



# Impact of Clip Project on the Livelihood Outcomes of Sheabutter Processing Women in Karaga District of Northern Region, Ghana

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**To cite this article:**

Alhassan Bawa. Impact of Clip Project on the Livelihood Outcomes of Sheabutter Processing Women in Karaga District of Northern Region, Ghana. *Science Development*. Vol. 3, No. 2, 2022, pp. 57-65. doi: 10.11648/j.scidev.20220302.12

**Received:** December 8, 2021; **Accepted:** March 21, 2022; **Published:** June 27, 2022

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**Abstract:** The poverty situation in northern Ghana is a major challenge to sustainable development. As a result of socio-cultural factors, women are vulnerable and their poverty situation is even more overwhelming. Development agencies, Governmental and Non- Governmental Organizations have adopted and implemented different strategies aimed at reducing poverty in these areas. Micro-credit delivery to the poor especially women is one of these strategies that seems to be making impact towards improving the livelihoods of the rural poor women. In recognition of the fact that the shea industry has a great potential and could help alleviate poverty in the five northern regions of Ghana, and most especially among the rural women, the Community Life Improvement Programme (CLIP) was established in 1997 to help boost the shea industry through the initiation of micro-credit scheme to help the northern women patronize, intensify and expand the sheabutter processing micro-business. This study was therefore conducted in 2015 to evaluate the impact of the CLIP project on the livelihood outcomes of women in the micro-scale sheabutter processing in Karaga district of Northern region. By means of purposive and snow ball sampling techniques, 110 respondents (consisting of 80 beneficiary and 30 non-beneficiary women) were interviewed for the study. An interview guide and focus group discussions were used to obtain information from the sheabutter processing women. Relevant literature documents of the CLIP project were also consulted. From the survey, the activities undertaken by the CLIP project to improve the livelihood of the beneficiary sheabutter processors were identified and the impact of the project on the beneficiary women assessed. The results of the study revealed that the livelihood outcomes of the beneficiary women have been improved. The study further revealed that the livelihood outcomes of the beneficiary women were far better off as compared to that of the non-beneficiary women of the CLIP project. The study recommended that, the CLIP project should expand its base to cover many more sheabutter processing women in the target communities, and intensify its training and monitoring activities.

**Keywords:** Likelihood Outcomes, Micro-credit, Sheabutter Processing, CLIP Project, Women Groups, Ghana

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## 1. Introduction

Northern Ghana, comprising the Northern, Upper East, Upper West, North East and Savannah regions is endowed with abundant natural resources. However, these regions of Ghana are far under-developed with low income economy. Coulombe *et al.* [1] reported that about 69%, 88% and 84% of the populations of Northern, Upper East and Upper West regions respectively live in abject poverty. The people are mainly subsistence farmers who depend on rain-fed agriculture for the production of food crops. The crops produced are yam, cassava, maize, rice, cowpea, groundnut,

cotton and recently, cashew. Part of the crops harvested is sold in the markets to generate income to meet individual domestic financial needs. The bulk of the farm produce is used to meet household food needs. A recent report prepared by MoFA [2] discussed that about 5 percent of Ghana's population (1.2 million people) are food insecure; with 34% in the Upper West region, 15% in the Upper East region, and 10% in the Northern region. There is only one season of rainfall in northern Ghana, and so cropping is once a year, hence farming-related incomes are very seasonal. The

combined effect of the interplay of the above factors is frequent food shortages, poverty amongst women, disease and rapid depopulation of the areas.

In recognition of the fact that the shea industry has a great potential and could help alleviate poverty in the five northern regions of Ghana, and most especially among the rural women, the Community Life Improvement Programme (CLIP) was established in 1997 to help boost the shea industry through the institution of micro-credit scheme to help the northern women patronize, intensify and expand the shea processing micro-business. Micro-finance is the provision of both financial and social intermediation service (and sometimes health services) to the low-income clients. Micro-finance is not simply banking; it is a development tool. Social intermediation is a process of building the human and social capital required for sustainable financial intermediation for the poor. The provision of social intermediation services enables poor people to form sustainable groups, increase their awareness of and access to social services and promote their economic activities. Financial intermediation, on the other hand, is the provision of financial services to low-income clients, including the self-employed. Financial services generally include savings and credit; however, some micro-finance organizations also provide insurance and payment services.

