Journal of Agricultural Science and Food Technology
Vol. 6 (2), pp. 28-33, February, 2019
ISSN: 2465-7522
Research Paper
https://doi.org/10.36630/jasft_19048
http://pearlresearchjournals.org/journals/jasft/index.html

Consequences of The Implementation of Lesotho Highlands Water Project on Agricultural Production of Dam-Affected and Relocated Farm Families: Mohale Dam Maseru

Accepted 11 December 2019

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ABSTRACT

The study explored the consequences of the implementation of the Lesotho Highland Water Project (LHWP) on agricultural production of dam-affected and relocated farm families at Ha-Makhalanyane and Makhoakhoeng in the Maseru District. Specifically, the study sought to identify the problems caused by LHWP on agricultural production of relocated farm families; assess the suitability of the LHWP compensation policy for relocated farm families and develop strategies for addressing problems caused by LHWP on agricultural production for relocated farm families. The study involved 37 respondents relocated to Ha-Makhalanyane and Makhoakhoeng. The areas were purposively selected because they are villages that have accommodated households relocated by LHWP. A structured questionnaire was used. Descriptive statistics were used for data analysis. The findings revealed that the majority of the affected households depended on compensation provided by LHWP. They also revealed that resources affected by the project-centered mainly on agricultural resources. Furthermore, it was found that respondents did not derive any benefits in terms of agricultural production; beneficiaries were not involved in the design phase of compensation policy and the compensation was also not enough to make up for lost agricultural resources. Also, the compensation policy is not suitable since people were not involved in its design phase to ensure their needs were met and relocated farm families still desire to continue with their farming lifestyle despite being exposed to other options.

Keywords: LHWP, Agricultural production and productivity, Relocation and Consequences.

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INTRODUCTION

Lesotho Highland Water Project (LHWP) was devised in 1954 and designed in the early 1980s by the Kingdom of Lesotho and the Republic of South Africa. Governments of both countries came into a formal agreement in 1986 of setting up a structure that will govern the project. That structure was called Lesotho Highlands Water Commission (LHDA, 1996). The government of Lesotho manages the project under the Ministry of Energy, Meteorology and Water Affairs and Lesotho Highland Development Authority (LHDA). In implementing this project, LHDA had an agreement with rural community people in order to assist and contribute to the project implementation. The people sacrificed their homes, agricultural resources including arable land, trees and crops and lifestyle for the project (Hoover, 2001). The problem was how rural people were going to survive as their livelihoods have been affected. The LHDA devised a policy under the compensation, resettlement and development division of which compensation deals with direct loss and resettlement deal with displaced households during the reservoir construction, and development section deals with sustainable households after losing the assets they originally used for generating income before the project. Under the compensation policy, households that have lost arable land are provided with annual payments in grain, pulses and fodder. In the case of rangelands, communities are provided with cash in order to establish community development projects which help in generating income for them (LHDA, 1996). One of the aims of LHDA is to improve the living standards of rural people by leaving them well-off rather than worse off. The effort made by LHDA in improving the quality of life of affected communities through compensation and

resettlement is commendable. However, as noted by Hoover (2001), since Lesotho is a land-stressed country, the project brings difficulty to people who produce agricultural products because they are relocated from quite fertile lands to those of poorer fertility status. This problem also affects people who rely on food that is grown by producers at their initial places of origin. During the implementation of LHWP, households' agricultural resources which are means of survival were lost or sacrificed in order to establish a way for the project (Hoover, 2001). This means that both agricultural and livestock production is affected, for those that still want to produce even after they have been affected.

