Awareness and Participation in Watershed Development Programmes and Its Impact

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Introduction:

A watershed defined as a geo-hydrological entity or an area that drains at a common point on the drainage system. It is bounded by the ridge line, which starts from and classes the same common draining point duly encircling the watershed area. In other words, a watershed is defined as "the land mass and the natural resources having a common drainage point".

The drainage point becomes the focal reference that decides the watershed and its area that may include arable, non-arable, public and private lands. Identification and declination of the watershed helps in understanding the geo-hydrological relationships between different landmasses within the watershed and thereby facilitate scientific conservation plans to be developed.

A watershed is a hydrological unit that has been described and used as a physical biological unit also and on many occasions as a socio-economic-political unit for planning and management of natural resources.

Participation of people in the developmental acuities is very important for the democratic and caste based economies like India. If people participate properly in the government programmes, then only the programmes and policies get success. With respect to the watershed programmes peoples participation is very important tool.

There are numerous of studies on watershed development programmes and its impact on various socio-economic indicators. Important studies are Biradar (1991), Dayanand (2001), Farrington and Lobo (1997), Hanumanthiah and Nataraj (1989), Kallur (1991), Marothia (1997), Sinha (1995) and others.

However, studies related to awareness and participation of watershed programmes in Karnataka and its impact analysis at gross-root level are a few. Hence, an attempt has been made in this study to fulfill this research gap.

Objectives:

The specific objectives of the study are

- To study the people's awareness of about the Watershed Development Programmes in the study area
- To analyse the participation level of stakeholders in the Watershed Development Programmes in the study area
- To study the impact of Watershed Development Programmes in the study area

Methodology

The watershed development programme in Haveri district (Kalledevaru sub Watershed Project of Byadgi taluk) of Karnataka was purposely selected for the study. Haveri district is a newly formed district comprising of 7 taluka The district has the total geographical area of 4,85,058 ha, with a cultivable area of 3,47,540 ha.. The basic objective was to evaluate the benefits in terms of increased crop yields and farm incomes due to continued adoption of improved dry land practices. Seven villages of Haveri district have been selection of the field work viz., 1. Kalledevaru 2.kalldevaru II (thanda) 3. Arabagunda. 4. Kengonda 5. Alagaere-I 6. Allagere-II and Motebennur. Random Sampling Design was employed to select the sample farmers for collecting primary data for the study. The primary data would be collected from 255 farmers over the watershed area.

Awareness about the Project Work and Activities

It is clear from table 1that awareness is one of the important behavioral characteristics to ensure the people's involvement. It was found that people, in general, were aware of the scheme with the overall awareness level of 86.00 per cent in watershed

Table 1: Awareness about the Project Work Activities

Particulars	Awareness	Percentage
Soil erosion is prevented	120	96.00
Land value increased	124	99.00
Land value improved	120	96.00
Drinking water problem is solved	64	51.00
Sense of belongingness of land	99	79.00
Self-confidence developed	96	77.00
Income increased	119	95,00
Improved unity among people	100	80.00
Employment opportunity increased	113	90.00
Fodder availability increased	110	88.00
Role of money lender minimized	99	79.20
Livestock increased	116	93.00
Benefits to landless	121	97.00
Adoption of new technique in agriculture	122	98.00
Overall awareness	--	86.00

Source: Field Work

People's Participation

Active participation of community at every stage of watershed development programme, i.e., planning, implementation and maintenance/follow up is a must for effective development and sustenance of watershed activities. This also helps in building of their capacity, sense of belongingness and sense of responsibility. The overall participation is quite high, i.e., 90.00 per cent of the people actively participated in watershed project.

Table 2 presents information about people's participation of sample respondents in watershed area.

Table 2 awareness about the Project Work Activities

Particulars	Participation	Percentage
Involvement of people has increased as compared to others	117	93.60
People are involved at every stage of implementation and development of the project	114	91.20
Built up close interaction between farmers and the staff of the project	113	90.40
Facilitated taking common action by group of people	110	88.00
Better utilization of local resources	112	89.60
Participation has created awareness among farmers about the technologies recommended	117	93.60
Better social interaction is developed among farmers after the implementation of the project	112	89.60

Source: Field Work

People's Participation in the Planning and Implementation of the Watershed Projects

Table 3 gives details about the sample respondents regarding implementation of project. It is clear from the able that it is quite interesting at the time of planning the project, the overall participation was 93.00 per cent, which was quite high, but the same enthusiasm is not at the time of implementation of the project. The overall participation rate is 72.00 per cent. However, people are actively participating in watershed project. People's participation reflects that the extent of the people's participation at different stages was good, because of more motivation by the project staff.

Table 3: Opinions of Respondents Regarding Planning And Implementation of Project

Sl. No.	Particulars	Opinion	Percentage
I.	**Planning Stage**		
1.	The watershed staff have organized meeting and convinced the people about its objectives	119	95.20
2.	The staff discussed with the farmers and considered their views in planning the project	111	88.80
3.	Bench mark survey is conducted in the area involving farmer before preparing project	121	96.80
	Total	--	93.00
II.	**Implementation Stage**		
4.	Technical knowledge of farmers has improved after project implementation	120	96.00
5.	Seasonal migration of people has come down because of employment generation in the project area	35	28.00
6.	Community lands have been utilized and vegetation developed because of the project	109	87.20
7.	Technical knowledge of farmers has improved after project implementation	100	80.00
	Total	--	72.00

Source: Field Work

Impact Assessment of the Watershed Development in the Sample Villages

Watershed development led to significant change in additional area brought under cultivation Table 4 gives the information about impact assessment of the watershed development in the sample villages

Table 4: Impact Assessment of the Watershed Development in Sample Villages

Sl. No.	Indicators	Before project	After project	Performance in percentage
1.	Total cropped area acres	636	716	12.50
2.	Yield rates (all crops in kg. per acre)	457	813	77.80
3.	Number of days employment	214	359	67.40
4.	Income (Rs.)	17551	35934	102.00
5.	Average amount of loan (Rs)	11416	25464	123.00
6.	Land value per acre (Rs.)	24403	85648	250.00
7.	Migration – number of persons	49	35	28.50

Source: Field Work

It is observed that area under cultivation increased by 12.50 per cent along with change in cropping pattern. Average yield per acre increased from 457 kg. to 813 kg., i.e., by 77.80 per cent. Employment opportunities also enhanced average employment (man days) increased from 214 days to 359 days, i.e., by 67.40 per cent. Increased productivity and employment automatically increases the income of sample households.

The average income increased by 102.00 per cent. Credit is an important indicator of development. Credit increased by 123.00 per cent. Land value also increased significantly, i.e., by 250.00 per cent. Rate of migration has come down by 28.50 per cent

Conclusion:

The watershed development programme has proved to be beneficial to the farmers in dry lands. The programme has brought in impressive results through increase in production and productivity. It is also consistent with the maintenance and sustainable use of ecosystem. There is also shift from inferior cereals to high yielding varieties and commercial crops. The major factors contributing to this success are the initiatives taken by NGO's and People's participation in the Programme. A sustained increase in productivity increased through low cost technologies is very important we have to proceed from "Green Revolution to Evergreen Revolution

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