

## Research Article

## Non-Government Organization and Its Impact on Agriculture – A Study in Jorhat District of Assam

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**Abstract:** Non-governmental organization (NGO) plays a significant and crucial role in the development of the society. In the present study an attempt was made to determine the impact of NGO's in economic upliftment of their beneficiaries and was carried out in Jorhat District of Assam. A multistage random sampling technique was followed to select the ultimate sample unit of 120 households. The area under cultivation, irrigation and cropping intensity were found to be increased after the NGO's intervention. The total average net income of the sample households before NGO's intervention was Rs.76,361.27/ha which increased to Rs.1,32,716.20/ha after the NGO's intervention. A 74 per cent change in the income was hence recorded. The maximum increase was found in small farms (82.73%) and minimum was found in marginal farms (67.34%). An increase in the economic status was found in the sample households after the NGO's intervention. The present study revealed that the NGO's played a positive role in the economic upliftment of the sample households. A joint effort of the public and private sector to eliminate these problems could lead to smooth and efficient working of NGO's.

**Keywords:** Non-government organizations, beneficiaries, economic upliftment, impact.

### INTRODUCTION

Agriculture is the most important source of economic aid and prime factor in growth and development of India. It is the main source of food supply and occupation for the major portion of country's population which resides in rural areas. It provides livelihood to about 64 per cent of the labour force and contributes nearly 26 per cent of GDP and accounts for 18 per cent share of the total value of the country's exports (Anon, 2000).

The "National seminar on Rural Development-Focus on the Weakest" organized by PADI and AFFP (Anon, 1978) recommended that voluntary organisations can play an important role in organizing the rural poor. They can provide support to banks in providing credit and exert moral support on the borrowers for ensuring prompt payments. The voluntary organizations can also provide technical support to the rural poor in formulation of different programmes.

These NGOs are able to recruit both experts and highly motivated staff with fewer restrictions than government. As they are constituted by a voluntary approach with an objective of developing the society by the enthusiastic people, they work in full efficiency for overall development. Upadhyaya (1982) from his study stated the significant roles played by the NGO's in the integrated rural development of Nepal. Mahanta (1991) through his study in Assam reported that farmer's voluntary organizations play a vital role in dissemination of information about improved crop cultivation. Keeping in view of the emerging importance and working efficiency of NGOs in their roles played in the process of agricultural development of the state, the present study was carried out in Jorhat district of Assam during MSc (agri) programme in the year 2015-16 to evaluate the impact of NGO's in economic upliftment of their beneficiaries.

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**METHODOLOGY:**

The study was conducted in the Jorhat district of Assam and was purposively selected as a good number of NGOs are working in the district. The sampling design followed for the study was two stage random sampling design. In the first stage three NGOs ((Neads, Impact and Jeuti) were selected at random. From the selected NGOs, those agricultural households

being beneficiaries for at least four consecutive years were taken into consideration. Out of these households, a total of 120 households were selected at random. This was necessary in order to find out the impact of NGO's in their economic upliftment. The sample households were then stratified into four groups, on the basis of their size of land holding.

**Table 1: The Distribution of Sample Households According To the Stratification Was Found As Follows**

Stratification of sample household	Number of household per group	Percentage of total sample household
Marginal (0 to < 1 ha)	52	43
Small (1 to < 2 ha)	38	32
Medium (2 to < 4 ha)	18	15
Large ( $\geq 4$ ha)	12	10
<b>Total</b>	<b>120</b>	<b>100</b>

The primary data were collected from the NGOs and the sample households with the help of specially designed pre-tested schedules and questionnaire through personal interview.

**The Other Different Analytical Tools Used In The Study Were As Follows:**

**Paired Sampling Design:**

Net income difference before and after the intervention of NGO's was denoted by  $d_i = x_i - y_i$  ( $i = 1, 2, \dots, n$ ). It indicates the difference in observations for the  $i^{\text{th}}$  unit.

$$\text{Standard deviation (S.D.)} = \frac{1}{n-1} \sqrt{\sum (d - \bar{d})^2}$$

$$t - \text{test formula, } t = \frac{\bar{d} - 0}{\frac{S}{\sqrt{n}}}$$

**Hypothesis:** 1. There is no change in the net income of the households after the intervention of NGOs.

**RESULTS AND DISCUSSION:**

**Distribution of Paddy Area into Irrigated and Un-Irrigated Condition:**

The total average area under irrigated and un-irrigated condition of the sample farms was 9.92 and 77.95 ha respectively which were 11.29 and 88.71 *per cent* respectively. Out of total area under irrigated condition HYV comprises 6.92 *per cent* and local varieties comprised of the rest (93.08 *per cent*). In un-irrigated condition the percentage of HYV and local paddy was 0.14 and 99.86 *per cent* respectively. It was found that after NGO's intervention the total average area under irrigation and HYV rice increased, hence it shows a positive impact on the paddy crop. The various activity of NGO like implementing projects and giving consultancies had left a positive effect on the farmers.

