

Original Research Article

Impact Determination of Watershed Beneficiaries

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ABSTRACT

Rapid increases population enhance the demand of water and affect land use change that is land degradation, soil erosion, so for Present study was conducted Jabalpur district of M.P., During 2014-15, total 200 farmers were selected for the study and the main objective of the paper was to know major determent of watershed like knowledge and adoption and their impact in terms of income, employment and change in cropping pattern. Major statistical tool like Z test, Chi-Square, mean and variance was used. Result indicated knowledge, adoption and attitude towards watershed development found to be positively significant with 4 degree of freedom. Regarding the impact on watershed development on income we can concluded that Z value found to be significant and there is a difference between level of knowledge of respondents before and after implementation of program, In case of employment generation concluded that there is a significant difference between employment of respondents before and after implementation of programme. It can also be concluded that induction of watershed programme has increased the employment of the beneficiaries and maximum number of beneficiaries comes under the group of medium employment group. Because of under watershed development programme different financial facility and other facility also provided to increase the employment level.

Keywords

Watershed
beneficiaries,
population

Introduction

Soil erosion due to traditional mode of farming is considered a serious environment constraint to agricultural and rural development in India. About two-thirds of the country's cultivated land currently depends exclusively on rainfall, which is often erratic and poorly distributed. Water, soil and vegetation are the most vital natural resources for the survival of people. More than 70% of the population has no other choice but to depend solely on the farming for their livelihood because of lack of employment opportunities in the other sector

of the economy. But the area of land available to each farmer household is decreasing due to an increasing subdivision among heirs. Consequently agricultural activities have been extended into areas of unsuitable land and these activities have resulted in deforestation of step mountain and. The farmers cultivate land in the traditional way under most unsophisticated, low yielding condition. Therefore, land productivity and environmental damage are unavoidable with an increasing population. In view of the above facts, Government of

India resolves that ending neglect of vast rainfed areas would be a major policy concern, main challenge is to move the nation decisively in the direction of "inclusive growth". Rainfed areas of 85 million hectares out of the 142 million hectares of net cultivated area have suffered neglect in the past. High untapped productivity and income potential exists in these areas.

An insight into the rainfed regions reveals a grim picture of poverty, water scarcity, rapid depletion of ground water table and fragile ecosystems. Land degradation due to soil erosion by wind and water, low rainwater use efficiency, high population pressure, acute fodder shortage, poor livestock productivity, Under investment in water use efficiency, lack of assured and remunerative marketing opportunities and poor infrastructure are important concerns of enabling policies. The challenge in rainfed areas, therefore, is to improve rural livelihoods through participatory watershed development with focus on integrated farming systems for enhancing income, productivity and livelihood security in a sustainable manner. The National Rainfed Area Authority (NRAA) has been set up in November 2006, keeping in mind the need to give a special thrust to these regions.

A close analysis of various types of rainfed situations would reveal that soil and water conservation, watershed development and efficient water management are the key to sustainable development of rainfed areas. The watershed approach has been accepted as a major theme for development of rainfed areas with a view to conserving natural resources of water, soil and vegetation by mobilizing social capital and increasing income and employment of the local people. In order to assess the performance of various ongoing projects/programmes of watershed

development, a series of evaluation studies have been conducted by different agencies like ICAR, SAU etc. one of study to know impact of Kundam watershed project was conducted in title of "To study the Impact of Watershed Development Programme in income, employment generation and change in cropping pattern of the beneficiaries Jabalpur district of M.P" was selected with the following objective.

Materials and Methods

State Area and Sampling

There are 51 District in Madhya Pradesh, among them Jabalpur district was selected purposely for conducting research work because, firstly it has secured top position among all the Watershed Programme running in Madhya Pradesh & secondly maximum tribal population under the area covered for Watershed Programme in Madhya Pradesh.

There are seven blocks in the district, out of which one Kundam block was purposely selected for the study as it is having all 4 Watershed Development Programme which comes under Hariyali project. There are 15 Villages covers under the 4 Watershed Development programme in Kundam block.

Out of only 5 villages fall under Hariyali-IV selected for this study because the programme completed during 2012 and to study the impact completed the programme were taken. A list of farmers (beneficiaries) from selected villages was prepared with the help of Gram Panchayat and out of which 25 per cent that is 200 beneficiaries was randomly selected for the study.

Analysis tools- For analysis mean, Slandered deviation, percentage and Z used for Study.

Results and Discussion

Attributes of beneficiaries of watershed development programme

Differential attribute of the beneficiaries of watershed namely personal and socio-economic, psychological, communicational variable have been studied and findings of each attribute of beneficiaries of watershed are described.

The study inferred that the higher percentage (60.50 per cent) of the beneficiaries belonged to middle age group (36-55 years). This finding is supported by Sengar (2003), Mewara (2005), Verma (2005), Sinha (2007), Mandloi (2007), Kansan (2008) Kulshrestha *et al.*, (2010), Choudhary (2010), and Mishra (2012), Yadav (2012).

Regarding the education study indicated that highest per cent (45.00 per cent) of the watershed development programme beneficiaries were having education up to primary school. This finding might be on account because of farmer did not get facility of high education nearby place. Present finding find support from the work of Mewara (2005), Verma (2005), Sinha (2007), Israel (2003), Choudhary (2010) and Mishra (2012).