Booth et al. [3] defined livelihood outcomes as the components of improved livelihoods or wellbeing (e.g. good health, more income, reduced vulnerability, empowerment, food security, etc.). Livelihood outcomes are the achievements or outputs of livelihood strategies. Transforming structures and processes within the livelihoods framework are the institutions, organizations, policies and legislation that shape livelihoods. Such institutions, organizations and policies affect the assets and opportunities that are available, and their productivity: e.g. government policy, formal organization (farmers' groups and local authority) and informal institutions, which include societal rules and norms (market networks, credit systems, discrimination and access to markets). The vulnerability context frames the external environment in which people exist. It is the part of the framework that lies farthest outside people's control. People's livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as shocks and seasonality- over which they have limited or no control.

Impact assessment is a management mechanism aimed at measuring the effects of projects on the intended beneficiaries [4]. The rationale is to ascertain whether the resources (inputs) invested in the livelihood activity produced the expected level of output and benefit, and contributed to fulfilling the mission of the project. The CLIP project plays an important role in improving the lives of rural poor and vulnerably people in Yendi, Gushegu and Karaga districts of the Northern region of Ghana. The objectives of the study were to examine the extent to which the CLIP project activities influence the livelihood outcomes of women in the sheabutter processing micro-enterprise; and to

determine if there was any difference between livelihood outcomes of beneficiary and non-beneficiary women of the CLIP project.

## 2. Methodology

### 2.1. Study Area

The study was carried out in Karaga district of the Northern region of Ghana. The Karaga district is located in the north-eastern portion of the Northern region between latitudes 9°30' North and longitudes 0° and 45° West [5]. The district capital is about 89.6 km north-east of Tamale, the regional capital. The approximate land area of Karaga district is 5,796 km<sup>2</sup> with a population of 77,706; consisting of 37,336 males and 40,370 females [5]. Female-headed households are made up of 11.8% in the district, with an average household size of 9.6 members. About 30% of the population resides in settlements that can be classified as town. This means that about 70% of the population is rural.

The vegetation is a typical Guinea-Savannah type, characterized by tall grasses interspersed with drought resistance trees such as Shea and Dawadawa. The climate reflects a typical continental climate experienced in northern Ghana. There is a rainy season that last from May to October; peaking in August and September. The rest of the year is virtually dry. Rainfall amount is between 900 mm and 1000 mm per annum. Temperatures are high throughout the year with the highest of 36 °C or above in March and April. Low temperatures are experienced between November and February (the harmattan period) [5]. The only opportunity opened to the Karaga district is in the area of agriculture. The district is endowed with vast productive agricultural land with a potential for the production of cereal crops, root and tuber, legumes, industrial crops and also rearing of livestock. The district exports grains and yams to other regions, especially Upper East. Cultivation of non-traditional export crops such as cashew is also gaining currency. Cotton is also produced on a large scale in the district. The district also has a large concentration of economic trees such as Shea and Dawadawa. Cattle, sheep and goats are reared on a large scale in the district. On the average, almost every household in the district rears some animals of a kind [5].

There is no established industry in the district. However, there are over one hundred groups engaged in various income generating activities. Income generating activities include sheabutter extraction by women groups and smock weaving by men. Low agricultural productivity and lack of ready markets for produce from income generating activities are some of the root causes of poverty in the district, although it is endowed with a strong renewable resources base that offer potentials for enhanced agricultural productivity.

### 2.2. Research Design

The research methodology used for the study was the

causal-comparative approach. Causal-comparative approach is used to investigate the possibility of a causal relationship among variables that can be manipulated [6]. The basic causal-comparative design involves selecting two or more groups that differ in a particular variable of interest and comparing them on another variable. The two groups in this study are the beneficiary and non-beneficiary women's groups. The main difference between the two groups is that one group receives support from the CLIP project whilst the other group does not. Method of data collection employed in this study was the use of interview guide. For this study, the population comprised of:

All the micro-scale sheabutter processing women groups who are beneficiaries of the CLIP project in the Karaga district; all the micro-scale sheabutter processing women who are non-beneficiaries of the CLIP project in the Karaga district; and all staff of CLIP project.

