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# Effects of Billion Tree Tsunami Project on the Income of Nursery Raising Rural Community in District Mardan

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**Abstract**
Agriculture is the back bone of Rural Economy of Pakistan. It consists of crops, Vegetables, livestock, Poultry farming, Fruit farming and Forestation. Forest play key role in the development of a country and on 25% land, forestation is necessary while in Pakistan this coverage is less than 5%. Seeing to this importance the government of KP has been started a project namely Billion Tree Tsunami since 2014 and ended in 2017.The main objective of the project was reforestation in Khyber Pakhtunkhwa while the present study major objectives were to find out the effects of billion tree Tsunami Project on the income of nursery raising growers in rural community of District Mardan and problems and constraints faced to nursery growers in the study area. Among 25 districts Mardan District was selected on the basis of more plantation. Latter on two villages, Katlang and Bakhshali were randomly selected from this district. The total beneficiaries in these two villages were 150. Through Yamani formula the sample number was fixed 110 and through proportion allocation formula allot 73 respondents to Bakhshali and 37 to Katlang villages. With the help of questionnaire data were collected from the said respondents and for data analysis, descriptive statistics and pair t-test were used. The results indicate that 60% respondents were literate and majority respondents were in Age group 30-40 while found familiar with the Billion Tree Tsunami Project. Although respondents have signed an agreement with the forest department and after agreements nursery units were allotted to Nursery growers in the study area. The result explained that BTTP have trained the nursery growers in nursery raising techniques in the study area. Tube and Bare root plants nurseries were raised by farmer and then that nurseries were sold on the forest department at a double price and then said nurseries were distributed among targeted farmers by project staff in the study area. The study further explains that tube roots nursery number was found more than the bare roots. Most of the farmers obtained training in nursery raising while nursery growers were financially and technically also supported. Before the project the nursery growers average annual income level was Rs.243455 and after project the income level was Rs.474864 and difference was Rs.231409 and was highly significant at 5% confidence level while they were happy and all growers stressed that to continue the project for ever. Few problems and constraints were identified during survey to Nursery raising grower in the study area. There was no transparency in nursery plants distribution to farmers; Less varieties of nursery plants were available by forest department such as pines, walnuts, berry and eucalyptus etc ; The number of facilitation centre were less than the requirement, so nursery growers access to BTTP staff was difficult. On the basis of findings following recommendations were given for uplifting nursery growers in the study area. Credit provision by government to nursery growers are requested; Well plan management is required for continuation of the Project; Monitoring centre should be established for proper checking and balance in the study area ; Nearest facilitation centre should be developed for easy access of nursery growers in the study area ; Government should supply new plant species, fruit nurseries and ever-green plants to farmers according to their interest for enhancing tree plantation; Demonstration plots should be arranged on road side for advertisement to rural community of district Mardan for uplifting to this project for multiplication of plants in the study area.
**Keywords:-** Effects , Billion Tree Tsunami Project, On The Income Of Nursery Raising, Rural Community District Mardan

## 1. INTRODUCTION

Agriculture is the back bone of Rural Economy of Pakistan. It consists of crops, Vegetables, livestock, Poultry farming, Fruit farming and Forestation. Forest play vital role in the development of a country and on 25% land, forestation is necessary while in Pakistan this coverage is less than 5%. Forestry has a vital economic division in the diverse industrial developed countries. Like in Germany, nearly one third of the land area is covered by forests. Wood is the renewable reserve resource, which generate more than a million employments and earns billion annually (Kleinn *et al.* 2010). Almost the life of 200 million forest occupants and poor immigrants are directly dependent upon forests (Angelsen *et al*. 1999). Approximately 1.6 billion people are dependent upon forest for their livelihood around the globe (USAID, 2007). Medical sciences researches showed that plant are helpful in the control of many diseases in which one of the alarming disease is cancer. (Winters, 2000). Increasing of forest, helps in cleaning the environment of the world (Kleinn, 2001).Forest provide a variety of

