

## Effect of Industrial Crops Production in the Emerging Dynamic Needs of Natural Resources Utilization on Farmers' Perception and Adaptation of Agricultural Development Projects (In Case of Wolkait Sugar Development Project), North Western, Ethiopia

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### Abstract

Wolkait sugar development project is one of the ten new sugar factories in Ethiopia. It is located in North Ethiopia 1200 km far apart from Addis Ababa to the western zone of Wolkait Administrative district. Research was conducted on farmers' perception towards establishment of development projects in case of Wolkait sugar development project. Knowing the perception of community towards such projects is very important to continue sustainably developing, and this study is the first in its kind for the area; thus, objective of this study is to assess community's perception and adaptation of Wolkait sugar development project at Korarit district. The study was conducted in Wolkait administrative district at Korarit kebele. Both primary and secondary data sources were collected from agricultural office, Wolkait sugar development project, Korarit district administration, and Korarit Kebele, using interview and questionnaires of closed and open-ended. Fifty households in the Kebele, 25 Kebele administrative and 25 projects representative were participated in the study. Data were entered, analyzed and presented in mean, percentage, frequency and cumulative frequency. Farmers are not well satisfied of their daily life sustenance at Korarit kebele because due to low compensation for their home, lack of infrastructure, unwillingness to lose their original land, separation in neighborhoods, high level of connection to previous social institutions clubs like churches, edris, ekubs and kusmi. People in the community perceived to be punished and ill-treated by an illegal group for a forceful anxiety.

**Keywords:** Adaptation; Industrial crops production; Community; Compensation; Conflicting perception; Sugarcane; Wolkait sugar development project

### Introduction

Wolkait sugarcane development project is one of the new sugarcane projects that, the Ethiopian sugar corporation is building in North Western Ethiopia along with Kuraz (South Nation nationalities and peoples regional state), Beles (Amhara), Arijo Dedisa (Western Ethiopia of Oromia) and Kesem (Afar). It is located in North Western Ethiopia, 1200 Km far apart from Addis Ababa in Wolkait district at latitude of 30°50' N and longitude of 37°35' E with an altitude of 1000 up to 2400 meter above sea level.

Two-sugar factories with capacity of crushing 24,000 tons cane per day (TCD) are under construction by Chinese Company-CAMC. The factories are huge to consume much cane stalks to process the crystal sugar. When it reaches its maximum production capacity, the factory will be capable of producing 484,000 tons of sugar and 41,654-meter cube ethanol a year. The project's total area of land for sugarcane cultivation is 50,000 hectares.

The project will get its water supply from the river called Zarema upon which the construction of a dam named "May-Day" is in progress and it reaches 87%. The dam, which is under construction by a local (Sur construction plc) and international construction

companies (Salini construction company and Chinese), will have 840 meters width and 135.5 meters height. When completed, May-Day Dam will have a capacity of containing 3,497,000,000-meter cube water to the purposes of irrigation, recreation, fishery and transportation. Besides, the dam construction a drip irrigation scheme is in operation reaching at a contractual agreement with an Israeli Company known as NETAFIM (irrigation equipment manufacturer) so as to cultivate sugarcane at 7,000 hectares of land of the project. A 10 kilo meters long canal construction work is completed. A canal structure work capable of cultivating 3,000 hectares of land is underway. As cane cultivation needs water supply all throughout the year, the project is currently cultivating cotton till cultivating sugarcane with irrigated water supply is possible. 261 hectares of land is made irrigable while 220 hectares are covered with cane. Eight hundred residential and 36 non-residential houses are constructed at the project sites.

The project has its own vision, which is to become one of the leading good quality sugar producing and supplier in and out of the country. In addition to be the leading sugar factory, they have also a mission to creating work opportunity for more than 10,000 employees and to maximize recently cultivated farm land to 50,000 hectares of land after the May Day dam is completed.

Even though, this sugar development project has its own fruitful task that are necessary not only for the North western region but also for the country conserving on the demand of crystal sugar, the farmers

or community of Wolkait displaced to Korarit district, have not a positive feeling to the project because the government is not adequately fulfill their necessities to survive at Korarit district like; home, farm land and enough basic social institutions like health center, social and justice office, administrative offices and meeting houses. Two thousand six hundred households (2,600) have complained over delayed compensation for their land that was taken in the name of a sugar development project, thousands of residents have waited over years for the promised cash payments after losing lands in relocation, back then 50,000 ha of land was taken from these farmers who were promised to be compensated with money and a replacement plot of land. For some of them, a replacement of land was not immediately given but the money is yet to be paid.

For the affair concerned with land replacements and compensation, for some of them, they gain one third plot of hectare as compared with they have before and for some of them haven't given. Whereas, the compensation, government promised to give cash calculated at 18,000 Br for one hectare. However, so far nothing has come out of it. There has been insufficient fund for compensation for creating sustainable income generation to support families of the displaced community. Moreover, the delay to the establishment of the proposed factory that was intended to suck high unemployed youth, resettled farmers and the promised farmers as out growers were subjected to discomfort, food insecurity and inadaptability to town businesses. Not only these problems the establishment of this sugar development project is cause for instability in sociality. Land grabbers always are frightening armed farmers' revenge for demanding their forcefully taken land resources.