The issue of agricultural resource loss does not only affect current farmers but future farmers also. This impacts them economically and socially, which causes a change in their livelihood patterns. Upon completion of Phase 1, it was estimated that over 20,000 farmers had been affected and displaced, of whom most have not received adequate compensation (World watch Institute, 2016). This issue raises concerns about the compensation policy, whether it is suitable and fair, and also if LHDA does make follow up on how far they are with compensating affected communities. Instead of strengthening the capacity of rural farmers, and building them into self-reliant people who are able to produce for themselves and make their own decisions, the project tends to shift farmers away from that, making them rely on the compensation that is provided by LHWP for survival. This has led to the study to explore the consequences of the implementation of LHWP on agricultural production of dam-affected and relocated farm families. The specific objectives were: (1) To identify the problems caused by LHWP on agricultural production of relocated farm families; (2) To identify the benefits of LHWP on agricultural production of relocated farm families and (3) To assess the suitability of the LHWP compensation policy related to loss of agricultural resources of relocated farm families;

To develop strategies for addressing problems caused by LHWP on agricultural production of relocated farm families.

METHODOLOGY

The study was carried out in two villages including Ha-Makhalanyane and Makhoakhoeng, in Maseru District. These are areas that have accommodated some of the families that have been relocated by LHWP. Ha-Makhalanyane is a small settlement located 17km southeast of the capital city, Maseru. This area has productive agricultural land and approximately 185 households, with a population of about 477 people. Makhoakhoeng is a village that falls under Abia Community Council in Maseru Municipality. This village has approximately 171 households and 680 people. The study used a descriptive quantitative survey. The number of households relocated to Ha-Makhalanyane is 23 (Sephula, 2011) while those relocated to Makhoakhoeng are 22 (Scudder, 2005). However, only 18 and 19 households in Ha-Makhalanyane and Makhoakhoeng, respectively participated in the study. These areas were purposively selected because they are villages that have accommodated households relocated by LHWP. A structured interview schedule which was checked for validity and reliability was used. For validity checking, the interview schedule was reviewed by two compensation officers and two experts at LHDA after which their comments were considered and incorporated in the final version of the interview schedule. The reliability of the interview schedule was checked by conducting a pilot study at Ha-Mosuoe and Ha-Tsepang in Nazareth, where there are still some people who have been relocated by LHWP. The reliability coefficient was calculated using Cronbachs Alpha formula, and was found to be 0.89 and considered acceptable. Descriptive statistics were used to summarize, simplify and organize data for statistical representation and easy understanding. The descriptive statistics involved frequency distribution, percentage distributions and measures of central tendency. This basic-level analysis is important in exploring the consequences of the implementation of LHWP on agricultural production of dam-affected and relocated farm families.

RESULTS AND DISCUSSION

Problems Caused by LHWP on Agricultural Production of Dam-affected and Relocated Farm Families. The respondents were requested to identify the problems caused by LHWP on agricultural production. The key aspects explored were: affected agricultural resources, state of soil at new home compared to previous home, number of animals kept at home, availability of grazing land, the performance of livestock enterprise at new home, and perceptions of the affected households on the impact of the project on their agricultural production. The findings revealed that majority (68%) of the households had been affected by the project by way of reduced arable land and garden land. Furthermore, 19% had been affected by a way of reduced trees and arable land and 14% by way of destroyed rangeland size and capacity which is a communal asset (Table 1). Hundred percent (100%) of the respondents indicated that the status of soil at their previous homes was fertile and, thus, able to sustain agricultural production. However, their opinions regarding status of soil at their relocated sites (Makhoakhoeng and Makhalanyane) were as follows: poor (65%), very poor (8%), fertile (22%). Thus, in relative terms, it can be inferred that the soil fertility status in the relocated areas was considered to be low in fertility compared to that in their original homes. This implies that agricultural production in the areas to which they relocated was more vulnerable than in the original homes. The findings also revealed that fifty-one percent (51%) of the respondents indicated that they were not

Table 1. Distribution of respondents by problems caused by LHWP on agricultural production of dam-affected and relocated farm families.

