

## International Journal of Agriculture Extension and Social Development

Volume 1; Issue 2; Jul-Dec 2018; Page No. 69-73

Received: 03-08-2018  
Accepted: 06-09-2018

Indexed Journal  
Peer Reviewed Journal

### Extent of people's participation in different activities at various stages in integrated watershed management programmed

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#### Abstract

The study was carried out during 2016-17 in the Mungeli district of Chhattisgarh state. This study aims to assess information on extent of people's participation in integrated watershed management's programme. This study was conducted in selected 12 villages identified from 2 blocks of Mungeli district and the sample comprised of 120 farmers. The data collection was done by structured interview schedule and through personal interview. The findings related to the extent of people's participation in integrated watershed management programme indicated that at programme initial stage; respondents had 69.58% maximum people's participation index score. At planning stage, respondents had 66.96% maximum people's participation index score. At implementation stage, respondents had 77.01% maximum people's participation index score. At maintenance stage, respondents had 72.08% maximum people's participation index score. At evaluation stage, respondents had 60.03% maximum people's participation index score. At last it was concluded that maximum participation of respondents were found in implementation stage which was 77.01% with minimum participation gap (22.99%). While 69.13% overall people's participation found with 30.87% participation gap in the study area.

**Keywords:** Watershed management, IWMP, peoples participation

#### Introduction

The Integrated Watershed Management Programme (IWMP) one of the flagship programme of Ministry of Rural Development is under implemented by the Department of Land Resources since 2009-10. Watershed in general is an area that supplies water by surface or subsurface flow to a given drainage system or body of water – a stream, river, wetland, lake or ocean. The interaction between land and water and its use and management decides the characteristics of the water flow and its relationship to the watershed. In recent decades, in many parts of the world, watershed degradation has emerged as a most serious problem causing natural resource degradation, which has been acting as a “pull factor” for the efforts of achieving food security and led to negative environmental and socio-economic consequences. People's participation in watershed management programmes is an important strategy of government of India for making watershed programmes successful. The major benefits flowing from the participation of the people in development are; in the planning and programming stages and throughout the implementation of development programmes, rural people can provide valuable social-cultural, ecological, economic and technical indigenous knowledge ensuring consistency between objectives of development and community values and preferences; people can mobilize local resources in the form of cash, labour, materials, managerial talent and

political support which are critical to programme success.

The programme should meet the daily requirements of the majority of the stakeholders like supply of drinking water, fodder for cattle and fuel for kitchen. The watershed development programmes are made for local people. During 2010-11 Government targeted 0.236 million ha area, but as an achievement finally 0.284 million ha area was Sanctioned under Integrated Watershed Management Programme (IWMP) in Chhattisgarh. Central Funds Released and Utilized under Integrated Watershed Management Programme (IWMP) in Chhattisgarh from 2009 to 2015 were 152.44 crore and 157.93 crore respectively. Keeping this in view in mind the present investigation was done.

#### Methodology

The study was carried out during 2016-17 in the Mungeli district of Chhattisgarh state. This study was conducted in selected 12 villages (10 respondents from each village) identified from 2 blocks of Mungeli district and the sample comprised of 120 [10 x 12 =120] farmers. The data collection was done by structured interview schedule and through personal interview. Collected data were processed, tabulated and analyzed by using appropriate statistical scales and methods like frequency, mean, per-cent, correlation coefficient and multiple regression analysis.

The extent of people's participation in Integrated Watershed

Management Programme was assessed by the response of respondents of watershed towards participation in various stages of integrated watershed management programme viz., planning stage, implementation stage, Maintenance stage, and evaluation stage. It was measured with the help of interview schedule developed for this purpose.

**Result and Discussion**

**Extent of Peoples participation in integrated watershed management programme**

Data pertaining to extent of people’s participation at initial stage are presents in table. A. The data revealed that the majority of the respondents (75%) were fully participated in that particular activity followed by respondents with partially participated (13.33%) and only 11.67% of respondents did not participate.

The result related to second statement of the table A. i.e., Participation in meetings to discuss about village problems, the majority of the respondents (38.33%) were fully participated in that particular activity followed by respondents with partially participated (37.5%) and only 24.17% of respondents did not participate.