The Waldiba monastery is another major source of conflicting perceptions since the hidden agenda of the TPLF to overtake the area for a greater tourism and recreation center is revealed through time which is against the religious beliefs of the total community. Additionally, people have not a comfort at Korarit because of the presence of thief, unavailability of fair administration and enough infrastructures (like water, light and health center). For this reason, the resettled community negatively perceives on the socioeconomic importance of the sugar development project in the area. The problem is occasionally tried to be solved via paying their fair compensation, offering their land with equal area comparing they had before, proper agreement with farmers and by creating social interaction between the farmers and the Wolkait Sugar Development Project. However, since there were no sincerity to follow a community inclusive model in conflict resolution, disagreement persist ever in the area.

By social culture, "the collection of values, beliefs and knowledge shared and agreed upon by a work group and other communities of farmers in performing actions which result in production or creating added value". This culture creates the institutional boundaries first, inspires some sense of identity to the members of organization and other individual farmers at the second level and provides people with a commitment to something which would be placed prior to their employees or other individual farmer that live around the boundary of the project area via considering mutual benefit' interests at the third step. The culture is also referred to as some kind of paste that can link the organization and individual farmers together through providing appropriate agreement. Finally, the mentioned culture as a control factor can create or shape employees' attitudes and ideas [1]. If the work culture in an organization or a society proves to be low, it means that the employees are not eager to perform productive and fruitful tasks, their actions are less effective, and the maximum possible output will not be gain from involving resources [2].

## Mission, vision challenges and opportunity of the project

### Vision:

- To be one of the leading sugar producing and supplier in the country.
- To produce sugar for domestic use as it increase the overall economy of the country to its part.

### Mission:

- Building the capacity of the project through different ways, empowering the employees and increasing the area of production.
- Creating work opportunity of more than 200,000 employees.
- Stabilizing the entire sugar demand of the country by reducing sugar imported from abroad.
- Producing diversified crop and utilizing of byproducts lefts from the factory.

### Opportunity:

- There is cheap labor and man power to run in production and processing aspects.
- The site selected for the production is with high soil fertility and virgin land.
- Its products will get good market access due to no sugar factory in the region.

Therefore, the objective of this research paper was to assess farmers' perception and adaptation on development projects in Ethiopia (in case of Wolkait sugar development project).

## Farmers/communities perception on land expansions for sugarcane cultivation

**Land expansion for sugarcane farming and effects on the community in Ethiopia:** Sugarcane production around the world has increased greatly. The main driving forces behind this increase are increasing demand for sugar and sugar products and the use of sugarcane for biofuel (bioethanol) production. An increasing emphasis on sugarcane production and processing can also be observed in Ethiopia due to rising domestic demand for sugar, a desire for ethanol production from molasses to halt huge expenditures on oil imports, and the aspiration to earn foreign currency from sugar export. Therefore, sugarcane production and processing is among the sub-sectors which have received the highest priority in the five-year Growth and Transformation Plan that the Ethiopian government has been implementing since 2010/2011 [3].

An increase in sugarcane production can be achieved by increasing land use for sugarcane production and by improving the productivity of sugarcane production show that about 60% of the global increase in sugar production over the last 40 years has been achieved through land expansion rather than through productivity gains. Msuya and Ashimogo show that the high growth rate in sugarcane production achieved both by out growers and estate farms in Tanzania has been attained through the expansion of land under sugarcane production rather than through productivity improvements. However, further land expansion for sugarcane production is limited by declining land availability and low tolerance to further damage to the environment.

Hence, significant increases in the productivity of sugarcane production are essential for the growth of the sugar industry. Furthermore, the increased productivity of sugarcane production is a

key factor in improving the competitiveness of the sugar industry on the global market. However, the intended increase in sugar production in Ethiopia is so large that it cannot solely be achieved by productivity enhancements. Thus, the land area used for sugarcane production is currently being rapidly increased and this has together with other large-scale agricultural investments in food and non-food crop production resulted in massive competition for land and water with local smallholder farmers. This situation can be observed not only in Ethiopia, but also in many other developing countries. Most land expansion for sugarcane production is through large-scale plantations, which often face strong resistance from local communities [4].

Furthermore, the establishment of large-scale plantations has been highly criticized by many local and international NGOs for its perceived negative effects on the livelihoods of local communities. It has been suggested that the use of out grower schemes can minimize the perceived negative effects. Abate and Teshome state that in developing countries like Ethiopia, where smallholder farmers take the largest share in agriculture, out grower schemes and contract farming are politically more acceptable than alternative forms of agricultural investments [5].

### Relationship between farm size and productivity

Most micro-level empirical studies that analyze the relationship between farm size and land productivity find an inverse relationship. The early explanations for the inverse relationship between farm size and land productivity were based on the theory of labor market segmentation or factor market imperfections. In these early explanations, small-scale farming was identified as family farms, while large-scale farming was identified as plantation-type production [6].