### **2.3. Sampling Technique and Sample Size**

Out of several NGOs that operate in the Northern region, the purposive sampling technique was used to select the CLIP project for the study. Out of the three operational districts (Yendi, Gushegu and Karaga) of CLIP, the Karaga district was selected through simple random sampling. The simple random sampling technique was again used to select six beneficiary communities, out of a total of thirteen beneficiary communities in the Karaga district, for the study. The beneficiary communities selected for the study include: Tong, Nyong-Nayili, Nyong-Guma, Bagurugu, Yamo-Karaga and Yamo-Karaga Yapala. Each beneficiary community consisted of one women's group, with the exception of Nyong-Nayili which had two women's groups.

The purposive sampling technique was used to select eighty (80) beneficiary women, whilst the snowball sampling technique was used to select thirty (30) non-beneficiary women sheabutter processors in the six (6) beneficiary communities. In all, 110 respondents were selected for the study. The research instruments used during data collection were interview guide and focus group discussions. The instruments comprised of a structure of open and close-ended questions.

### **2.4. Development of Research Instruments**

The research instruments used during data collection were interview guide, questionnaire and checklist. The instruments comprised of a structure of open and closed-ended questions. Interview guide and questionnaires are a good way of collecting certain types of information (facts, views, opinions, and perceptions) quickly and relatively cheaply as long as respondents are sufficiently disciplined to abandon questions that are superfluous to the main task [7]. The interview guide and checklist were employed for face-to-face interviewing of the beneficiary and non-beneficiary women of the CLIP project. The questionnaires were self-administered. For the sake of reliability and validity, the

questions were criticized, reviewed and revised many times by the researcher and his colleagues. The research instruments were also pre-tested at Sakoya in the Yendi Municipality of the Northern region where there were similar micro-scale sheabutter processors. This process exposed all inconsistencies, wrong expressions and inappropriate words in the prepared questionnaires, which resulted in making of the necessary corrections before they were taken to the field of study.

### **2.5. Method of Data Analysis**

All responses were coded, and fed into a computer for statistical analysis using the Statistical Package for Social Sciences (SPSS). All the data from the two main contrasting women groups were analyzed comparatively. The analysis produced descriptive statistics of frequencies, counts and percentages. Cross tabulations of variables were done and the chi-square tests used to establish relationships. The Two-Independent-Samples Tests analysis was used to compare the beneficiary and non-beneficiary women with respect to: the quality and output of sheabutter processed; expansion and diversification of the sheabutter business; income; reduced vulnerability; empowerment; coping strategies; and environmental management and conservation. The Two-Independent-Sample Tests analysis is a type of statistical test which is used to compare two independent groups with respect to some specific variables. This type of test determines the mean ranks recorded by the two independent groups (i.e. beneficiaries and non-beneficiaries) for all variables that are common to the two independent groups. The P value is calculated and based on this, the significant levels (in terms of variable performance) between the two independent groups are determined. For visual impression and ease of understanding, summaries of findings were presented in graphs and tables.

## **3. Results and Discussion**

### **3.1. Income from Sheabutter Business**

53.75% of the beneficiary sheabutter processors strongly agreed that their income from sheabutter business has been increasing. For the non-beneficiary women sheabutter processors, 86.70% of them disagreed that their income from sheabutter business has been increasing (Table 1). The increment in income of majority (96.25%) of the beneficiary women could be due to the micro-financial services provided by CLIP. This is in consonance with the observation made by Robinson (2001) that micro-finance and savings have helped people to increase their income. Training of beneficiary sheabutter processors on techniques and methods of processing quality sheabutter might have improved the quality of butter processed, resulting in improved marketing and hence, increased income of the CLIP beneficiary sheabutter processors.

**Table 1.** Income from Sheabutter Business.

Respondents	Income from sheabutter business increases	Frequency of responses	Percentage
Beneficiaries	Disagree	2	2.50
	Undecided	1	1.25
	Agree	34	42.50
	Strongly agree	43	53.75
	Total	80	100.00
Non-beneficiaries	Strongly disagree	3	10.00
	Disagree	26	86.70
	Agree	1	3.30
	Total	30	100.00

Source: Field Survey 2015.