The result related to third statement of the table A. i.e.,

Participation in prioritizing the available solution to solve the identified problems, the majority of the respondents (49.17%) were partially participated in that particular activity followed by respondents with fully participated (37.5%) and only 13.33% of respondents did not participate. The result related to fourth statement of the table A. i.e., Participation in preparation of bench mark survey report, the majority of the respondents (66.67%) were not participated in that particular activity followed by respondents with partially participated (19.17%) and only 14.17% of respondents did not participate.

The result related to fifth statement of the table A. i.e., Participation in deciding the demarcation of watershed boundary, the majority of the respondents (57.5%) were fully participated in that particular activity followed by respondents with partially participated (23.33%) and only 19.17% of respondents did not participate.

The result related to sixth statement of the table A. i.e., Participation in formulating watershed associations/ sanghs/ societies, the majority of the respondents (58.33%) were fully participated in that particular activity followed by respondents with partially participated (25.83%) and only 15.84% of respondents did not participate.

**Table 1:** Initial stage Distribution of respondents according to their participation in various stages of integrated watershed management programme

Sl. No.	Item	Fully participated	Partially participation	Not participated
1	Participation in attempting to gain information about the objectives of programme.	90 (75)	16 (13.3)	14 (11.67)
2	Participation in formal and informal meetings to discuss about village problems	46 (38.33)	45 (37.5)	29 (24.17)
3	Participation in prioritizing the available solution to solve the identified problems	45 (37.5)	59 (49.17)	16 (13.3)
4	Participation in preparation of bench mark survey report	80 (66.67)	23 (19.17)	17 (14.17)
5	Participation in deciding the demarcation of watershed boundary	69 (57.5)	28 (23.33)	23 (19.17)
6	Participation in formulating watershed associations/sanghs/societies	70 (58.33)	31 (25.83)	19 (15.84)

**Note:** Figures in parentheses are in percentage

Data pertaining to extent of people’s participation at planning stage are presents in table 4.19.B. The data revealed that the majority of the respondents (74.17%) were fully participated in that particular activity followed by respondents with partially participated (13.33%) and only 12.50% of respondents did not participate.

The result related to second statement of the table B. i.e., Participation in discussion to identifies the production problems of village and technological options, the majority of the respondents (67.50%) were partially participated in that particular activity followed by respondents with fully participated (23.33%) and only 9.17% of respondents did not participate.

The result related to third statement of the table B. i.e., Participation in meetings to approve the proposals for activities in work plan, the majority of the respondents (60%) were partially participated in that particular activity followed by respondents with not participated (20.83%) and only 19.17% of respondents were fully participated.

The result related to fourth statement of the table B. i.e.,

Participation in deciding the location and design of proposed soil and water conservation structures measures like bunds, water ways, farm pods, bund, check dam, gully checks, etc, the majority of the respondents (67.50%) were fully participated in that particular activity followed by respondents with partially participated (19.17%) and only 13.33% of the respondents did not participate.

The result related to fifth statement of the table B. i.e., Participation by suggesting income generating components in project plan, the majority of the respondents (58.33%) were partially participated in that particular activity followed by respondents with fully participated (29.17%) and only 12.50% of the respondents did not participate.

The result related to sixth statement of the table B. i.e., Participation in discussion for setting of norms for distribution/ sharing of benefits among people coming from community lands, the majority of the respondents (58.33%) were fully participated in that particular activity followed by respondents with partially participated (23.33%) and only 18.34% of the respondents did not participate.