Family farming is based on the use of under employed household labor so that it faces a lower effective labor price (lower opportunity cost of labor) than plantations and thus, uses more labor per area unit to produce a higher output per area unit than plantation-type production. A second group of studies uses the principal-agent framework to explain the inverse relationship between farm size and land productivity. The authors argue that household labor involves lower supervision costs and lower information asymmetries than hired labor because household laborers on small-scale farms have proper incentives to cultivate their land efficiently [7,8].

The third group of explanations is related to methodological issues such as omitted variable biases due to missing information on soil quality measurement errors; misspecification of the functional form of the production function; and unobserved heterogeneity between farmers. However, some recent studies reject the claims that the inverse relationship is related to methodological issues. Barrett et al. include plot-level soil quality-obtained by laboratory soil tests-as the additional explanatory variable and conclude that only a very limited share of the inverse relationship can be explained by the differences in soil quality. By using data from a Ugandan household survey in which the household's self-reported land size was complemented by plot-size measurements collected using the Global Positioning System (GPS), Carletto et al. argue that the inverse relationship cannot be explained by measurement errors in land size [9,10].

They conclude that when more precise measures of land size are used, the evidence for an inverse relationship is even strengthened investigate the relationship between the farm size and farm productivity of small-scale farmers in Burundi using a non-parametric regression approach that avoids potential bias due to the choice of an

unsuitable functional form. Their findings also support the existence of an inverse relationship. However, based on an extensive review of the experiences of large-scale farming the organizational form of production here refers to the organizational arrangement of the sugarcane production, i.e., out grower schemes and factory-operated production [11,12].

And plantation farming in Africa, Gibbon concludes that low productivity is not an inherent characteristic of large-scale farming and plantation farming. More recently, Collier and Dercon state that most of the literature that studies the inverse relationship compares very small farms with slightly larger farms, instead of comparing small-scale family farms with large-scale commercial plantations [13].

### Organizational form of production and relative productivity

Ferrantino et al. point out that while productivity is determined by the underlying production technology and input quantities; other factors such as the organizational form of production may also influence the relative productivity of firms. The effect of the organizational form of production on relative productivity is most often investigated within the framework of principal-agent theory. The principal-agent literature mainly deals with a situation where the principal (the employer) contracts an agent (employee) to perform a job on his/her behalf [14].

The principal-agent problem arises when there is disparity between the interest and objectives of the two parties; the principal does not have full information about the agent's behavior, when it is technically or economically infeasible for the principal to precisely observe the quality of the job performed by the agent with regard to timing, effort exerted, and thoroughness and when the two parties have different risk strategies (i.e., risk averse, risk neutral or risk-taker). When the incentives of the agent are not sufficiently aligned with the objectives of the principal to eliminate or mitigate the shirking of the agent, and it is too costly for the principal to monitor the agent's behavior, the agent may not put his/her maximum effort into the production activity due to the presence of moral hazard, which results in the reduction of the principal's outcome [15].

Share cropping, where the landowner and the farmer share both the output and the risk equally, is the most examined production arrangement in agriculture. In the case of sharecropping, the farmer has a strong self-interest in a successful crop and no incentive to shirk, while the landowner can also assume that the farmer puts great effort into the production processes without needing to confirm it [16].

The incentive structures both for farm managers and for laborers play an important role in determining farm productivity. While out grower production and other small-scale farming activities are mostly based on family laborers, large-scale production depends on hired labor, which may decrease its relative productivity due to principal-agent problems. Large-scale agricultural production usually has complex management hierarchies with many layers of principals and agents in the principal-agent ladder [4], which may also affect productivity. Since family laborers are the residual claimants, they have stronger incentives to adjust and work hard than wage laborers who receive a fixed wage. For this reason, family laborers usually exercise more care, effort and judgment than hired laborers who may have incentives to shirk (moral hazard) and thus, require costly supervision [17].

It is usually assumed that the amount of effort exerted by hired laborers i.e., how hard or carefully they perform their work-depends

on the level of supervision. Using plot-level data on Indian rice farms, Frisvold found that low effort exerted by wage laborers who were not sufficiently supervised by family laborers resulted in considerable output loss, which was greater than 10% of the output on more than 40% of the plots. One way to increase the productivity of hired laborers is through incentive payments, i.e., paying laborers based on type and magnitude of the task rather than a fixed wage. However, especially in agriculture where the effect of low-quality effort is not immediately observed, payments based on the type and magnitude of the task may not only increase the amount of tasks that the laborers complete per hour, but also reduce the quality of the work performed. Paarsch and Shearer found that although a payment system based on the magnitude of the task increased the productivity of tree-planting laborers by about 22.6%, only a small part of this could be attributed to valuable output because laborers reacted to the payment incentives by reducing the quality of their work. Thus, moral hazard due to principal-agent problems and the related labor supervision costs make the effective labor costs higher on large-scale farms than on smallholder plots, which reduces the relative productivity of large-scale farms. Contract farming (out grower schemes) provides an opportunity for smallholder farmers to take advantage of the relatively high productivity of family labor [18-20].

