

## USE OF PARTICIPATORY EXTENSION METHODS IN HILL AREAS: AN PARTICIPATORY EXTENSION APPROACHES

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### ABSTRACT

Participatory research and extension methods are important tools to study the demography of villages as well as to assess the needs of the villagers. Thus, present research investigation was conducted in Nanital district of Uttarakhand. Total three villages nearer areas of Institute of Biotechnology, Patwadangar were selected for investigation. Intensive survey of these three villages was conducted with the objective to study the profile of village. Data was collected with the key informants [Experienced Hill women] of these villages. Participatory mapping, Time line, Problem tree, Venn diagramme, Transect walk, Seasonal Diagramme, Daily Routine Diagramme, Trend analysis were done and maps were drawn.

**KEYWORDS:** Villages, Hills Area, Farmers, Agricultural

### INTRODUCTION

Participation means to involve people in identifying the problem, determining ways to overcome all the problems, designing real plan to achieve goals. Solution provide by the local people related to problems in the rural areas are more likely to be successful rather than other people. Participatory approaches are the local methods and tools to improve the development practices. Participatory Extension approaches are the participatory approaches to improve the agricultural technologies and rural life. These approaches focus on the problems and plight of the rural people and its solution in the participatory ways. This type of approaches encourages the involvement of local honcho, key informants, extension workers and private sectors in identifying the local problems. It involves the community to identifying problem, analyzing situation, prowess of rural people to solve these problems. It involves rural people to analyze the situation, planning, trying, monitoring and evaluation of new technologies. This will result in adoption of new technologies by the rural people. These approaches involve rural people in planning to implementation stage of adoption and dissemination of any technologies. These types of approaches are helpful to increase the agricultural productivity to enhance the participation of farmers.

In this approach, the principal task of extension workers is not first and foremost to transfer agricultural know-how and technology to farmers (Anonymous, 2004). These approaches put emphasis on strengthening farmers' problem-solving capacities from the very beginning. Different approaches have been developed to facilitate the farmers' participation in the development of technologies to reduce poverty. These approaches are to facilitate the incorporation of farmers' knowledge in the research and extension process and to enhance agricultural knowledge significantly and skills of farmers, which in turn could be reflected in an increase in production. The increase in knowledge and skills is the result of

a learning process of farmers and researchers.

Keeping all these things in mind, a research investigation was conducted in hill areas with the objective to study the demography of villages through participatory methods.

## METHODOLOGY

Present research investigation was conducted in Nainital district of Uttarakhand. Total three villages nearer areas of Institute of Biotechnology, Patwadangar were selected for investigation. Intensive survey of these three villages was conducted with the objective to study the profile of village. Data was collected with the key informants [Experienced Hill women] of these villages. Participatory mapping, Time line, Problem tree, Venn diagramme, Transect walk, Seasonal Diagramme, Daily Routine Diagramme, Trend analysis were done and maps were drawn.

## RESULTS

### Time Line

#### Village 1: Baldiyakhan

Baldiyakhan village is situated at two Km. far away from Institute of Biotechnology, Patwadangar. The people of Baldiyakhan used to go to Haldwani and Nainital for marketing which are located at a distance of 30 Km and 12 Km. from Baldiyakhan respectively. Geographically, the village is located at the north-south border of district Nainital. According to a retired primary school teacher (popularly known as 'master ji' by the villagers who are supposed to be the most knowledgeable person among them) the village is protected by Gods and Goddesses from all the four directions. In 1945, one school from 6<sup>th</sup> to 8<sup>th</sup> standard was started in a hut which elevated into High School in 1955-56 and into Government Intermediate College in the year 1960. Presently, 147 families live in the Baldiyakhan village and the total population of village is 1350. Male-Female ratio in the village is 55:80 and literacy rate is 95 per cent in which male comprises about 45 per cent and female comprises about 55 per cent. The general occupation of people in the village is agriculture but many people also earn from the shops and driving. Total, 27 women key informants were selected for the purpose of collection of qualitative data. The village is having other facilities like *anganwadi centre*, temple, transportation, post office, primary health centre etc.