### 3.2. Enhanced Empowerment

According to Blumberg (1991) cited in Young et al. [8], micro-enterprises and the informal sector are a source of empowerment and that the following are components of empowerment:

Control over life, self-respect, voice in household decision, dividends for community contribution, and often more education for girls. On the basis of Blumberg's findings, the researcher came out with four-point conditions for enhanced empowerment. Therefore, for a respondent's empowerment to be enhanced, she should have satisfied all the four conditions. The conditions include:

1. Increased contribution to family income;
2. Increased level of involvement in decision making in the household;
3. Increased level of self-confidence; and
4. Increase level of self-reliance.

Most of the CLIP project beneficiary women (85%)

satisfied all the four conditions for enhanced empowerment. For the non-beneficiary women, 63.3% of them satisfied none of the four conditions for enhanced empowerment (Table 2). The improved empowerment of majority (85%) of the beneficiary as against the non-beneficiary sheabutter processors could be attributed to the improved financial, social and human capitals of the beneficiary women. It is possible that the social network built through interaction of group members, coupled with periodic training and financial assistance for group members could have enhanced their self-confidence, self-reliance and participation in decision-making, hence improving beneficiary women's empowerment. This supports the findings of DFID [9] that building up assets is a core component of empowerment. Uaiene *et al.* [10] also suggested that social network effects are important for individual decisions, and that, in the particular context of agricultural innovations, farmers share information and learn from each other.

**Table 2.** Distribution of Respondents by Level of Enhanced Empowerment.

Respondents	Number of conditions which have been satisfied	Frequency	Percentage
Beneficiaries	1	2	2.5
	2	4	5.0
	3	6	7.5
	4	68	85.0
	Total	80	100.0
Non-beneficiaries	0	19	63.3
	1	2	6.7
	2	3	10.0
	4	6	20.0
	Total	30	100.0

Source: Field Survey, 2015; Note: four conditions are the total conditions to be satisfied.

### 3.3. Reduced Vulnerability

DFID [9] reported that one of the components of improved livelihoods is reduced vulnerability, which is achieved through livelihood strategies. The researcher came out with three-point conditions for reduced vulnerability. Therefore, for a respondent's vulnerability to be reduced, she should have satisfied all the three conditions. The conditions include:

1. Increased contribution to dependants' education;
2. Increased access to improved health and nutrition; and
3. Increased savings from income.

Most of the beneficiary women (92.5%) of the CLIP project satisfied all the three conditions for reduced vulnerability (Table 3). For the sheabutter processors who do not benefit from the CLIP project, only 20% of them satisfied all the three conditions for reduced vulnerability. The reduction in vulnerability of majority (92.5%) of the beneficiary women could be attributed to the enhanced livelihood assets of the beneficiaries. This is in consonance with the observation made by DFID [9] that reducing vulnerability can be achieved through supporting poor people to build up their assets, for example increasing people's access to appropriate financial

services- including insurance is one way of reducing vulnerability.

**Table 3.** *Reduced Vulnerability.*

Respondents	Number of conditions which have been satisfied	Frequency of responses	Percentage
Beneficiaries	2	6	7.5
	3	74	92.5
	Total	80	100.0
Non-beneficiaries	0	20	66.7
	1	1	3.3
	2	3	10.0
	3	6	20.0
	Total	30	100.0

Source: Field Survey, 2015; Note: three conditions are the total conditions to be satisfied.

### 3.4. Enhanced Coping Strategies

DFID [9] reported that one of the components of improved livelihoods is enhanced coping strategies, which is achieved through livelihood strategies. Chowdhury *et al.* [11] asserted that women participating in BRAC-sponsored activities have more assets and are more often gainfully employed than non-participants. Mustapha and Ara [12] confirmed this and noted that the BRAC members have better coping capacities in lean seasons and that these increased with length of membership and amount of credit received from BRAC. On the basis of the findings of Mustapha and Ara [12], the researcher came out with two-point conditions for enhanced coping strategies. A respondent's coping strategies is enhanced if she is able to:

1. Manage scarce resources of the sheabutter business; and

2. Make up for financial and other resource deficiencies in the sheabutter business.

52.5% of the beneficiary women have satisfied the two conditions for enhanced coping strategies (Table 4). The improved coping strategies of majority (52.5%) of the beneficiary women could be due to increased access to livelihood assets. The network built, coupled with CLIP project financial support for the beneficiary women groups, could have increased the women's bargaining power to seek financial and other resources support, in times of difficulties, from external sources such as friends and family members. Thereby, enhancing the coping strategies of the CLIP project beneficiaries. This supports the findings of Mustapha and Ara [12] that BRAC members have better coping strategies in lean seasons and that these increased with length of membership and amount of credit received from BRAC.

**Table 4.** *Enhanced Coping Strategies.*

Respondents	Number of conditions which have been satisfied	Frequency of responses	Percentage
Beneficiaries	1	38	47.5
	2	42	52.5
	Total	80	100.0

Source: Field Survey, 2015; Note: two conditions are the total conditions to be satisfied.

### 3.5. Food Security

Abu and Soom [13] also reported that higher food production increases the probability of a household being food secure. They further observed that due to rising food prices, households with less income have difficulties to purchase enough food, hence they tend to rely more on own food production in order to reduce their vulnerability to food insecurity.

In a Focus group discussion with women's groups, majority of the beneficiary women agreed that the CLIP project has played a major role in improving food security among them:

*[The CLIP project has helped us to increase food production. Therefore, food is now available, accessible and affordable all year round. We were really food insecure during the years we were not working with CLIP, particularly around April to June each year. The beneficiary sheabutter processing women were of the view that through CLIP training and micro-finance*

*programmes, they have been able to increase food production, hence improving food availability, accessibility and affordability. Majority of the beneficiary women also reported that through CLIP project, they have been able to improve wholesomeness and nutritional value of food through improved storage techniques and storage facilities. Majority of the beneficiary women agreed that their ability to store disease and pest-free grains has improved ever since they joined the CLIP.]*

### 3.6. Enhanced Livelihood Outcomes

According to DFID [9], livelihood outcomes are the components of improved livelihoods (e.g. good health, more income, improved food security, improved empowerment and reduced vulnerability) and that livelihood outcomes are the achievements or outputs of livelihood strategies. Based on the findings of DFID on livelihood, the researcher came with nineteen-point conditions for enhanced livelihood outcomes. Therefore, for a respondent's livelihood outcomes to be enhanced, she should have satisfied all the nineteen

conditions. The conditions include:

1. Production of improved quality sheabutter;
2. Easy access to market for the sheabutter;
3. Intensification of the sheabutter processing business;
4. Increased output of sheabutter business;
5. Increased income from sheabutter business;
6. Expansion of sheabutter business;
7. Establishment of other micro-businesses from the proceeds of sheabutter business (i.e. diversification of sheabutter business);
8. Increased contribution to family income;
9. Increased level of involvement in decision making in the household;
10. Increased level of self-confidence;
11. Increased level of self-reliance;
12. Increased contribution to dependants' education;
13. Increased access to improved health and nutrition;
14. Increased savings from income;
15. Manage scarce resources of the sheabutter business;
16. Make up for financial and other resource deficiencies in the sheabutter business;
17. Prevent shea trees from fire destruction;
18. Harvest/ gather ripe shea fruits from the ground; and
19. Employ environmental-friendly method of disposing processing waste (e.g. using waste to set fire or to plaster walls, burying waste, etc.);

20% of the CLIP beneficiary women satisfied all the nineteen conditions for enhanced livelihood outcomes (Table 5).

**Table 5. Enhanced Livelihood Outcomes.**

Respondents	Number of conditions which have been satisfied	Frequency	Percentage
Beneficiaries	11	1	1.25
	13	1	1.25
	14	4	5.00
	15	2	2.50
	16	4	5.00
	17	15	18.75
	18	37	46.25
	19	16	20.00
	Total	80	100.00
Non-beneficiaries	1	7	23.33
	2	5	16.67
	3	4	13.33
	4	3	10.00
	5	2	6.67
	7	1	3.33
	8	3	10.00
	9	1	3.33
	10	1	3.33
	12	2	6.67
	16	1	3.33
	Total	30	100.00

Source: Field Survey, 2015; Note: nineteen conditions are the total conditions to be satisfied.