## Methodology

### Description of the study area

The study was conducted at Wolkait sugar development project, which is found in Northwestern region of Ethiopia at Wolkait district. It is located 1200 km far to the North of Addis Ababa, located in latitude of 13°50' N and longitude of 37°35' E. The climate at Wolkait sugar development project in continental type is sub-tropical climate. It has Kola agro-climatic conditions with its elevation ranging from 1000 to 2400 meter above sea level. The mean temperature of the area is 26.4 degree centigrade, with 41.2 and 12 degree centigrade maximum and minimum respectively. The annual rainfall about 987 milli-meter and the soil type is a black verity soil.

According to the 2007 census conducted by Central statistical Agency of Ethiopia (CSA), the district has a total population of 15,600, of whom, 7,126 are men, 8,474 women and 2,600 are households.

### Study design

Descriptive cross-sectional study design was conducted by collecting qualitative and quantitative data from primary and secondary data sources. Data was collected through direct interview and group discussion of the respondent (farmers), office of agricultural administration, Kebele agricultural agent and Wolkait sugar development project agronomists and management team.

### Sample size and sampling technique

The total population of the study area is about 15,600 and there about 2,600 total households. To identify the different resettled kebeles from Wolkait sugar development project area at Korarit purposive sampling was conducted. To know the sample size of the study Slovin's sampling formula with 90% confidence level and marginal error=0.1 was used.

$$\text{Solving formula: } n = \frac{N}{1 + N(E)^2}$$

$$n = \frac{2,600}{1 + 2600(0.1)^2}$$

n=96.3: From this, 50 respondents were taken via considering our time and money. From 2,600 households, 50 were selected as respondents using simple random sampling technique. Twenty-five respondents intended for the interviews (Kebele) and 25 respondents would be answering the questionnaire.

### Data collection and tool

Qualitative data was collected by interview, focus group discussion using interview guide from community, and the project manager, supervisors, Forman's, heads and daily laborers. Data were collected using standard questioners open and close-ended questions were employed to address the objective. Questioner was prepared in English, translated in to Amharic and Tigrigna retranslated to English. Finally, Tigrigna and Amharic were used to collect data accordingly. Two grad 12 students, who took two-day training, collected the data.

### Data analysis

Data were cleaned, entered, and analyzed using Microsoft office Excel version 2007. Mean, frequency, percentage, and cumulative frequency summarized the data, and presented by text, percentages, graphs and tables.

## Results and Discussion

### Respondent status

Sex in Percentage (%)		Age in Percentage (%)				Marital Status in Percentage (%)		
M (%)	F (%)	>36	37-57	58-78	79>	Divorce	Married	Single
56 (28)	44 (22)	44 (22)	24 (12)	20 (10)	12 (6)	20 (10)	60 (30)	20 (10)

**Table 1:** Marital status and age classification of study participants, May 2017.

### Total population displaced from their original land to Korarit district

In the cropping season of 2011, the Wolkait Development Project aimed to displace about 15,600 people from their origin of 50,000 hectare of land pretending for the purpose of sugarcane production to feed the sugar factory which is now under construction and have the capacity to crash 24,000 ton per day. These displaced people were from Kalema, Maygaba, Tsebri and Mayhumer districts. The population of Tsebri was seriously refusing the forceful displacement to leave their original place but after four months of intimidations and forceful measures they went to Korarit district. In Korarit also the populations of each Kebele were arranged in according to their original settlement. At this moment the project intends also to expand the area aiming to displace many households from around May Day Dam down catchment (Monastery area) area to the place of May-Zehelto.

### Farmers' perception towards Wolkait sugar development project (WSDP)

Seventy percent of the residents believed that construction of the dam negatively affect the societal values and customs, 20% of the respondent have positive feeling about the Dam construction and the

rest 10% of the respondents were not responsive (Tables 1-3). At the beginning of 2012 lots of people from around Waldeba church raised complain about the launching of the sugar factory and the construction of May-Day Dam which has the capacity to irrigate 50,000-hectare land. According to the respondents the main reason of the complaint is the fear of the historical church might be disturbed by

the transportation if the road is opened and connected to and from different cities and other reason is if this area is the center of transportation and trade many people come to the historical church from far even abroad then the materials and heritages may have roped or makes out of work.

Income Source in Percentage (%)			Family Size in Percentage (%)			
Petty Trade	Mixed crop Cultivation and Livestock	Pasture/Livestock Production	b/n 3-5	6-8	9-11	12-14
10 (5)	80 (40)	10 (5)	6 (3)	20 (10)	40 (20)	34 (17)

**Table 2:** Income source and family size of study participants, May 2017.

The people perceive strongly that preserving Church places and Monasteries should be kept first priorities regardless of any development interventions. Particularly the well-known Waldiba monastery is preserved for centuries for its religious and historical purpose. The establishment of the Wolkait sugar development industry with its dam component shares boundary to the monastery. The monastery people in particular and the whole community in general have a fear up on the development of truisms center around the monastery that will be attracted towards assets of the monastery. There is a strong belief that determines no involvement of other religion believers, tourists, authorities, officials and weekend people to the area for these sects may not come with respect to the religious blessings from the monastery's services and holy fathers' blessings. Everything in the monastery is believed to be holly, healing, peace bearer and God given for spiritual remediation and salvation. Anyone who would like to participate in rituals of the monastery must come up with commitment to the regulations of the fathers to receive the invisible blessings from there. They do have special sprit water treatment for healing every kind of illness. Regardless of all the physical assets they are deadly conservative to the invisible pleasures being subjected to a

religious living and working to keep the monastery safely as it is in all days of their life.

