Review of Biological Mechanisms of Public Participation in Watershed Management Operations Guilan Watershed

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ABSTRACT

Aquiferous management of Guilan province, with spending considerable expenditures, during 1992-2007 could perform biological aquiferous operation in aquiferous grounds of 92500 ha. Undoubtedly, gaining expected results and success in programming and performing these kinds of plans are important. The results obtained form these researches show that enjoying humanity participation is one of the most effective factors in plans success, such as aquiferous operation, so that, whenever there was humanity participation in different stages of projects, such as decision making programming, performance, keep and main tainings resulting success was more tangible. So, in order to knowing scientific approaches in attracting participation of rurals in aquiferous research plans, present research lasted for two years in four aquiferous districts of province in villages of biourzin (south), kasmeh jan (west), (oman north-eastern) and goulak (east). We referred to Archive of aquiferous active of aquiferous activities between years 1992-2004 to get some information for doing this project. Independent case variables were including role of local leaders and deans, owner ship, turnover retardation from biological operation, theary of peple and etc. Statical society including people of four mentioned villages which slightly samples were interviewed dy questionnaire personaly and in a random method. Gathered information were analyzed by statistuical software (spss) and in a non-parametric method. The results showed that there was a meaningful correlation between aducational level variables and way cooperation with cooperation rate.

Key words: Participation rate, biological operation, aquiferous, Plan of Guilan, Success rate, Biologic project, Watershed. Guilan.

Introduction

The soil and water resources as the main capital of each country that the conservation and efficient use of them would be an effective step towards achieving sustainable development. Watershed management activities of the movement as a conscious, purposeful and determined by the human society in order to prevent waste of water and soil erosion occurs, the main use of water resources and soil quality and comprehensive development of the country that the necessity and importance of these activities are not secret to anyone. Success in watershed management projects depends heavily on the cooperation and participation of villagers in all stages of its implementation. In explaining the relationship between the executive and the importance of watershed management plans for rural farmers play an important role in the success of the collaborators.

Much research on the role and importance of public participation in the project's success and the factors influencing people's participation has been made:
Eftekhari [1] in a study entitled "Place people in sustainable rural development with emphasis on the centrality of human reported that Satisfaction with the partnership approach to provide rural people and local institutions in the framework of the community as a whole and is a major Component of development.

Khobfekri et al [3] in a study entitled " Popular participation in the Watershed Basin of origin change Taftan, examine the social impacts of the activities in the Watershed Basin Taftan in the Sistan and Balochestan province. In this study, was clear that people participate in the activities of the Watershed Management to speed up the process of implementation, cost reduction, job creation and attracting financial and spiritual capital of the villagers.

Ganji [2] also in a study entitled " Participation of rural and urban development strategy, To achieve this result without the participation of developing balanced, desirable, and may not be comprehensive and non-participation of the people, can intensify the class divide.

Nasri [6] in his study entitled" Administrative practices and incentives for private sector participation in public projects, reported that Participation in investment projects in natural resources very important factor in restoring the damaged natural resources and reduce And above all costs to protect and restore natural resources to be found. Mikkelsen [4] in a study entitled" The role of public participation in the upstream watershed area Watershed reported that Conservation of natural resources with local communities and rural people and was very efficient and useful and is enforcement of conservation and proper utilization of natural resources and the formation and development of rural services in villages that can be achieved.

Napir et al [5] in their study entitled" How to conserve water and soil for agricultural production systems in rural areas reported that One of the successes in the utilization and conservation of soil and water in rural areas is participate People in programs and policy.

Most studies show that the main factor in the success of public participation goals and projects, Better protection of water, soil and natural resource areas and to achieve balanced development is good overall. In this study also to investigate the biological factors in attracting people's participation in the successful operation of watershed management of the Guilan province.

Material and methods

The study of the whole of Guilan province, Four of East, West, South and Northeast were used for the statistical community.

Then the reports were a watershed studies, geological and topographic maps and documents selected from the archives of the four basins of watershed management activities from 1992 onwards were prepared. Based on field goals and plans with regard to the limitations contained in the four villages, four of the eight basins in question.

And in each region based on existing constraints, Watershed management was under 20 percent of the basin that were randomly selected. And surveys in selected areas between all those involved in watershed management plans, identification and were randomly distributed and Factors in attracting the participation of the villagers were investigated.