### 3.6.1. Period of Training and Enhanced Livelihood Outcomes

The distribution of respondents by training received and enhanced livelihood outcomes is presented in Table 6. Out of 80 beneficiary women who receive periodic training from the CLIP project, 74 of them satisfied fifteen or more of the nineteen conditions for enhanced livelihood outcomes. Out of a total of 30 non-beneficiary women who do not receive periodic training, only one of them satisfied fifteen or more of the nineteen conditions for enhanced livelihood outcomes. The chi-square test results indicated

that at 5% confidence level, there was a significant difference between the different levels of enhanced livelihood outcomes with respect to training received ( $\chi^2 = 79.959$ ,  $df = 1$ ,  $***P < 0.001$ ). The implication is that enhanced livelihood outcomes of respondents are influenced by training. The skills development training that was periodically organized for CLIP project beneficiary women, on methods and techniques of sheabutter processing, storage, preservation and marketing might have improved their livelihood outcomes, relative to the non-beneficiary women processors.

**Table 6. Distribution of Respondents by Training received and Enhanced Livelihood Outcomes.**

Receive Periodic Training	Number of conditions which have been satisfied		Total
	< 15	≥15	
Yes	6	74	80
No	29	1	30
Total	35	75	110

Source: Field Survey, 2015;  $\chi^2 = 79.959$ ,  $df = 1$ ,  $***P < 0.001$  significant.

### 3.6.2. Sources of Money for Buying Processing Inputs and Enhanced Livelihood Outcomes

The distribution of respondents by source of money for buying processing inputs and enhanced livelihood outcomes is presented in Table 7. Out of the 78 beneficiary women who buy the processing inputs from CLIP loan, 72 of them satisfied fifteen or more of the nineteen conditions for enhanced livelihood outcomes. All the 3 respondents, who purchase the processing inputs through the financial assistance of friends/

market queens, satisfied less than fifteen of the nineteen conditions for enhanced livelihood outcomes. The chi-square results indicated at 5% confidence level, there was a statistically significant difference between those whose livelihood outcome are enhanced and those whose livelihood outcomes are not enhanced with respect to the source of money for buying inputs ( $\chi^2 = 72.068$ ,  $df = 2$ , \*\*\* $P < 0.001$ ). This implies that the source of money for buying processing inputs influences enhanced livelihood outcomes.

**Table 7.** Distribution of Respondents by Source of Money for Buying Processing Inputs and Enhanced Livelihood Outcomes.

Source of Money for Buying Processing Inputs	Number of conditions which have been satisfied		Total
	< 15	≥15	
Loan	6	72	78
Self	26	3	29
Friends/ Market queens	3	0	3
Total	35	75	110

Source: Field Survey, 2015;  $\chi^2 = 72.068$ ,  $df = 2$ , \*\*\* $P < 0.001$  significant.

### 3.7. Differences in Livelihood Outcomes Between Beneficiary and Non-beneficiary Women

#### 3.7.1. Expansion of Sheabutter Micro-enterprise

The beneficiary women recorded a mean rank of 70.01, whilst the non-beneficiary women recorded a mean rank of 16.80 with regard to the expansion of micro-enterprise. There

was a significant difference between the mean ranks of the beneficiaries and non-beneficiaries ( $P < 0.001$ ) (Table 8). The differences in mean ranks of micro-enterprise expansion between the beneficiary and non-beneficiary women could be attributed to the CLIP micro-credit scheme. This support the findings of Robinson [14] that micro-finance and savings have helped people to expand and diversify their enterprises.