**Table 2:** Planning stage

Sl. No.	Item	Fully participated	Partially participation	Not participated
1	Participation in decision making for contribution of resources like land, labour etc.	89 (74.17)	16 (13.33)	15 (12.50)
2	Participation in discussion to identifies the production problem of village and technological options.	28 (23.33)	81 (67.5)	11 (9.17)
3	Participation in formal and informal meetings to approve the proposals for activities in work plan.	23 (19.17)	72 (60.00)	25 (20.83)
4	Participation in deciding the location and design of proposed soil and water conservation structures measures like water ways, farm pods, bund, check dam, gully checks, etc.	81 (67.50)	23 (19.17)	16 (13.33)

5	Participation by suggesting income generating components in project plan.	35 (29.17)	70 (58.33)	15 (12.50)
6	Participation in discussion for setting of norms for distribution/ sharing of benefits among people coming from community lands	70 (58.33)	28 (23.33)	22 (18.34)

Note: Figures in parentheses are in percentage

Data pertaining to extent of people’s participation at implementation stage are presents in table C. The data revealed that the majority of the respondents (72.50%) were fully participated in that particular activity followed by respondents with partially participated (24.17%) and only 3.33% of respondents did not participate.

The result related to second statement of the table C. i.e., Participation by adopting graded contour bunds, gully checks, farm ponds, check dams, diversion channels, etc in the field, the majority of the respondents (69.17%) were fully participated in that particular activity followed by respondents with partially participated (25.8%) and only 7.50% of respondents did not participate.

The result related to third statement of the table C. i.e., Participation while planting forest plant, the majority of the respondents (56.67%) were partially participated in that particular activity followed by respondents with fully participated (41.67%) and only 1.67% of respondents did not participate.

The result related to fourth statement of the table C. i.e., Participation in training programme conducted by watershed authorities, the majority of the respondents (58.33%) were partially participated in that particular activity followed by respondents with fully participated (35.83%) and only 5.83% of the respondents did not participate.

The result related to fifth statement of the table C. i.e., Participation at the time of opening of water ways, the majority of the respondents (69.17%) were fully participated in that particular activity followed by respondents with partially participated (20.83%) and only 10% of the respondents did not participate.

The result related to sixth statement of the table C. i.e., Participation by adopting crop production and other improved practices recommended by agricultural scientist, the majority of the respondents (75%) were partially participated in that particular activity followed by respondents with fully participated (16.67%) and only 8.33% of the respondents did not participate.

**Table 3:** Implementation stage

Sl. No.	Item	Fully participated	Partially participation	Not participated
1	Participation by contributing resources like land, labour, etc.	87 (72.50)	29 (24.17)	04 (3.33)
2	Participation by adopting graded contour bunds, gully checks, farm ponds, check dams, diversion channels, etc in the fields	80 (69.17)	31 (25.83)	09 (7.50)
3	Participation while planting forest plant.	50 (41.67)	68 (56.67)	02 (1.67)
4	Participation in training programme organized by watershed officials.	43 (35.83)	70 (58.33)	07 (5.83)
5	Participation at the time of opening of water ways.	83 (69.17)	25 (20.83)	12 (10.00)
6	Participation by adopting crop production and other improved practices recommended by agricultural scientist.	90 (75.00)	20 (16.67)	10 (8.33)

Note: Figures in parentheses are in percentage

Data pertaining to extent of people’s participation at maintenance stage are presents in table D. The data revealed that the majority of the respondents (66.67%) were fully participated in that particular activity followed by respondents with not participated (25%) and only 8.33% respondents were partially participated. The result related to second statement of the table D. i.e., Participation by fixing responsibility among user groups to maintain the works/activities taken up under the programme, the majority of the respondents (54.17%) were partially participated in that particular activity followed by respondents with fully participated (37.50%) and only 8.33% respondents did not participate. The result related to third statement of the table D. i.e., Participation in maintenance of soil and water conservation works/ structures taken up in fields on community lands, the majority of the respondents (76.67%)

were partially participated in that particular activity followed by respondents with fully participated (21.67%) and only 1.67% of the respondents did not participate.

The result related to fourth statement of the table D. i.e., Participation by protecting the trees in the development forest plots, the majority of the respondents (48.33%) were partially participated in that particular activity followed by respondents with fully participated (39.17%) and only 12.5% of respondents did not participate. The result related to fifth statement of the table D. i.e., Participation by protecting grazing areas in the village, the majority of the respondents (55%) were fully participated in that particular activity followed by respondents with partially participated (38.33%) and only 6.67% of the respondents did not participate.