### Time Line of Baldiyakhan Village

**Table 1: Time Line of Baldiyakhan Village**

Time	Activities
1921	Establishment of village
1930	Farming was started
1937	Temple built
1938	First 'sarpanch' (chief of the local self government at the village level) was elected
1940	Livestock rearing
1945	6 <sup>th</sup> -8 <sup>th</sup> standard Government school was started in hut
1946	Village was well connected by road
1955	Elevated into High School
1960	Elevated into Intermediate School
1978	Establishment of Shops
1988	Electricity connection to the village
2000	First television set in the village
2000	First Gramin Bank in the village

<b>Time</b>	<b>Activities</b>
2001	Savings and credit programme started
2001	<i>Aanganwadi</i> centres was started
2002	Primary health centres was started
2005	Use of Water tanks
2009	First woman elected as 'Sarpanch'
2009	<i>Serve Siksha Abihyan</i> Government programme was started
2011	Community hall

### Village 2: Devidhura

Devidhura village was established in 1960. This was about 9 kms from Institute of Biotechnology, Patwadangar. As per the record of Aaganwadi centers the total population of village is divided in 125 households. The village is comprised Brahmin and Takaur. The major occupation of the villagers was agriculture. The village was well connected by road. There are two temples in the village whose priest are Brahmin by caste. There is a big tree under which villagers often meet. There are 87 television sets and 125 mobile sets in the villages. The hill women in this village also gets 3 types of newspaper viz; Amar Ujala, Danik Jagran, Uttar Ujala and 2 magazines viz; *Rupayan* and *Grah Sobha*. Electricity came into this village in 1999. There is also a Post office in the village. There were two SHGs in this village.

### Time Line of Devidhura Village

**Table 2: Time line of Devidhura Village**

<b>Time</b>	<b>Activities</b>
1960	Establishment of village
1961	Farming started
1967	Temple built
1991	Post Office
1997	Panchayati Raj System was started
1998	Village was connected with roads
1999	Electricity connection to the village
2000	First television set in the village
2001	First SHGs
2003	<i>Serve Siksha Abihyan</i> Government programme was started
2003	Aaganwadi center was started
2008	Primary health centres was started

### Village 3: Koandh

Village Koandh was about 7 kms from Institute of Biotechnology, Patwadangar. This village was established in 1945. In spite of being such an old village still not yet looks developed even there was no primary school up till now. People send their children in Government school of Koandh which is 5 km far away from this village. The population of the village is 219 where 120 are male and 99 are female. There was one temple and two *Aaganwadi* centers. Farming was main occupation of this village. There are 100 television sets and 119 mobile phones in the village. Only pacca house is electrified. There were three shops and one small restaurant in this village. Major problems of this village are Drug addiction and gambling. Most of the hill women were aware about the Government scheme viz; ICDS, *Serve Siksha Abihyan*. Hill women collected drinking water in water tanks.

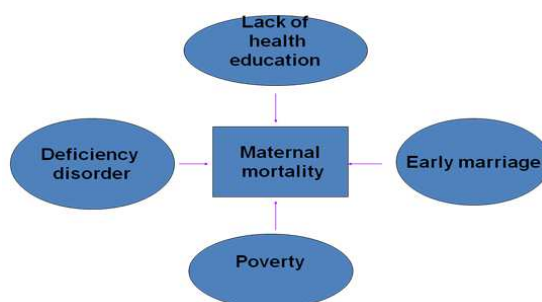
## Time Line of Koandh Village

**Table 3: Time line of Koandh Village**

Time	Activities
1945	Establishment of village
1947	Farming was started
1950	Temple built
1956	Livestock rearing
1995	village was well connected by road
1997	Electricity connection to the village
2000	First television and radio set in the village
2000	Govt. programmes were started
2001	<i>Aaganwadi center</i> was started
2009	Establishment of Shops and restaurant
2009	Use of water tanks

## Problem Tree

Women in hill areas are suffering from various problems viz; Health and Nutritional types of problem, Educational Problem, Agricultural problems etc. Data regarding the problems in hill villages were collected from the key informants. Hill women told the problems and its causes. According to their views problem trees were drawn. Problem Tree Figure 1, Figure 2, Figure 3 is given as follows while Problem tree.



**Figure 1: Problem Tree**









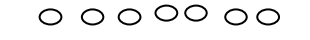

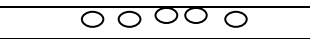

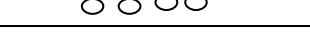


**Figure 2: Problem Tree**



Figure 3: Problem Tree

Trend Analysis

Table 4: Trend Analyses in the Villages

Period	Water 	Trees 	Farmland 
1960	Water always in river		
2001	Rain at least once in 2-3 days in June		
2006	Water Tanks and river		
2011	Water tanks and river		
Today	Water tanks, river and natural resources		