Problems Caused by LHWP On Agricultural Production of Dam-affected and Relocated Farm Families	Frequency	Percentage
Household affected resources		
Reduced arable land	12	32.4
Reduced garden land	4	10.8
Reduced arable and garden land	9	24.3
Affected fruit trees and reduced arable land	7	18.9
Destroyed rangeland	5	13.5
Status of soil at new home compared to old home in terms of agricultural production		
New home		
Poor soil fertility	24	64.9
Very poor soil fertility	3	8.1
Lack of land	2	5.4
Fertile soil	8	21.6
Maximum number of livestock allowed to keep at new home		
Restricted from keeping livestock	19	51.4
Allowed to keep livestock	18	48.6
Availability of pasture land at new home		
Insufficient land	32	86.5
Not sure	5	13.5
Performance of livestock at new home		
Moderately good	2	5.4
Poor	4	10.8
Perceived impact of project on agricultural production		
Negative	37	100
Perceived impact of project on pasturing		
Negative	6	16.2

allowed to keep livestock. These are households that were relocated to Makhoakhoeng in the Maseru district. This is a municipal area where households are not permitted to rear any animals. However, 49% of respondents who had been relocated to Makhalanyane revealed that they were actually allowed to keep livestock and that anyone could keep any number of livestock. Nevertheless, majority (87%) of respondents reported that there was insufficient land for pasturing and the situation in both areas indicated that both agricultural production and productivity were negatively affected. The findings in Table 1 are similar to those of Hichcock (2015) that people who are affected by the project are often relocated to the areas which are unplanned and ecologically less productive. It quite evident that the soils from the rural areas are much more productive than the soils found in urban areas of Lesotho. In support of this, International Rivers (2005) also pointed out that about 575 ha of arable land which was the best soil in the Mohale region had been lost to the project. When asked to indicate how the project had impacted their agricultural production, respondents generally indicated that the impact had been negative in the following ways: (1) There is no land to use for farming here, and we have to buy every piece of food; (2) We would grow maize and dagga back at home, now we cannot because there is no land; (3) We have to opt for shared cropping here, although farming here includes so many expenses we sometimes cannot afford; (3) The soil here is poor and requires fertilizers and improved seeds which we cannot afford; (4) We would engage in shared cropping back at home, where there is no field for that; and (5) This is a township, there is no land here to engage in farming activities.

It is evident that the affected resources center mostly on agricultural resources and these findings are similar to those noted by Hoover (2001), who stated that household agricultural resources that happen to be the means of survival for rural people are lost just so to make way for the development project. With the loss of such resources, agricultural production becomes affected for those households that still wish to continue farming even after they have been displaced.

Generally, it can be concluded that relocation negatively affected agricultural production and productivity amongst the affected households.

Benefits of LHWP On Agricultural Production of Dam-Affected and Relocated Farm Families

The respondents were requested to indicate other benefits that they had expected and realized from relocation in terms of agricultural production and the findings are summarized in Table 2. With proximity to market of cash crops, they would have the ability to sell their crops, animal and animal products for cash, probably even realize far greater returns than they did

Table 2. Distribution of respondents according to benefits that have been expected from the relocation programme.

Expected Benefits	Frequency	Percentage
Proximity to market of cash crops	9	24.3
Proximity to water sources for irrigation	7	18.9
Proximity to market for sale of animals	4	10.8
Proximity to market for sale of meat	1	2.7
Proximity to market for sale of milk	1	2.7

Table 3. Distribution of respondents on the suitability of the LHWP compensation policy related to loss of agricultural resources.

Suitability of LHWP Compensation Policy Related to Loss of Agricultural Resources	Yes (%)	No (%)	Overall
Compensation prior to relocation concerning desired place for relocation	97.3	2.7	100
Involvement in the designed phase of the compensation policy	35.1	64.9	100
Explanation of the compensation prior to relocation	97.3	2.7	100

back at the places they were relocated from. The respondents further reported that they had expected that they would be close to water sources for irrigation, surprisingly, they are faced with even far greater challenge of struggling with access to water resources and declining agricultural production and productivity. It is evident that the respondent's expectations were never realized in their new places of settlement, instead, new challenges were encountered. It can be concluded that LHWP did not have any positive contribution to agricultural production and productivity.