**Table 8.** Differences in Livelihood Outcomes Between CLIP Beneficiary and Non-beneficiary Women.

Variable	Category of respondents	N	Mean rank	Sum of ranks	Exact significance
Recorded improvement in quality of sheabutter	Beneficiaries	80	68.69	5495.50	0.000
	Non-beneficiaries	30	20.32	609.50	
Output of sheabutter processing increases	Beneficiaries	80	70.07	5605.50	0.000
	Non-beneficiaries	30	16.65	499.50	
Sheabutter processing micro-enterprise expands	Beneficiaries	80	70.01	5601.00	0.000
	Non-beneficiaries	30	16.80	504.00	
Establishment of other micro-businesses (diversification)	Beneficiaries	80	67.81	5425.00	0.000
	Non-beneficiaries	30	22.67	680.00	
Income from sheabutter business increases	Beneficiaries	80	69.93	5594.00	0.000
	Non-beneficiaries	30	17.03	511.00	
Reduced vulnerability	Beneficiaries	80	67.16	5373.00	0.000
	Non-beneficiaries	30	24.40	732.00	
Enhanced empowerment	Beneficiaries	80	66.88	5350.00	0.000
	Non-beneficiaries	30	25.17	755.00	
Enhanced coping strategies	Beneficiaries	80	70.50	5640.00	0.000
	Non-beneficiaries	30	15.50	465.00	
Enhanced environmental management and conservation	Beneficiaries	80	68.78	5502.50	0.000
	Non-beneficiaries	30	20.08	602.50	

Source: Field Survey, 2015; For beneficiaries, N=80; for non-beneficiaries, N=30; \*\*\* $P < 0.001$  significant.

#### 3.7.2. Income from Sheabutter Business

The beneficiary women recorded a mean rank of 69.93, whilst the non-beneficiaries recorded a mean rank of 17.03 (Table 8) with respect to increment in income from sheabutter business. There was a significant difference ( $P < 0.001$ ) between the mean ranks of beneficiary and non-beneficiary women. The significant differences between the beneficiary and non-beneficiary women might be due to the CLIP project intervention. This is in line with the

observations made by Robinson [14] that micro-finance and savings have helped people to increase their income.

#### 3.7.3. Enhanced Empowerment

The beneficiary women recorded a mean rank of 66.88, whilst the non-beneficiaries recorded a mean rank of 25.17 (Table 8) with respect to enhanced empowerment. There was a significant difference ( $P < 0.001$ ) between the mean ranks of the beneficiary and non-beneficiary women with respect to empowerment. The significant differences in mean rank

between the beneficiaries and non-beneficiaries might be due to the CLIP micro-finance scheme. This is in consonance with the observation made by Ardayfio-Schandorf *et al.* [15]. The authors reported that Enhancing Opportunity for Women in Development (ENOWID) intervention in Ghana revealed increased independent decision-making in domestic affairs and children's education by women participants as compared to non-participants who took more joint decisions with their spouses.

## 4. Conclusion and Recommendations

The study examined the impact of CLIP project on the livelihood outcomes of the micro-scale sheabutter processing women in Karaga district of Northern region. In general, the study revealed that majority of the CLIP project beneficiary women had their livelihood outcomes totally enhanced, whilst the livelihood outcomes of majority of the non-beneficiary women were not enhanced. The study established that enhanced livelihood outcomes of beneficiary women were influenced by both training and source of money for buying processing inputs of respondents. Finally, the research revealed that at 5% confidence level, there was a significant difference between the CLIP project beneficiary and non-beneficiary women in terms of increased income, reduced vulnerability, enhanced empowerment, enhanced coping strategies and enhanced environmental management and conservation.

Based on the conclusion, the following recommendations are made:

1. The CLIP project should extend its services to cover many more non-beneficiary sheabutter processors in the target communities;
2. The Project should expand its micro-credit and social intermediation services; and
3. The Project should intensify its monitoring to attain the goals for which the micro-credits were given.

## Ethics Approval and Consent to Participate

There are no actual or potential conflicts of interest including financial, personal or other relationships with other people or organizations that could inappropriately influence, or be perceived to influence this work. Therefore, no ethical issue may arise after the publication of this article.

## Competing Interest

Author has declared that no competing interest exist.

## Authors' Contributions

The sole author designed the research, prepared questionnaires, analyzed data, prepared the first draft and proof-read the manuscript.

## Acknowledgements

Author do acknowledge the critical comments and scientific inputs made by all researchers at the Department of Agricultural Extension, University of Ghana, Legon, and the Millar Institute for Transdisciplinary and Development Studies, Bolgatanga, Ghana.

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