Seasonal Calendar of Crops and Vegetables in Hill Areas

Table 5: Seasonal Calendar of Crops and Vegetables in Hill Areas

Month	Village 1 Baldiyakhan	Village 2 Devidhura	Village 3 Koandh
Jan	Potato, Spinach, fenugreek, Cauliflower, Pea	Potato, fenugreek, Pulam, Malta, Kunnu	Malta, Kunnu, Cauliflower, Pea, Cabbage
Feb	Buransh	Pea, Buransh	Buransh, Tomato
March	Malsa, Hisalu, Pumpkin	Gahat, Bhatt, Pumpkin	Cherry, Bhatt, Pumpkin
April	Malsa, Rajma, Brinjal	Malsa, Rajma, Brinjal	Malsa, Rajma, Brinjal
May	Lemon, Bhatt, Bottle guard	Apricot, Lemon, Bottle guard	Gahat, Pumpkin, Bottle guard
June	Kilmoda, Gahat, Gaderi	Orange, Kunnu, Gaderi	Orange, Cherry, Gaderi
July	Onion, Pear, Apple	Onion, Pear, Apple	Onion, Pear, Apple
August	Rajma, khubani,	Cucumber, khubani	Cucumber, khubani
Sept	Pumpkin, pulum, Chaulai	Pumpkin, pulum, Chaulai	Pumpkin, pulum, Chaulai
Oct	Malta, Onion	Carrot, Onion	Carrot, Onion
Nov	Jawar, Pulum, Chaulai	Jawar, Pulum, Chaulai	Jawar, Pulum, Chaulai
Dec	Potato, Spinach, fenugreek, Lai	Potato, Spinach, fenugreek, Lai	Potato, Spinach, fenugreek, Lai

Seasonal Health Calendar

Hill women are suffering from various types of problem related to health viz; Flu, cold, Typhoid, Stomach pain, Sore throat, Malaria, Scarbie, Jaundice, Vomiting, Headache. The seasonal health calendar is given as follows:

Table 6: Seasonal Health Calendar

Criteria	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
<b>Diseases</b>												
<b>Flu, cold</b>												
<b>Typhoid</b>												
<b>Stomach Pain</b>												
<b>Sore throat</b>												
<b>Malaria</b>												
<b>Scarbies</b>												
<b>Jaundice</b>												
<b>Vomiting</b>												
<b>Headache</b>												

Medicinal plants

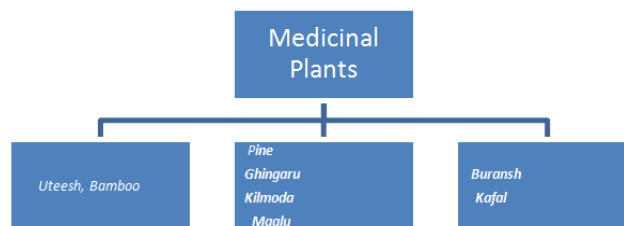


Figure 4

Transect Walk

The details for each of the village on six features viz., area locality, land type, water source, species of trees, uses and ownership have been collected and listed in a tabular form. In the discussions that followed, the participants also identified the various problems which infest each of the agro-ecological zones. Lack of information about modern agricultural technologies has become one of the severest problems. Soil erosion has been another problem on all types of land but particularly in the upland leading to a significant drop in soil fertility and thereby in productivity.

Table 7: Transect Map

Features	Village 1	Village 2	Village 3
Area Locality	Baldiyakhan	Devidhura	Koandh
Land [Nali]	2-10	1-3	1-5
Land type	Hill and forest	Hill and forest	Hill and forest
Irrigation sources	Rainy water, Sprinkler, River	Rainy water, Sprinkler, River	Rainy water, Sprinkler, River
Species	Burans, Apple	Burans, Apple	Burans, Apple
Uses	Cultivation of vegetable	Cultivation of vegetable, paddy	Cultivation of vegetable
Ownership	Government and people	Government and people	Government and people
Animals	Horse, cow, buffalo, Goat	Horse, cow, buffalo, Goat	Horse, cow, buffalo, Goat
Problems related to	Soil Erosion, Lack of resources, Lack of information about modern agricultural technologies	Soil Erosion, Lack of resources, Lack of modern agricultural technologies	Soil Erosion, Lack of resources, Lack of modern agricultural technologies

## CONCLUSIONS

The above findings have showed that Participatory extension approaches are very important tool to study the demography and needs of the rural people. Research Organization or institutes are developing the technologies and Extension approaches play a very important role to disseminate all the technologies. Dissemination means distribution of technologies to the beneficiaries. Innovations of the technologies are depend on three factors: environment factors, innovation factors and personal factors. Thus the study of the demography of villages is very urgent work before implementation of any project and programme in the villages.

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