Suitability of LHWP Compensation Policy Related to Loss of Agricultural Resources

The study investigated the suitability of the LHWP compensation policy related to the loss of agricultural resources. The findings presented in Table 3 indicated respondents' views regarding the suitability of the policy. With regard to consultation prior to relocation on desired places for relocation, the majority (97%) of the households reported that they were actually given a choice of places they desired to move to, while only 3% reported that there was no consultation. This indicates that the respondents were given the opportunity to choose new places of settlement that would suit their livelihood patterns, thus, places having all the resources they needed to maintain their livelihoods and lifestyles. If the people had used the opportunity wisely, they would have not relocated to places that lacked agricultural resources to sustain their livelihoods. In terms of policy inclusion, around sixty five percent (65%) of the respondents stated that they were not involved in the design phase of the compensation policy. It is evident that majority of the respondents were not involved in the design phase of the compensation policy. This shows that the opinions, views and desires of the people were not considered regarding the restoration of their livelihoods. That is, the LHWP followed a top-down approach which, according to Sephula (2011), is undesirable for successful and sustainable policy.

The probable explanation for this situation could be that the policy was formulated during apartheid (RSA) and military (Lesotho) era where orders were used to drive messages through for people to just comply. This has led to perceptions among the communities that the policy was not suitable hence does not address their livelihood needs. It could be assumed that this would have been provided for had the communities been involved in the design phase of the project.

Majority (97%) of the respondents indicated that, prior to relocation; the compensation policy was explained to them to better understand, while the remaining had the opposing view.

Despite the awareness creation, the majority indicated that the package was not what they desired and all respondents chose a once-off payment in cash over monthly food parcels compensation. They needed cash but not as a once-off payment but in small monthly grants that would ensure that they put bread on the table every day/month but this option was not provided for in the compensation package. They did not opt for monthly food parcels because experience had taught them that the quality was always inferior. Majority of the recipients of the once-off cash payments were young people who appeared to have raw business ideas (Mphale and Slater, 2009) and it was assumed that they would wisely invest these huge sums of money in sustainable businesses. This proved to be disastrous as today few of them are having any meaningful business ventures and this could be attributed to their high levels of illiteracy. It can be argued that had they been involved in the design phase of the compensation policy this illiteracy could have been identified and addressed by incorporating business related training to compensation recipients. This indicates that the policy package was not suitable as it failed to address weakness and challenges of the affected communities.

Table 4. Distribution of respondents by assessment of the compensation n = (37).

Attribute of Compensation	Mean	SD
It has accompanied by follow-up to ensure it received	4.27	1.146
It was enough to make up for lost agricultural resources	1.16	0.727
It has enabled beneficiaries to sustain their households	1.11	0.658
It has enabled beneficiaries to regain their livelihoods	1.11	0.658
It reaches beneficiaries on time	4.86	1.110
It has enabled beneficiaries to establish income generating projects	1.46	1.406
Overall	2.33	0.951

Assessment of the Compensation Received by Relocated Farm Families

Respondents were asked to assess the compensation that they received from LHDA by giving opinions on selected attributes of compensation. The following scale was used: 1=strongly disagree, 2=disagree, 3=slightly disagree, 4= slightly agree, 5=agree, 6=strongly agree. For purposes of interpretation of the findings, means ranging from 3.5 and above were considered to reflect agreement, while those below 3.5 were considered to reflect disagreement. Standard deviations below 1.000 and above were taken to reflect less variation in the responses, while standard deviations of 1.00 and above were taken to reflect variation in the responses. (This supposed to be in the methodology). The findings (Table 4) revealed that mean responses ranged from 1.11 to 4.86 and the overall mean was 2.33. This implies that the majority of the respondents did not favour the compensation that they received. The standard deviations ranged from 0.658 to 1.146, with the overall standard deviation of 0.951 which implies that the respondents did not vary in their responses. Specifically, the respondents only agreed with the following attributes of compensation: It reaches beneficiaries on time (Mean=4.86); It has been accompanied by follow-up to ensure that beneficiaries received it (Mean=4.27).