**Distribution of Mustard into Irrigated and Un-Irrigated Condition:**

The average area under mustard before and after NGO's intervention was 4.09 ha and 5.61 ha respectively. In both the cases i.e. before and after NGO's intervention, cent *per cent* of total area under mustard were subjected to un-irrigated condition. Since the mustard is presently grown in un-irrigated condition therefore after NGO's intervention the area under irrigation is nil however it was seen that the total

average area under mustard increased which is due to the trainings and consultancies provided by the NGO's.

**Distribution of Pulses into Irrigated and Un-Irrigated Condition:**

The average area under irrigated pulse before and after NGO's intervention was 2.19 ha and 4.05 ha respectively. The average area under un-irrigated pulse before and after NGO's intervention was 6.11 ha and 6.56 ha respectively. In terms of percentage the area under irrigation before and after NGO's intervention was 26.40 and 38.18 *per cent* respectively. A very significant impact (11.78 *per cent*) after the NGO's intervention was recorded, which is due to different developmental activities undertaken by the NGO's.

**Distribution of Area Under *rabi* Vegetables Into Irrigated And Un-Irrigated Condition:**

The total average area of the farmers in irrigated and un-irrigated conditions were 10.15 and 3.71 ha which were 72.83 *per cent* and 27.17 *per cent* of the total area under *rabi* vegetables respectively. The total average area under irrigated and un-irrigated condition after NGO's intervention was found to be 14.04 and 2.99 ha respectively. In case of *rabi* vegetables also, an increase in the area under irrigation

was found after NGO's intervention. It is due to the mechanization and other activities of NGO's.

#### Distribution of Area Under *kharif* Vegetables into Irrigated and Un-Irrigated Condition:

The average area found under *kharif* vegetables before and after NGO's intervention was 4.74 and 5.73 ha respectively. For both the time period i.e. before and after NGO's intervention *per cent* area under *kharif* vegetables are present in un-irrigated condition. Like mustard, though the area under irrigation was same before and after NGO's intervention, but the total average area under *kharif* vegetables was found to be increased. It is due to the NGO's consultancy and training services.

#### Area under Irrigated and Un-Irrigated Condition:

The total average area under irrigated and un-irrigated conditions before NGO's intervention was found to be 22.26 hectares and 97.34 hectares which were 18.61 and 81.39 *per cent* of total area. After NGO's intervention the total average area under irrigated and un-irrigated condition are 37.68 and 102.78 hectares respectively. The *per cent* area under irrigated and un-irrigated condition after NGO's intervention was found to be 26.82 and 73.18 *per cent* respectively. Irrigation is one of the most important needs of crops. An adequate and timely irrigation leads to proper growth and development of crops. It was found that the area under irrigation increased after NGO's intervention. The mechanization due to AACP implementation by NGO's and their consultancy services are the factors behind this increase in irrigation facilities which ultimately leads to increased production. Similar results were found in the study by Patel (2000).

#### Distribution of Allied Purpose and Holding into Fishery and Other Enterprises:

The total average area of the sample farmers which was allotted for fishery purpose was 2.29 hectares which is the 37.66 *per cent* of area under allied activities. After NGO's intervention the total average of sample farmer areas under fishery was 1.95 hectares which is 71.43 *per cent* of the total area under allied activities. It was found that before NGO's intervention a minor part of area under allied activities was allotted

for fishery purpose which became the major part comprising of 71.43 *per cent* of total area under allied into fishery purpose after the NGO's intervention. It is due to the implementation of AACP by the NGO's along with other services. Under AACP the input cost and other trainings are provided for good yield from fishery. Taking advantage of this project the area is found to be increased.