 

products such as shrub, firewood, trees and grasses for grazing and browsing, fruit, medicinal herbs, wildlife, scenic beauty and water springs. The wellbeing of the local populations is largely depended on forest. The rural community obtained goods for survival of life from natural resources which is the production of the forest. Trees play central part in our life, such as wood, fruits, paper and medicine provided by forest. The rural community and their animals rest in the shade and get oxygen from forest for breathing. To provide a adequate oxygen to four family one tree is enough (Fomete and Vermaat, 2001). In rural communities forests are one of the major source of water, food shelter and other necessities for their survival. The rural folks by indigenous knowledge passed through generations are equipped with special skills about the usage of local plants. (Shinwari and Khan, 2000). Forests preserve environment and shelter for the community of the world. However, rising levels of anthropogenic trouble pushed great force on the forests. This calls for a direct running and preservation of this natural reserve of the region (Panigrahy *et al.* 2007). Field afforestation measures have revealed solid regional and native attentions because of the lack of endogenous switch, practices the stages of arena afforestation have the higher bounds of local reception in some areas, both in standings of the real parts afforested and the effects of such afforestation on the native landscape (Selby *et al*. 2003).

The first step of sustainable plantation program is the cuttings or seedling which must be raised in nursery for some months which will help in production of healthy seed and cuttings (Thakur *et al.* 1993). For safe and healthy plants having height and leaves it should be grown in nursery for fifteen days (Sethi *et al*. 2002). The research of Sengar and Kothari, 2008 also supported the nursery raising for healthy plants. For any sustainable and long term forestation program the speedy production of high quality seedlings in nurseries is a pre-requisite (Michelsen, 1992). It is always difficult to formulate a quality producing nursery because of unavailability of microbial populations which is helpful in seedling production as the nursery soil is often collected from sub soil or barren soil (Muthukumar *et al.* 2001). Raising of proper nurseries for commercial species has got a high importance to encourage plantation (Gregorio, 2004). There were no livelihood opportunities associated with the Malakand Social Forestry Program (MSFP) to encourage plantation and farmers did not show interest to go for commercial scale planting of eucalyptus for timber. It was only used as fuel wood (Ali *et al*. 2007). The eucalyptus is a new species to the area but its plantation is high due to the availability of sapling from government nurseries. The nurseries of local species on the other hand are limited in number with higher costs of production. Poplar is another dominating species of interest for farmers, mostly planted in the irrigated area. It has got profitable local market in the form of matches industry, furniture, construction timber and fuel wood. That is why linear plantation can be observed in the irrigated land of the study area. The problem associated with poplar is pest infestation which is the main hurdle in raising it (Arun *et al*. 2004). Himalayan region is known for its forests and glorifying environment a recent study showed that deforestation is badly affecting the environment of that region. If we look at Basho valley which were one of the green valley of the Himalayans but recent interviews and satellite analysis shows the alarming deforestation of the valley after the construction of the link road 1987 legal and illegal constructions and rapid population growth the forests has decreased up to 50 %. (Ali et al. 2005)