In case of family size, it can be concluded that highest per cent (54.50%) of beneficiaries belonged to scheduled tribes and scheduled cast category. This finding is similar to the study of Ali (2001), Paigwar (2006), Sinha (2007), Choudhary (2010), Kulshrestha (2010), Mishra (2012)

It can be concluded that highest percentage (64.00 per cent) of beneficiaries were belonged to joint family. This finding line up with the finding of Verma (2005), Paigwar (2006), Sinha (2007)

Regarding attribute of social participation higher percentage of watershed beneficiaries had higher (44.50 per cent) social participation. This finding is get support to the finding of Mishra (2012)

The findings regarding occupation indicated that higher percentage (33.50 per cent) of beneficiaries was busy not only in cultivation, but they are also earning through caste occupation. This finding found similar to the work of Mishra (2012)

As far the size of land holding it was observed that higher percentage (61.50 per cent) of watershed beneficiaries had marginal size of land holding. This finding line up with the finding of Paigwar (2006), Singh and Prakash (2010)

It can be concluded that maximum (42.00 per cent) of the percentage of beneficiaries were having medium level of material possession. This finding is found to be similar with the finding of Kappala (2002), Verma (2005), Choudhary (2010), Mishra (2012).

Regarding risk preference It can be inferred that highest (42.00%) of watershed beneficiaries had medium to high-risk preference. This finding is line up with the finding of, Ali (2001), Kappala (2002), Dhuware (2003), Israel (2003), Mewara (2005), Verma (2005), Kansana (2008).

As for the regarding economic motivation it concluded that higher percentage (42.00 per cent) of watershed beneficiaries had medium economic motivation. This finding is supported by Ali (2001), Kappala (2002), Dhuware (2003), Mewara (2005), Paigwar (2006), Mishra (2012), Yadav (2012).

The finding regarding scientific orientation shows that maximum number of watershed

beneficiaries had medium to high scientific orientation towards technology. This finding is similar with the finding of Kansana (2008).

As for the attribute knowledge of watershed management practices it can be concluded that higher per cent (51.00 per cent) of watershed beneficiaries had high knowledge of watershed management practice.

Finding indicated that a higher percentage of beneficiaries were having medium level (42.50 per cent) of adoption of watershed management practices.

This finding get supported to finding of, Waghmare and Ingle (2001), Kappala (2002), Paigwar (2006), Sinha (2007), Mandloi (2007), Pawak (2009), Choudhary (2010), Mishra (2012).

Finding regarding attitude towards watershed development practices indicated that higher percentages of watershed beneficiaries were having high level (42.50) of attitude towards watershed development practices. This finding is found to be similar with the finding of Kulshrestha *et al.*, (2010).

Regarding attribute mass media exposure result indicated that maximum (42.50 per cent) of watershed beneficiaries had medium mass media exposure. This finding is similar with the finding of Meware (2005), Mishra (2012).

Regarding the contact with extension agencies it can be concluded that higher percentage (61.50 per cent) of watershed beneficiaries had low contact with extension agencies. It may be on account of innovativeness or more awareness to the mass media. This finding is supported to the finding of Ali (2001) Pawak (2009).

Finding inferred that higher percentage (40.50 %) of the beneficiaries having medium cosmopolite. This finding was found to be similar with the finding of Kulshrestha *et al.*, (2010)

Knowledge & Adoption of watershed

Regarding the impact on watershed development on income we can conclude that Z value found to be significant and there is a difference between level of knowledge of respondents before and after implementation of program, it can also be concluded that maximum number of watershed beneficiaries belong to high knowledge group after implementation of the programme. This may be due to training given on different aspect by watershed team member of the beneficiaries.

The finding in connection to adoption, we can conclude that Z value found to be significant and there is a difference between adoption of respondents before and after implementation of program, it can also be concluded that maximum number of watershed beneficiaries belong to medium adoption category after implementation of the programme.

Impact of watershed development programme on income, employment and change in the cropping pattern

The findings regarding the income concluded that there is a significant difference between annual income of beneficiaries before and after implementation of programme. Watershed development programme has increased the annual income and maximum number of beneficiaries comes under medium annual income group, it may be due to training and different facility provided by watershed team members. This finding line up with the

finding of Sharma (1997), Ali (2001), Kappala (2002), Bhankariya (2004), Kansana (2008), Pawak (2009), Meware (2005)

In case of employment generation concluded that there is a significant difference between employment of respondents before and after implementation of programme.

It can also be concluded that induction of watershed programme has increased the employment of the beneficiaries and maximum number of beneficiaries comes under the group of medium employment group. Because of under watershed development programme different financial facility and other facility also provided to increase the employment level. This finding supported to finding of Ali (2001), Israel (2003)

The study reveals that in kharif season highest area cover under kodo-kutki crop (110 ha) and remaining crops like paddy, black gram, maize and soybean grown in very small area before initiating of the programme but after implementation of the watershed development programme area under kodo- kutki decreases and increases area of paddy, black gram, maize and soybean. In rabi season higher percentage of area increases under wheat, gram and lentil and decreases area under pea. In zaid cent percent increases area under vegetable observed.

The area more increases in the rabi then kharif because of availability of irrigation water in the rabi season because of availability of the irrigation water maximum number of cropped area increased because of availability of irrigation water. This finding line up with finding of Singh (2000), Ali (2001), Choudhary (2010), Soni *et al.*, (2003)

From this paper it can be concluded that watershed play vital role and this programme implemented change the knowledge and adoption of the beneficiaries it is also inferred from the study change in income, employment and cropping pattern was also observed which help to increasing in status of the beneficiaries.

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