	500	6,000
Desk	7	23,286	25,799	5,000	80,000
Clock	29	8,397	11,332	1,000	50,000
Iron (for press	37	10,730	14,181	1,000	60,000
Computer equipment	5	182,000	79,812	60,000	250,000
Sattelite dish	5	27,800	7,855	19,000	40,000
Solar panel	115	43,496	55,010	1,000	210,000
Hand hoe	691	6,588	6,919	300	90,000
Slasher	173	3,431	2,575	600	20,000
Axe	250	3,861	4,324	500	50,000
Sprayer	41	30,244	29,510	2,500	150,000
Panga knife	286	2,595	1,534	200	10,000
Sickle	172	1,838	1,359	200	12,000
Treadle pump	8	102,250	54,998	25,000	150,000
Watering cane	123	6,394	4,916	1,000	35,000
Ox cart	7	500,000	173,205	300,000	800,000
Ox Plough	3	78,333	106,105	5,000	200,000
Ridger	1	80,000	.	80,000	80,000
Motorized pump	1	120,000	.	120,000	120,000
Chicken House	135	14,211	16,438	500	100,000
Livestock Kraal	107	25,187	40,426	3,000	400,000
Poultry Kraal	32	10,063	6,924	2,000	30,000
Storage house	5	53,000	56,080	10,000	150,000
Granary	7	18,357	16,864	3,000	50,000
Barn	3	18,333	12,583	5,000	30,000
Pigsty	41	23,793	27,749	1,500	120,000
Total	3,547	26,803	101,983	100	3,000,000

Table A7: Assets and productive resources owned by youth by MGC membership

Asset	Non-MGC		MGC		Overall	
	No.	%	No.	%	No.	%
Hand hoe	223	61.8	468	74.5	691	69.9
Panga knife	72	19.9	214	34.1	286	28.9
Axe	67	18.6	183	29.1	250	25.3
Bicycle	55	15.2	164	26.1	219	22.1
Mortar/pestle	51	14.1	158	25.2	209	21.1
Radio	53	14.7	139	22.1	192	19.4
Chair	46	12.7	145	23.1	191	19.3
Slasher	43	11.9	130	20.7	173	17.5
Sickle	54	15	118	18.8	172	17.4
Bed	45	12.5	126	20.1	171	17.3
Table	31	8.6	109	17.4	140	14.2
Chicken House	30	8.3	105	16.7	135	13.7
Watering cane	30	8.3	93	14.8	123	12.4
Solar panel	21	5.8	94	15	115	11.6
Livestock Kraal	21	5.8	86	13.7	107	10.8
Sprayer	10	2.8	31	4.9	41	4.1
Pigsty	7	1.9	34	5.4	41	4.1
Iron (for pressing)	7	1.9	30	4.8	37	3.7
Poultry Kraal	6	1.7	26	4.1	32	3.2
Clock	9	2.5	20	3.2	29	2.9
Television	8	2.2	17	2.7	25	2.5
Motorcycle/scooter	5	1.4	11	1.8	16	1.6
Tape or CD/DVD play	4	1.1	11	1.8	15	1.5
Sewing machine	2	0.6	9	1.4	11	1.1
Beer-brewing drum	6	1.7	5	0.8	11	1.1
Fan	1	0.3	9	1.4	10	1
Lantern (paraffin)	3	0.8	7	1.1	10	1
Refrigerator	2	0.6	7	1.1	9	0.9
Upholstered chair,	0	0	9	1.4	9	0.9
Coffee table (for s	1	0.3	7	1.1	8	0.8

Treadle pump	0	0	8	1.3	8	0.8
Desk	3	0.8	4	0.6	7	0.7
Ox cart	3	0.8	4	0.6	7	0.7
Granary	4	1.1	3	0.5	7	0.7
Electric or gas stove	2	0.6	4	0.6	6	0.6
Cupboard, drawers,	2	0.6	3	0.5	5	0.5
Computer equipment	1	0.3	4	0.6	5	0.5
Satellite dish	1	0.3	4	0.6	5	0.5
Storage house	0	0	5	0.8	5	0.5
Car	1	0.3	2	0.3	3	0.3
Ox Plough	1	0.3	2	0.3	3	0.3
Barn	2	0.6	1	0.2	3	0.3
Kerosene/paraffin	1	0.3	1	0.2	2	0.2
VCR	0	0	1	0.2	1	0.1
Ridger	0	0	1	0.2	1	0.1
Motorized pump	0	0	1	0.2	1	0.1

Source: MGC Survey 2023



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