The findings that the compensation is always on time and it has been followed up to ensure that it has been received by beneficiaries are noteworthy. These do not agree with Haretsebe (2014) revelation that compensation is usually late on never comes at all, and sometimes the wrong people get compensated instead of the beneficiaries. It could be argued that the LHWP through life learning and experience has managed to address the factors that led to weaknesses in the compensation delivery systems. However, respondents did not agree with the following attributes of compensation: (i) It enabled beneficiaries to create an income generating project (Mean=1.46); (ii) It was enough to make up for lost agricultural resources (Mean=1.16); (iii) It has enabled beneficiaries to sustain their households (Mean=1.11) and (iv) It has enabled the beneficiaries to regain their livelihoods (Mean=1.11). As indicted by majority of the respondents, the compensation received was not enough to enable beneficiaries to establish income generating projects. The compensation was little and did not allow beneficiaries to establish projects as very few people who have received once-off cash payment appeared to have established income generating projects though not that meaningful. This also could probably be due to lack of skills in business and financial management among the affected households.

The findings also reveal that, affected communities disagree with the attribute of compensation that it was not enough to make up for lost agricultural resources. Some of the lost agricultural resources include land which is a valuable asset to those who own it but respondents feel to have been under-compensated given the value of the compensation received. This is supported by Sephula (2011) that the compensation paid to the people relocated due to development projects do not make up for the lost agricultural resources which include farmlands, forests, fields and grazing lands. With respect to whether compensation enabled respondents to sustain their households, the findings reveal that respondents were actually never able to sustain their households after receiving the compensation. In addition to the compensation packages being less than the value of the livelihood sources lost by relocated people, the large sizes of relocated households render the once-off cash compensation more inadequate for the sustenance of these households. The average household size among the relocated respondents was around twelve in both Ha-Makhalanyane and Makhoakhoeng settlements. Generally, it can be argued based on the findings that the received compensation dished out by LHWP was not enough in helping with the restoration of the livelihoods of the affected/relocated households. These are in agreement with the Whirlend Bank Group (2003) findings that the livelihoods of the affected people have not been re-established and also, that people have actually been pushed further to the edge of their struggle for survival. These discoveries are contrary to the legal obligations of the LHWP compensation policy, which states to ensure that lives of the affected people are not worse off in comparison with the standard of living prior to the project implementation.

CONCLUSIONS

Relocated farm families face problems of inadequate

agricultural resources including land and water and these together with institutional factors negatively affect the production and productivity levels that have led to food insecurity and poverty among these LHWP affected households. The LHWP did not have any benefits regarding agricultural production of the relocated farms instead it led to costs such as arable and grazing lands losses as well as decline in production and productivity. Moreover, the compensation policy is not suitable for the maintenance of the livelihoods of the people as it does not consider their opinions, views and needs as it does not involve them during the design phase.

RECOMMENDATIONS

Given that relocated farm families face problems in terms of agricultural production including livestock keeping, for future projects, LHDA should carefully select relocations places which would allow farm families to continue with their farming activities. The provision of agricultural inputs in the form of land, equipment, fertilizers, machinery, agro-chemicals as well as advisory services could be explored. The LHDA should involve all stakeholders in matters of policy design to ensure that their views, opinions and needs are catered for in these policies and they (LHDA) should hold workshops and trainings on small business and cooperatives management as other means of livelihoods restoration. Moreover, the LHDA should perform the valuation of the land and other resources lost by the affected households and compensate accordingly.

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