Khyber Pakhtunkhwa occupies 40% of the Pakistani forests which will be increased more by billion-tree project . The entire program was launched for the Billion tree project by Khyber Pakhtunkhwa government which includes network of nurseries providing of loans, purchase of tree sapling agreement throughout the province, approximately 13 thousand nurseries were engaged in the process. A number of plant species such pines, walnuts berry and eucalyptus were produced in these nurseries. The theme was that the government has to provide 40% new trees and the rest will regenerate through natural regeneration of the protected forests. Advance money was given to the small nursery owners having the capacity of producing 25000 saplings which were a booster for their business. The program was also a direct cut on unemployment almost 500,000 jobs were created for the local communities specifying women and youth this program was a step towards breathable environment and a concrete protection against the horrible climate change (The Express Tribune 2015) Government of Khyber Pakhtunkhwa Forest Department through Project Director, Billion Trees Tsunami Afforestation Project under the overall administrative control of the Secretary Forestry, Environment and Wildlife Department Khyber Pakhtunkhwa. The activities are executed through the territorial/ managerial staff of each Billion Trees Tsunami Afforestation Project initiated in Khyber Pakhtunkhwa. The project extends to the entire Khyber Pakhtunkhwa Province. It is executed in two phases. The Revised Phase 1 with a cost of Rs.1912.0 million initiated activities, while Phase 2 of Rs.12422.72 million was complete the entire program. It is implemented by the three Forest Regions of Khyber Pakhtunkhwa Forest Department. Although the project is not included in the Medium Term Five Year Plan (MTDF) as such, but it is positively related to the overall objectives set forth in the MTDF for conservation, improvement and rehabilitation of forest ecosystem. It is also a pave way for smooth transformation of current economic growth model to green economy. It has now been realized that the existing global growth model has been failed to alleviate poverty and resulted in natural resource stripping. Thus, to deliver socially inclusive, environmentally sustainable and climate resilient, new economic growth model called “Green Economy” is being promoted worldwide. (KP Forest Department 2016)

 

The Mardan Forest Division consists of Mardan and Swabi districts. It extends over an area of 3166 ha. This region is mostly irrigated where intensive agriculture is carried out. The plantation along canals, roads network is spread in the whole division. The adjoining parts to Bunner and Gadoon are hilly and contain sub-tropical broad-leaved vegetation. For administrative purposes Mardan Forest Division was established in 1979, having four Sub Divisions, Lower Swat Canal Forest headquarter at Marian, Upper Swat Canal Forest headquarter at Katlang, Swabi Forest Headquarter at Swabi, Gadoon forest headquarter at Bada and Rustam Forest Range with head quarter at Rustam. The recent afforestation project program has been started since 2014 in Khyber Pukhthunkhwa. The plantation number in 2014-15 was 276275. The established nurseries private and departmental were 88 and 16 respectively. However Private and Departmental seedling number was 2200000 and 9,760,450separately while the total seedlings was 11,960,450.( Mardan Forest Division) This project has a great effects on different sector of economy of Pakistan while here only one sector only be focused for the present study which is to find out the effects of billion tree Tsunami Project on the income of nursery raising growers in rural community of District Mardan and problems and constraints faced to nursery growers in the study area

## 2. METHODS AND MATERIAL

The study was conducted in District Mardan of Khyber Pakhtunkhwa province, Pakistan. Geographically, Mardan is the second most populous city in the province, located at 34°12'0N 72°1'60E and an altitude of 283 meters (928 ft) in the south west.Mardan is a federation of several small towns coming together to form a large city. Mardan valley was part of the ancient Gandhara civilization. Most of the Mardan land is agricultural. It has one of the world's best irrigation systems, which was laid down in 1934 from the Swat River through Jabban Hydel Power Station. Katlang is a Tehsil of District Mardan Khyber Pakhtunkhwa, Pakistan. It is situatedabout 19 km north of Mardan, bordering with District Buner and Malakand and is surrounded by canals in west and north. In district Mardan there are three Tehsils namely Mardan, Takhtbai and Katlang. The nurseries were efficiently raised in District Mardan but due to financial and time constraint only Katlang teshsil was purposively on the basis of more nurseries was selected. Latter on randomly two villages namely Bakhshali and Katlang were chosen for the study. Through yamani formula (1967) sample size was fixed 110 from the 150 total population respectively . Then Proportion formula was used and allot 37 to Katlang and 73 respondents to Bakhshali and detail is given in table 1.

**Table 1 Area wise Distribution of Nursery Raising**

| District | Selected Area | Total No. of Nursery Growers | Sample size |
|---|---|---|---|
| **Mardan** | Katlang | 50 | 37 |
| | Bakhshali | 100 | 73 |
| **Total** | | 150 | 110 |

A comprehensive interview schedule was designed based on the study objectives and the questionnaire was pre-tested in the study area to fully grasp all the related questions which links with the study objectives. All respondents were interviewed personally through face to face meetings. After data collection the data was punched into SPSS (2016) software for analysis and t-test was used for income comparison of the nursery growers after and before project implementation.