The corporation takes measurement to solve the complaints raised from the people around the churches and the monastery. And held hot meeting for three days which lead by Wezero Azeb Mesfin (former-First lady) and raised different negotiated points in the meeting as the construction of the dam is very important in different aspects like for diversified productions by irrigation, for fish production, for hydroelectric power and also creates work opportunity to the youth people. That time the participants come out with the common understanding as these benefits or advantages are expected from the construction of the May Day Dam. Even they agreed with the opening of the road from and to different districts for market getting market access.

The problem of agreement with the Waldeba Monastery Church's servants is that the corporation wants to give them money insurance for the two churches which are Endajewergis and Enadamariam but they did not like to receive money insurance, so the corporation decides to construct the church and give to them with in limited time.

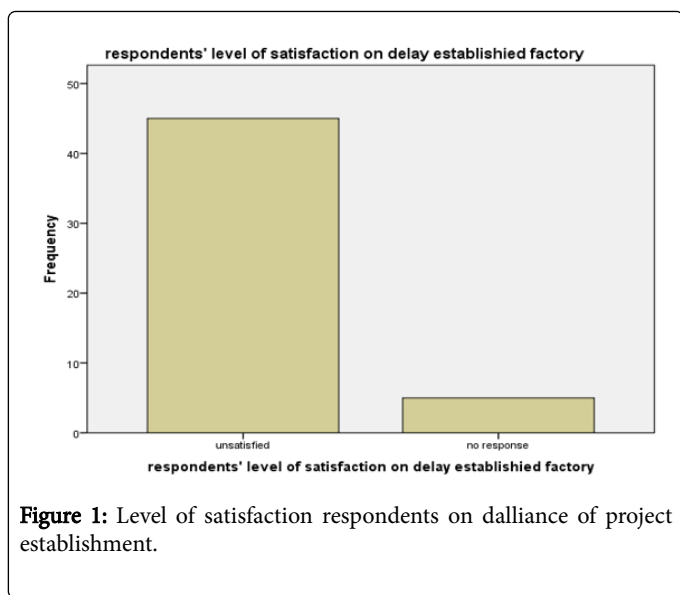
Level of Satisfaction		Frequency	Percent	Valid Percent	Cumulative Percent
Dam Construction	Satisfied	10	20.0	20.0	20.0
	Unsatisfied	35	70.0	70.0	90.0
	No Response	5	10.0	10.0	100.0
	Total	50	100.0	100.0	
	Unsatisfied	45	90.0	90.0	90.0
Project Delay	No Response	5	10.0	10.0	100.0
	Total	50	100.0	100.0	
land Expansion of WSDP	Unsatisfied	50	100.0	100.0	100.0

**Table 3:** Level of satisfaction on dam construction, delayed project and land expansion of WSDP, May 2017.

### Delayed establishment of the factory

The original intent of establishment of the project was not kept true. The local government canceled many of the promises given to the people and cultivating other cash crops that of cultivated by the farmers before. Cotton and sesame were crops of the farmers while the project would be intend monotonous to sugarcane production. The

prolonged delay of the project up to ten years with no sugar production so as null employment merit to the community. Rather natural resources and heritages kept safely for centuries by the local community emanated and shared resource management practices were extravagantly robbed by the land grabbers shielding the governmental structure.



**Figure 1:** Level of satisfaction respondents on dalliance of project establishment.

As indicated in the study majority of total (90%) of respondent is not satisfied by the delayed establishment of the project (Table 3 and Figure 1). The corporation promised to offer the irrigation supply around the boundary farmers, and the farmers want to cultivate and deliver sugarcane to the feed the factory as out growers. However, it failed to implement even after years of delay.

The main reason for delaying of the factory is the redesigning of the dam so with the completion of the dam production of sugarcane is possible. But the displaced population did not understand this reason but only think as the corporation want to produce another crop like sorghum, sesame and cotton rather than sugarcane. As a result, the people now were trying to disturb the factory and the seed cane multiplication site which is kalmia by firing it. Some farmers also came back to their original destinations and try to plough the farm without the permission concerned bodies from the corporation.

According to the farmers perception the main reason for disturbing of the factory is that about 50,000 hectares of land is out of production and the corporation is not allowing us to use till it starts producing sugar cane.

### Land expansion for purpose of WSDP

All 100% of respondents/residents are unwilling to loss their original place of land (Table 3). But WSDP still know want to expand the land not only for sugarcane production but also want to produce ITAN and fish production. Because of these reasons WSDP wants to expand the land that owned by the farmers which, they used for cultivating different crops, for grazing, for production of timber, and the land that used as a social service.