#### Average Area, Production and Yield of Crops before and after NGO's Intervention:

For paddy the total average yield after NGO's intervention was 11% more. In case of mustard and pulses also the total average yields were 6% more after the NGO's intervention. Since for vegetables the outputs are of various kinds. Some are sold on the weight basis and some on the unit i.e. Rs./piece. In such cases the weight were not taken. For that reason in the present study, instead of yield/ha the respondents gave a figure upon the income generated per hectare. For *rabi* vegetables it was found that total average income/ha was Rs. 1,09,854.44/ha which was Rs. 1,13,735.94/ha after NGO's intervention. For *kharif* vegetables the figures were Rs.1,03,082.54/ha and Rs. 1,05,231.87/ha respectively. Hence for all the three crops it was seen that the yield and for vegetables income increased after the NGO's intervention.

For a good yield improved management practices with essential inputs are required. For having all the inputs finance is prerequisite. In the present study, NGO's provides helps in getting credit to the farmers; also they provide consultancy and trainings on improved package of practices. Along with these, they implement various agricultural projects. All these factors together lead to as increased yield and income of these major crops grown by the farmers.

#### Average Area, Production and Yield of Fishery before and after NGO's Intervention:

Here the total average yield before NGO's intervention was 13% lesser than the yield after the NGO's intervention. Here also it was found that there was an increase in yield of fishery sector after the NGO's intervention, it is also due to the same reasons as stated earlier.

**Table 2. Average yield of crops before and after NGO intervention (Yield in quintal /ha)**

Crops Item	Yield of Paddy		Yield of Mustard		Yield of Pulses		Yield of Fishery	
	Before	After	Before	After	Before	After	Before	After
Marginal	23.24	26.03 (12.00)	5.15	5.43 (5.00)	4.47	4.64 (4.00)	24.00	28.33 (18.05)
Small	23.04	25.81 (12.00)	5.05	5.44 (8.00)	4.15	4.65 (12.00)	25.00	28.33 (13.33)
Medium	23.37	26.17 (12.00)	5.13	5.40 (5.00)	4.74	4.76 (0.40)	25.00	28.33 (13.33)
Large	23.17	26.15 (13.00)	5.15	5.47 (6.00)	4.50	4.90 (9.00)	25.00	28.33 (13.33)

*Parenthesis indicates percentage change after NGOs intervention*

**CONCLUSION:**

It was seen that before NGO's intervention the total average net income per hectare was Rs. 76361.27/ha which increased to Rs. 132716.20/ha after NGO's intervention. In terms of percentage 74 *per cent*

change had occurred after NGO's intervention. The maximum 82.73 *per cent* change in small farms and minimum of 67.34 *per cent* change in marginal farms was seen.

**Table 3. Average net income/ha before and after NGO's intervention (In rupees)**

Item/Farm size	Average Net income per ha (Before NGO's Intervention)	Average Net income per ha (After NGO's Intervention)	% Change(After NGO's Intervention over Before NGO's Intervention)
Marginal	19833.31	22898.29	67.34
Small	20450.06	37370.06	82.73
Medium	6084.69	10882.45	78.84
Large	24331.25	41797.60	71.78

On the overall a positive impact of NGO's is seen on the total average net income of farmers. A significant role of NGO's in economic upliftment of farmers is hence observed from the present study. White (1991) studied to evaluate the impact of NGO's

in poverty alleviation in Bangladesh found that most members have gained some additional income since joining the NGO, and some have benefited substantially.

**Table 4. Paired t – test**

Farm size	N	**t – stat	Table Value	Significant/ Insignificant
Marginal	52	380	2.00	Significant
Small	38	312	2.02	Significant
Medium	18	186	2.11	Significant
Large	12	36	2.20	Significant

\*\*Significant at 5% probability level

The Table 4 present the result of statistical analysis. From the results of paired t-test of farmers total average net income before and after NGO's intervention it was found that the calculated value of t is higher than the table value, at 5% probability level. So the null hypothesis is rejected and hence there is change in the net income of the households after the intervention of non-government organizations.

The result of this study is supported by our finding especially agree with the study conducted by Chowdhury (2008) which examined the economic impact of NGO interventions on the lives of women living in the char lands (riverine) and coastal areas of Bangladesh and also analysed the development status of group members in relation to the number of years they had been involved with the NGOs. It was found that the NGO's projects had made a breakthrough in improving the economic status of the members and had brought some broader socio-cultural changes to the traditional char society. It was found that the longer the involvement with the NGO's and group activities, the higher the average monthly income.

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