## 3. RESULT AND DISCUSSION

### Age Wise Respondents

Table 2 shows age wise distribution of the sampled respondents in the study. According to table in below 30 years the number of respondents in Bakhshali was 25% and Katalng 15% and total 40% while in the 30-40 years age category in Bakhshali 31% and Katlang 17% and total 48%, Similarly in Above 4o category the number in Bakhshali was 10% and Katlang was 2% and total was 12%. The majority number was found in 30-40 age category followed by below 30 years category while the below number was found in above 40 age category. The comparison of the three age groups involvement in the project shows that the age group 30-40 years showed more interest in the project. The findings of Masale, (2007) also described that the middle-aged respondents grew more trees per year in their farms due to cultural traditions and were ready for services offer to forest department for tree plantation. Young generation preferred quick money generating activities like fishing, farming activities. However, their percent share here is also more than the above 40 years age category. The review concludes that age difference play vital role in nursery raising in the study area.

 

**Table-2. Age Wise Distribution of the Sampled Respondents in the Study Area**

| Age Category (Year) | Village | | | | Total | |
|---|---|---|---|---|---|---|
| | Bakhshali | % | Katlang | % | No. | % |
| Below 30 | 28 | 25 | 16 | 15 | 44 | 40 |
| 30-40 | 34 | 31 | 19 | 17 | 53 | 48 |
| Above 40 | 11 | 10 | 02 | 2 | 13 | 12 |
| Total | 73 | 66 | 37 | 34 | 110 | 100 |

Source: Field Survey 2017

Table 3 shows distributions of sampled respondents regarding literacy status in the study area. According to table the illiterate number in Bakhshali was 31% and Katlang 9% and total 40% while the literate number in Bakhshali was 35% and Katlang 25% and total 60%. Instead of illiteracy the illiterate respondents have more experienced in nursery growing. They grew the nursery plants from more long times Due to their experiences, they were acceptable to take part in the project because they can grow more perfectly the nurseries and they don't have need of training for nursery raising while education also play key role in nursery raising development and pick the modern technology very easily

**Table -3 Distributions of Sampled Respondents Regarding Literacy Status in the Study Area**

| Literacy status | Village | | | | Total | % |
|---|---|---|---|---|---|---|
| | Bakhshali | % | Katlang | % | | |
| Illiterate | 34 | 31 | 10 | 9 | 44 | 40 |
| Literate | 39 | 35 | 27 | 25 | 66 | 60 |
| Total | 73 | 100 | 37 | 100 | 110 | 100 |

Source: Field Survey 2017

Table-4 shows distribution of sampled respondents regarding education level in the study area. According to table in Bakhshali the Primary number is 3% and Katlang 5% and total 8% while in Middle in Bakhshali the number is 21% and Katlang 6% and total 27%. Similarly in Matric in Bakhshali the number is 28% and Katlang 22% and the total is 50%, in FA/Fsc in Bakhshali the respondent number is 3% and Katlang 5% and total 8% , in BA/B.Sc the respondent number is Bakhshali is 2% and in Katlang 3% and total is 5% while in MA.M.Sc in Bakhshali the number is 2% and Katlang zero percent. The number was found more in Matric than the other education level followed by Middle. The upper level do not take interest in this business while they try for government job so there also the higher level education number is less than the low level education. Therefore this project has provided jobs more to Matric and Middle level in the project area.