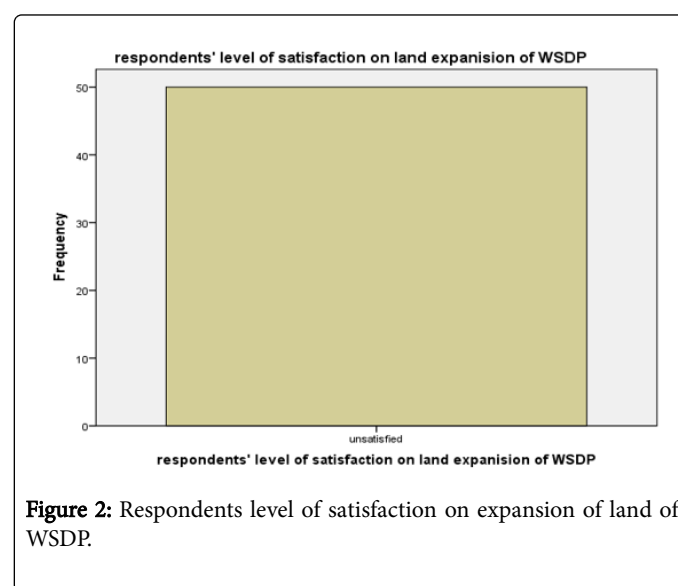
At this moment the corporation wants also to expand the area so aims to displace many households from around down May Day Dam to the place of May-Zehelto (Figure 2).

### Farmers perception on farm land and housing compensation

The resettled population in Korarit district seriously blamed their unwilling displacement and the unfulfilled promises of housing and land compensations. As it is indicated in this survey, 100% the farmers were not willing to leave their original places and farm lands (Table 4).

Many of these farmers do have a special connection to any residency resources of original places including trees, ponds, streams, gardens, farmlands, cattle, open grazing lands and the weather. On the other hand, concerned with compensation of housing 93% of the resident are not satisfied of and the rest 7% of the residents are well satisfied (Table 4).

The main problem of the displaced population was the farm land given as a compensation is not enough and also not balance with the farm they own before. Still now, also there are farmers who did not get land compensation. The area and the productivity of the land are also different and the ruling bodies that administrate the land for these displaced people made corruption instead of fair distribution and division of the land. This causes people to continuously raise complain in different meetings till now.



**Figure 2:** Respondents level of satisfaction on expansion of land of WSDP.

Since there were local governments resettling program starting from early 1970s through displacing the land owners, land distribution varies from house hold to house hold. Advantage is assured for the early settlers for they are served the purpose shielding land grabbing strategies of the rebellion group which established locally organized administrative in Korarit. That is why people get farm land differently.

The corporation also gave compensation not only farm land but also money insurance for house to the displaced population. The amount of money is based on the household owns before displacement to Korarit. But due to the corruption two households who own the same hectare of land before displacement get land insurance differently (Table 5).

From the above table we can understand that Ato Kalayu and Wezero Letemcheal owns the same farm land before displacement but the house insurance (80,000 birr and 30,000 birr) respectively and farm land insurance (1.7 ha and 1.25 ha) respectively. This difference comes from the ruling bodies due to corruption as a result the people cause to raise complains to the regional government and to the corporation. But not only these respondents but also the whole population have the same problem related to land and money insurance.

Weed infestation alters the agroecology with prevalence of newly developed weed population and greater labor cost. Labor drudgery, therefore, is seriously committed to which the daily laborers get burdened with difficulties of managing aggressively and fast growing weed population.

Variables	Land Area and Compensation Amount	Frequency	Percent
Land owned by farmers before displaced	1-4 ha	20	40.0
	5-8 ha	20	40.0
	9-12 ha	6	12.0
	13-16 ha	4	8.0
	Total	50	100.0
Land owned by farmers after displaced	0-400 m <sup>2</sup>	20	40.0
	>400 m <sup>2</sup> -1 ha	17	34.0
	>1-1.75 ha	6	12.0
	>1.75-2.5 ha	4	8.0
	>2.5-3.5 ha	3	6.0
Total	50	100.0	

Housing compensation given to farmers	0-2,000	8	16.0
	>2000-50000	26	52.0
	>50000-80000	13	26.0
	>80000-150000	2	4.0
	>150000	1	2.0
Total	50	100.0	

**Table 4:** Land owned by farmers before and after displacement, housing compensation and level of satisfaction, May 2017.

This phenomenon caused reduction of the cultivable land which had been productive at the hands of the local people so far. Ecological dominance and weed dispersion in the areas get greater concern while there is hesitation to investigate weed distribution, type and ecological effect.

S No	Land Owned Before Displaced	Land Given as Insurance	Level of Satisfaction in Percentage			Housing Compensation	Level of Satisfaction in Percentage		
			satisfied	Unsatisfied	No Response		Satisfied	Dissatisfied	No Response
1	1-4 ha	0-400 m <sup>2</sup>	-	100 (50)	-	0-2,000	2 (1)	90 (45)	10 (5)
2	5-8 ha	400 m <sup>2</sup> -1 ha	-	100 (50)	-	>2,000 – 50,000 birr	6 (3)	100 (50)	-
3	9-12 ha	1-1.75 ha	-	100 (50)	-	>50,000 – 80,000 birr	15 (6)	98 (49)	-
4	13-16 ha	1.75-2.5 ha	-	100 (50)	-	>80,000 – 150,000 birr	7 (14)	94 (47)	-
5	17-20	2.5-3.5 ha	-	100 (50)	-	>150,000		85 (44)	-
Average				100 (50)				93 (36)	

**Table 5:** Shows the land owned by farmers before and after displacement, housing compensation and level of satisfaction, May 2017.