**Table 4:** Maintenance stage

Sl. No.	Item	Fully participated	Partially participation	Not participated
1	Participation by publicizing the importance of maintenance of assets development under programme	80 (66.67)	10 (8.33)	30 (25.00)
2	Participation by fixing responsibility among user groups to maintain the works/activities taken up under the programme	45 (37.50)	65 (54.17)	10 (8.33)
3	Participation in maintenance of soil and water conservation works/ structures taken up	92 (76.67)	26 (21.67)	02 (1.67)

	in fields on community lands.			
4	Participation by protecting the trees in the development forest.	47 (39.17)	58 (48.33)	15 (12.50)
5	Participation by protecting grazing areas in the village.	66 (55.00)	46 (38.33)	08 (6.67)

Note: Figures in parentheses are in percentage

Data pertaining to extent of people’s participation at Evaluation stage are presents in table E. The data revealed that the majority of the respondents (55.83%) were fully participated in that particular first activity followed by respondents with partially participated (42.50%) and only 1.67% of respondents did not participate.

The result related to second statement of the table E. i.e., Participation by expressing problems encountered in programme to the officials of IWMP, the majority of the respondents (48.33%) were partially participated in that particular activity followed by respondents with fully participated (33.33%) and only 18.33% of respondent did not participate.

The result related to third statement of the table E. i.e., Participation by assisting the officials in collection of feedback, the majority of the respondents (57.50%) were partially participated in that particular activity followed by respondents with fully participated (39.17%) and only 3.33% of respondents did not participate.

The result related to fourth statement of the table E. i.e., Participation in meeting to provide required information for preparation of report, the majority of the respondents (67.50%) were fully participated in that particular activity followed by respondents with not participated (28.33%) and only 4.17% of the respondents were partially participated.

The result related to fifth statement of the table E. i.e., Participation by suggesting suitable modifications for future programme, the majority of the respondents (55%) were not participated in that particular activity followed by respondents with fully participated (24.17%) and only 20.83% of the respondents were partially participated.

The result related to sixth statement of the table E. i.e., Participation by attending meetings to review the progress of works/ activities, the majority of the respondents (49.17%) were fully participated in that particular activity followed by respondents with not participated (40.83%) and only 10% of the respondents were partially participated.

Table 5: Evaluation stage

Sl. No.	Item	Fully participated	Partially participation	Not participated
1	Participation in determining the success of programme by supplying information on the benefits received from programme.	67 (55.83)	51 (42.50)	02 (1.67)
2	Participation by expressing problems encountered in programme to the officials of IWMP.	40 (33.33)	58 (48.33)	22 (18.33)
3	Participation by assisting the officials in collection of feedback.	47 (39.17)	69 (57.50)	04 (3.33)
4	Participation in meeting to provide required information for preparation of report.	81 (67.50)	05 (4.17)	34 (28.33)
5	Participation by suggesting suitable modifications for future programme.	29 (24.17)	25 (20.83)	66 (55.00)
6	Participation by attending meetings to review the progress of works/activities.	59 (49.17)	12 (10.00)	49 (40.83)

Note: Figures in parentheses are in percentage

Data pertaining to overall extent of people’s participation in IWMP are presents in table F. The data revealed that maximum participation of respondents were found in implementation stage which was 77.01% with minimum participation gap (22.99%). However there was 69.13% overall people’s participation found with 30.87% participation gap.

Table 6: Distribution of respondents according to their overall extent of people’s participation score of various stages of IWMP

Sl. No.	Stage	PPI (%)	Gap in Participation (%)
1.	Initial Stage	69.58	30.42
2.	Planning Stage	66.96	33.04
3.	Implementation Stage	77.01	22.99
4.	Maintenance Stage	72.08	27.92
5.	Evaluation Stage	60.03	39.97
	Overall	69.13	30.87

**Conclusion**

The findings related to the extent of people’s participation in integrated watershed management programme indicated that at programme in initial stage, majority of the respondents (69.58%) people’s had maximum participation index score. At planning stage, 66.96% respondents had maximum people’s participation index score. At implementation stage, 77.01% respondents had maximum people’s participation

index score. At maintenance stage, 72.08% respondents had maximum people’s participation index score. At evaluation stage, respondents had (60.03%) maximum people’s participation index score.

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