**Table -4 Distribution of Sampled Respondents Regarding Education Level in the Study Area**

| Education level | Village | | | | Total No. | % |
|---|---|---|---|---|---|---|
| | Bakhshali | % | Katlang | % | | |
| Primary | 02 | 03 | 03 | 05 | 05 | 08 |
| Middle | 14 | 21 | 04 | 06 | 18 | 27 |
| Matric | 19 | 28 | 15 | 22 | 34 | 50 |
| FA/F.Sc | 02 | 03 | 03 | 05 | 05 | 08 |
| BA/Bsc | 01 | 02 | 02 | 03 | 03 | 05 |
| MA/M.Sc | 01 | 02 | 0 | 0 | 01 | 02 |
| Total | 39 | 59 | 27 | 41 | 66 | 100 |

Source: Field Survey 2017

Table-5 reveals distribution of nursery owned by respondents before the BTTP project in the study area. According to table in village Bakhshali 82% have their own nurseries before the BTTP project while 18% have no nurseries before the BTTP Project. Similarly in Katlang 41% have their own nurseries before the BTTP project while 59% have no nurseries before the project implementation. The table shows that most of the respondents of Bakhshali were already nurseries before the project and have more experience in nursery raising so they show more positive response during the project while in Katlang only 41% respondents were experienced and know the tricks of the trade. Glowacki and Cleaves (1990) also described that to maximize nurseries, it would be beneficial to start with those individuals with previous nursery experiences. They did not had need of providing marketing education along with nursery techniques training.

**Table-5. Distribution of Nursery Owned by Respondents Before the BTTP Project in the Study Area**

| Village | Owned Nursery Before | | | | Total | |
|---|---|---|---|---|---|---|
| | Yes | % | No | % | No. | % |
| Bakhshali | 60 | 82 | 13 | 18 | 73 | 100 |
| Katlang | 15 | 41 | 22 | 59 | 37 | 100 |

Source: Field Survey 2017

Table-6 shows distribution of sampled respondents familiar with Billion Tree Tsunami project in the study

 

area. According to table there was 110 respondents in the study area and all were Knowledge about the BTTP project. Most of the respondents were familiar with nursery raising. They were having more experience in nursery growing so they were aware of the project and took their part actively. All the respondents respond was found in yes category when they asked whether they knew about Billion Tree Tsunami Project.

**Table-6 Distribution of Sampled Respondents Familiar with Billion Tree Tsunami Project in the Study Area**

| Villag | Known about BTTP in KP | | Total |
|---|---|---|---|
| | Yes | % | |
| Bakhshali | 73 | 66 | 73 |
| Katlang | 37 | 34 | 37 |
| Total | 110 | 100 | 110 |

Source: Field Survey 2017

Table-7 indicates the respondents who received benefit from the project. There are 66% respondents in Bakhshali and 34% respondents in Katlang have signed an agreement with government in which it was mentioned that government will pay double the price of market rate for the nurseries that have been raised by nursery growers. The nursery units were only provided to those nursery growers who meet all the requirements of the agreement. Due to this agreement, all the selected respondents took benefits. This project included the development of communities' woodlots, decentralized nurseries for distributions, promotions of tree plantations on private lands under agro forestry and farm forestry. Among them establishment of community plantations was the major activity which generate employment while developing fuel and fodder resources to meet the local needs. Anderson, (1987) also found the same result in his study A positive commitment to rural afforestation and to improving soil and farm management practices, combined with better incentives for investment in agriculture, could successfully address the serious ecological problems that now threaten large tracts of arable land.

**Table 7 Distribution of Sampled Respondents Received Benefit from the BTTP Project in the Study Area.**

| Village | Receive Benefit from Project | | Total |
|---|---|---|---|
| | Yes | % | |
| Bakhshali | 73 | 66 | 73 |
| Katlang | 37 | 34 | 37 |
| Total | 110 | 100 | 110 |

Source: Field Survey 2017

Table 8 indicates the distribution of kind of nursery raising by sampled respondents in the study. According to table 69 growers have raised the tube and four growers have only raised the nursery of bare root in village Bakhshali while in Katlang 36 growers have raised the nursery of tube while only one has raised the nursery of bare root**.** Farmers of the target areas preferred bare root and fruit nurseries which were suitable to their land specification while here only the project has focused on tube nurseries in the study area. Hegde, (2008) also found the same result in his study.