**Farmer's perception on the infrastructure and service at Korarit-the resettlement area**

Concerned with the infrastructure, majority of respondents (66%) are not satisfied of 34% of the rest resident have not also gotten fully

infrastructure (Table 6). Government promised to fulfill their necessity for surviving at Korarit district like; basic social service including, education, health center, social and justice office, water, electricity, administrative offices and meeting house.

S No	Social Service	Before Displacement	After Displacement	Level of Satisfaction in Percentage (%)		
				Satisfied	Dissatisfied	No Response
1	School	2 elementary	Good quality but shortage of learning class	50 (25)	50 (25)	0
2	Health center	2 health centers	Good, as it compared with before	70 (35)	30 (15)	0
3	Meeting house	At all kebeles	Under construction	40 (20)	60 (30)	0

4	Electricity	-	No service		100 (50)	0
5	Administrative office		No fair administrative bodies	10 (5)	90 (45)	0
6	Water	Full natural water	Not fully		100 (50)	0
7	Road construction	-	Under constructing	70 (35)	30 (15)	0
Average				34 (17)	66 (33)	0

**Table 6:** Social service before and after displacement and level of satisfaction, May 2017.

As the respondent responded, we are satisfied of on the service of education to our children and health center. But the problems are not fully solved on education and health center. Because of there are shortage of classes, due to this reason, students are learning with shift.

On the other hand, problems on health center, there is difficulties concerned with the disease malaria. But the rest are still not available to use, especially water supply for daily household consumption is difficult survive at the new area (Korarit district). As all respondent said that, they “buy 20 litres of water by 50 cents. And the electricity concerned, the electricity professions already finished the pre-installation material like poles, transformers, and electric wires, but still people cannot access electricity for the last six years.

#### Farmers perception on current and future benefits of the project to the displaced farmers

Fifty percent of the residents were convinced of the proposed plan with a strong doubt of its accomplishment. When, the project promised to offer the current and future benefit to the residents and the rest half of them were not totally satisfied of the proposal (Table 7).

The project has its own role on creating work/employment opportunity in order to reduce portion of the labor force that is without a job but is actively searching for a job. However, displacement caused by the project resulted in Social problem (unemployment increases crime rate in a country), migration, threat to peace and stability, reduction in investment and high rate of dependency. WSDP planned to create employment opportunity for more than 10,000 employees since 2009 which failed even to satisfy 1% of its plans other than feeding the land grabbing strategic actors.

The WSDP was planned to participate youths in to fish production, when the May-Day dam construction is finished and in to honey production, after designed the map (via selecting mountainous place, that is not favor for cultivation of sugarcane), and coal production (during land clearing; when, trees are uprooted and lay downed).

Starting from the past year about six groups of youths (Each group have average member of 34) from the displaced population were engaged in the work of charcoal production from the 50,000-ha land and allowed them to sell to different cities. But now it is terminated due to the uncontrolled deforestation by the groups themselves. The corporation only allowed them to use the area from only 50,000 ha but they use out of the area, so the local community complains to the project to stop deforestation of the indigenous trees by group of youth illegally use of forest extravagantly for charcoal production.

Concerned on giving irrigation supply to the farmers and creating mutual benefit by initiate farmers to be an out grower of sugarcane, the farmers were waiting with hope up to 2007 (the proposed plan that was, the factory launch producing sugar), but now they are hopeless because of the delayed establishment of the factory and the delayed constructing of May Day Dam. Form the delaying of the factory, is not the only problem of the farmers but also the Israelis. Because the Israelis are already finished the irrigation installation (i.e., is the drip irrigation system installation) and they are now waiting for launching of the factory to deliver cane. If the factory finished and ready launch for next year, they will start planting the set.

Future and Current Benefits from WSDP to the Communities	Level of Satisfaction in Percentage (%)		
	Agree	Disagree	No response
Employment opportunity	50 (25)	50 (25)	0
Give irrigation supply to the farmers and Creating mutual benefit by initiate farmers to be an out grower of sugarcane	50 (25)	50 (25)	0
Participate the youth in Fish, honey and coal productions	50 (25)	50 (25)	0

**Table 7:** Farmers perception on current and future benefit planned to the resident.

#### Farmers' perception on the establishment of WSDP on religious affairs

Majority of the respondents (84%) are negatively feeling about WSDP establishment (Table 8). As the resettled community said WSDP has its own influence on religious views and religious places.

Religious site/church is not built like that of other institutional or other social meeting places. There were more than 4 well established and old historic churches before displacement, but now all are compressed in to two newly built churches. The new churches at Korarit are under construction, but it is difficult to accept them as worship places compared with the earlier, because they believed that, the churches



that left at the WSDP area were blessed by God and most places have spirit water. Moreover, there has been a common belief of considering ancient places as sanctified, full of spiritual treasures, godly presence and respectful.

Three churches are under construction (Enda Silassie, Enda Mariyam and Gebre Menfes Kidus). But they are not happy, saying “the church we had before is bounded by church forest and spiritual water and it looks like Eden. But this is a bare land and this is not considered to be blessed, the land is selected randomly, the communities are not came to this church because of it is not attractive as before, it is so not blessed, it is not comfortable to stay for long time to pray and people always used to go to Waldiba monastery before at their original place, but now it is extremely far and difficult to go for ritualistic celebrities”.

Levels of Satisfaction	Frequency	Percent	Valid Percent	Cumulative Percent
Agreed	6	12	12	12
Disagree	42	84	84	96
no response	2	4	4	100
Total	50	100	100	

**Table 8:** levels of satisfaction about WSDP in the study population, May 2017.

### Effect of WSDP on sociality of the farmers

The study found out that WSDP have a direct impact on traditional and religious based institutions participation as 60.0% of farmers were participated in traditional and religious based institutions when they were at their original place. But now their participation as it is compared with before is declined to 27% (Table 9). As a result of this, the farmers living in Korarit district have looser relationship than before. The study indicated that the project is a cause for declining inter-community cohesion i.e., links amongst neighboring communities and district integration through traditional and religious based institutions.

S No		% Resident Participated in Sociality Before Displaced	% Resident Participated in Sociality After Displaced
1	Debo	80 (40)	20 (10)
2	Equb	20 (10)	--
3	Edir	90 (45)	80 (40)
4	Mahiber	50 (25)	10 (5)
Average		60 (30)	27 (13)

**Table 9:** Effect of WSDP on sociality of the farmers in the study area.

### Summary and Conclusion

The study investigated that establishment of Wolkait Sugar Development Project (WSDP) in the center of community primary properties without the communal consent resulted in the forced displacement of the total 2,600 household farmers from their original

place and resettled to a newly formed village called Korarit district. Resettled community members are not good and satisfied at Korarit due to so many problems which made living difficult and hardly to be adaptive with respect to social chief experiences, economic inequity and political instability. Shortage of land resource, lack of basic services and infrastructures, shortage of drinkable water, absence of well administrative body, enhancement of thief and unemployment are major sources of conflicting perceptions towards establishment of the project. The forceful displacement and anxiety lead to continuous popular resistance triggered with growing community grievances demanding a wholistic national reformation.

The original intent of establishment of the project was not kept true in which the local government canceled many of the promises given to the people and cultivating other cash crops that of cultivated by the farmers before. Cotton and sesame were crops of the farmers while the project would be intend monotonous to sugarcane production. The prolonged delay of the project up to ten years with no sugarcane production so as null employment merit to the residing community. Rather natural resources and heritages kept safely for centuries by the local community emanated and shared resource management practices were extravagantly robbed by the land grabbers shielding the governmental structure. There were peaceful and rebellion struggles from the community since the very beginning for the pertinent question of resources ownership.

With 95% confidence level the community perceived that Wolkait sugar development project is intended to be established for a purpose of determining the economic benefit of land grabbing groups in the name of the nation's strategies to invest on grand projects for development. The original settlers of the area are systematically excluded through time for the sake of warrior juntas and families. Agricultural land solely devoted for sorghum production and cattle rearing is seized by the will of regional government and distributed to investors, Heywet Agricultural Mechanization, Baeher industrial park, Wolkait sugar development project and factories with a grand fund investment. All these sectors took the land of original settlers forcefully without any legal procedures of replacement and significant compensation. Many laid down their lives against the resource grabbing group. Land and Ethiopians are highly integrated for it is everything to farming community; hence the area became a hot spot for popular resistance which flame national socio economic and political reform.

Wolkait sugar development project took 50,000 hectares of cultivable fertile land from the farmers for the sake of sugarcane plantation and not specified area for dam construction, bee keeping, beef ranching and dairy farms. The first strategic intent of the project was to create job opportunity, to alter agro-ecology positively and to separate the movement of people from one side to the other particularly the monks of Waldiba monastery in the area. However, the final agendum is to establish a huge tourism center by an integrated projects approach. Hence the construction of the dam to the nearby cross section of the well-known monastery has been plotted to have roads surrounding the delimited area for creating an access for tourism development with an exclusion of the resource owners' socio-economic benefit.

Development projects at any expense should consider the community perception, consent and the long-lasting communal effect for sustainable endeavors. Huge investment >\$ 200 million USD in the case of WSDP through community exclusion and annexation project approach is proved to be source of serious conflicts with the fate of

delay and resource robbery. Forceful annexation and land grabbing of the Wolkait people led to a continuous popular appraisal and struggle which forced the local government to lose much capital for relieving the grievance that failed to handle conflicting perceptions. Finally, people win and tried to continue with overtaking the development arena for the fair benefit of the community in the government. Hence, sincerely, inclusion of community in development projects shared resources of the community pertains for sustainably establishment and economic gain of industrialization.

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