**Table -8. Distribution of Kind of Nursery Raising by Sampled Respondents in the Study Area**

| Village | Tube | Bare Root |
|---|---|---|
| Bakhshali | 69 | 4 |
| Katlang | 36 | 1 |
| Total | 105 | 5 |

Source:- Field Survey 2017

Table-**9** indicates distribution of sampled respondents training from BTTP Staff in the study area. According to table all respondents in the study area were trained in nursery raising techniques by BTTP Project and training was found useful for nursery raising and tree multiplication in the study area

**Table-9. Distribution of Sampled Respondents Obtained Training from BTTP in the Study Area.**

| Village | Obtain any Training from BTTP | | Total |
|---|---|---|---|
| | Yes | % | |
| Bakhshali | 73 | 66 | 73 |
| Katlang | 37 | 34 | 37 |
| Total | 110 | 100 | 110 |

Source: Field Survey 2017

Table 10 indicates distribution of number of plants sold year wise by sampled respondents in the study area

According to table in plants category 25000-50000 the number of respondents is 90% while in 50001-75000 the number of respondents is 5%, similarly in 75001-100000 category only 2% respondents were present however in 100000 and above category only 3% respondents was fall. It play key role in forest regeneration. green cover and income raising. Hegde (2003) investigated that the land of the nursery growers was development directly contributed to their livelihood and generate more income for them. With easy availability of fuel, fodder

 

and timber the dependency on the forest was reduced significantly.

Table-10. Distribution of Number of Plants Sold Year Wise by Sampled Respondents in the Study Area

| Number of Plants | Bakhshali | Katlang | Total | % |
|---|---|---|---|---|
| 25000-50000 | 68 | 31 | 99 | 90 |
| 50001-75000 | 4 | 1 | 5 | 5 |
| 75001-100000 | 0 | 2 | 2 | 2 |
| 100001 and Above | 1 | 3 | 4 | 3 |
| Total | 73 | 37 | 110 | 100 |

Source:- Field Survey 2017

Table 11 shows distribution of sampled respondents who sold plants on forest department in the study area According to table 66 % respondents in Bakhshali and 34% respondent sold plants on Forest Department. As these respondents were bound and an agreement was signed between Forest Department and nursery growers, it was clearly described that Forest Department will purchase back these plants after one year tenure completed. Latter on the Forest Department will distributed these plants free of cost among the schools, colleges, universities, government and private institutions for planting these plants in the field. Hegde, and Daniel (1994) also resulted that afforestation projects helps in development of community woodlots, decentralized nursery plants for distribution and promotion of tree plantations on private lands under agro forestry and farm forestry. Among them, establishment of community plantations was the major vity to generate employment for the poor while developing fuel and fodder resources to meet the local needs**.**

**Table-11. Distribution of Sampled Respondents Who Sold Plants on Forest Department in the Study Area**

| Village | Forest department | % | Total |
|---|---|---|---|
| Bakhshali | 73 | 66 | 73 |
| Katlang | 37 | 34 | 37 |
| Total | 110 | 100 | 110 |

Source: Field Survey 2017

Table 12 shows Effect of the Project on the Income Level of Nursery Growers in the Study Area. According to the table the average income before was Rs. 243455 and after was Rs. 474864. The difference was Rs. 231409 while the t value was 7.782 and p-value was .000. The Null hypothesis was rejected at 0.05 level. The result was found highly significant which indicates the average income of the nursery growers was higher after the project implementation. The result of Haque et al. 2007 also found the same result in his study.

**Table 12. Effect of the Project on the Income Level of Nursery Growers in the Study Area**

| After Project Mean Income | Before Project Mean Income | Difference | t.value | p.value |
|---|---|---|---|---|
| 243455 | 474864 | 231409 | 7.782 | .ooo |

Source:- Field Survey 2017

Table-13 describes the number of sample respondents who are in favour of project continuation. Out of total respondent's 95% were in favour of the continuation of the project while 5% respondents were not in favour of the continuation of the project. The main reason of the continuation was the more income generating by respondents from their land. Anderson and Denis (1987) told that the Respondent sold sapling from their nurseries were more likely to continue nursery raising. The income generated from nurseries will cover operating costs and would maintain nursery viability and discourage wasteful practices..

**Table 13. Continuation of Project by Sampled Respondents in the Study Area**

| Village | Continue Nursery Raising | | | | Total | |
|---|---|---|---|---|---|---|
| | Yes | % | No | % | No. | % |
| Bakhshali | 73 | 66 | 0 | 0.0 | 73 | 66 |
| Katlang | 32 | 29 | 5 | 5 | 37 | 34 |
| Total | 105 | 95 | 5 | 5 | 110 | 100 |

Source: Field Survey 2017

Table-14 shows sampled respondents distribution regarding positive and negative response towards nursery raising continuation. According to table Out of total, 95% respondents showed positive response and favour the nursery raising project to remain continue and consider beneficial economically for nursery raising community while 5% respondents shows negative response and told that it wasting the fertility of the soil latter on in the study area..

 

**Table-14.Sampled Respondents Distribution Regarding Positive and Negative Response Towards Nursery Raising Continuation.**

| Village | Reasons | | | | Total | |
|---|---|---|---|---|---|---|
| | Positive | % | Negative | % | No. | % |
| Bakhshali | 73 | 66 | 0 | 0 | 73 | 66 |
| Katlang | 32 | 29 | 5 | 5 | 37 | 34 |
| Total | 105 | 95 | 5 | 5 | 110 | 100 |

Source: Field Survey 2017

Table 15 shows the problem faced by Nursery Growers in the study area. According to the table 24% respondents were not satisfied by the planning management of the BTTP staff. Only 3% respondents in both target areas faced the non-availability of the credit while 25% respondents have no access to the facilitation centres. About 67% of the total respondents were the grievance of the non-transparency in the distribution of nursery plants in the study area while most of 80% respondents did not get the desired plants species. The unavailability of the nursery plants according to their land specification was a major problem faced by nursery growers

**Table 15. Problems and constraints Faced by Nursery Growers in the study area**

| Name of village | Types of Problem | | | | | | | | | | Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | | II | | III | | IV | | V | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % |
| Bakhshali | 10 | 14 | 1 | 1 | 13 | 18 | 46 | 63 | 57 | 78 | 25 | 34 |
| Katlang | 17 | 46 | 2 | 5 | 15 | 40 | 28 | 76 | 31 | 84 | 19 | 51 |
| Total | 27 | 24 | 3 | 3 | 28 | 25 | 74 | 67 | 88 | 80 | 44 | 40 |

Source: Field Survey 2017.

I= Complications in well Plan Management, II= Non-Availability of Credit,
III= No access to Facilitations Centers, IV= Non-Transparency in Provision of Nurseries,
V=Non-Availability of Desired Nursery plants

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## 4. CONCLUSION AND RECOMMENDATION

The study finally concludes that forest play key role in the development of a country. They generate employment in different sector of the economy. The BTTP main objective was that to multiply the plants to one 100 core in the study area while in the first instance required the nurseries of different species, it was difficult work for them so they have handover this task to train grower of the area. The project staff give training to nursery growers and provided financial help to them for nursery raising while latter on they purchase those plants on double price, so it was a great advantage for growers. Through this way majority farmers find jobs their and increase their income level in the study area. Few problems and constraints were identified during survey to Nursery growers in the study area. There was no transparency in nursery plants distribution to farmers; Less varieties of nursery plants were available by forest department; The number of facilitation centre were less than the requirement, so nursery growers access to BTTP staff was difficult. On the basis of problems following recommendations were given for uplifting tree plantation programs in the study area: Credit provision by government to nursery growers is requested ; Well plan management is required for continuation of the Project; Monitoring centre should be established for proper implementation of the projects in the study area; Nearest Centre should be developed for easy access of nursery growers in the study area; The government should supplied some new plant species, fruit nurseries and ever-green plants to farmers for enhancing tree plantation in the study area; Demonstration plots should be arranged on road side for advertisement.

## 5. ACKNOWLEDGEMENT

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