According to The documents contained in the Basin Watershed Management, a village of about twenty people has been actively involved in biological functions.

Some Details of the samples randomly from the four regions are as follows:
A. Emam region from Polrood watershed for Amlash City: 19 people.
B. Golak region from Siyahkal-Deylaman city watershed: 16 people.
C. Biorzin region from roodbar city watershed: 20 people.
D. Kasme jan region from Talesh city watershed: 17 people.

Variables in this research were including the role of local leaders and elders, late returns of watershed management projects, methods of participation, ownership, education and , and participation rates as the dependent variable were examined. The variables measured by Liker range and were evaluated and analyzed the data using Spearman correlation coefficient (Spearman Correlation) was used.

Position Basins:

Details of geography, water, soil and location of basins under study are as follows:

![Fig. 1: Position of the four regions in the Guilan province.](image-url)
Results:

In this part of the description and analysis of data tables is presented below:

Table 1: Spearman correlation coefficients between the level of participation as the dependent variable and independent variables (first group).

<table>
<thead>
<tr>
<th>Variables role</th>
<th>Participation rate</th>
<th>Age</th>
<th>Knowledge</th>
<th>Elders</th>
<th>Ownership</th>
<th>Education</th>
<th>Late returns</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation rate</td>
<td>1</td>
<td>-0.138</td>
<td>0.118</td>
<td>0.186</td>
<td>0.293</td>
<td>0.153</td>
<td>0.046</td>
<td>0.012</td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>0.164</td>
<td>-0.322**</td>
<td>-0.164</td>
<td>-0.055</td>
<td>0.089</td>
<td>0.337**</td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>1</td>
<td>0.206</td>
<td>0.325**</td>
<td>0.134</td>
<td>-0.032</td>
<td>0.137</td>
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<td></td>
</tr>
<tr>
<td>Elders</td>
<td>1</td>
<td>0.394**</td>
<td>-0.016</td>
<td>-0.014</td>
<td>-0.247*</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ownership</td>
<td>1</td>
<td>0.16</td>
<td>0.04</td>
<td>-0.028</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>1</td>
<td>0.273*</td>
<td>0.299**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Late returns</td>
<td>1</td>
<td>0.279*</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilities</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**And* significant at the 0.01 and 0.05 levels, respectively

The Correlation Between Age And Turnout:

The participation rate was negatively correlated with age (-0.138). Means that aging is expected to participate in projects that reduce the efficiency of late. Negative correlation (-0.322) between age and the role of elders in the 99 percent confidence level is significant; it can be much above expression.

Correlation Analysis Between Variables And Levels of Participation:

Statistical correlation between education and the participation of rural people with a positive coefficient (0.153), indicating the importance of rural education issues. In many studies by other researchers has announced that Much more training for local people to be held And in that period to explain the goals and plans need to be biological, Partnership with rural demand is expected to face.

Correlation Analysis Between Variables of Knowledge And Participation:

Positive statistical correlation (0.118) between the awareness of the advantages and disadvantages of biological projects and their participation rates indicate that this, If we want to explain to local residents as well as the Watershed and Watershed activities, and a bright future for the people to explain the information they need to add this to their active participation in the plan will achieve.

The Correlation Between The Elders And The Participation:

Due to changes in social and economic fabric of the countryside which is rapidlyand the local councils, mostly with the Council's position that local people are being replaced. Despite this positive correlation in this study (0.186) shows that, yet the role of elders in many rural areas the participation of affected villagers knew and must place reasonable procedures to be strengthened.

The Correlation Between Ownership And Participation:

The acquisition is expected to draw natural areas, participation of rural people to work on watershed management can influence these variables can be emphasized.

Positive correlation (0.293) indicates that this kind of study is expected in many areas. at the beginning of this material may create incentives for farmers, but in the long term possibility, it will enhance participation incentives.

Correlation Analysis Between Variables, Banking Facilities and Levels of Participatio:

Statistical relationship between the amount of banking facilities and the participation of villagers (0.012) shows that, Facilities alone is not the motivation, determination and effective participation. In the medium term financial arrangements may be appropriate for the biological functions of plant work, Small dams to store water and generate increased interest in cooperation in the rural watershed management projects were successful, but that enterprise is not recommended for such a loan with them.

Correlation Analysis Between Variables of Late Returns and Turnout Watershed Projects:

Positive statistical correlation in this study (0.046) and the small observed. To ensure greater participation of villagers in the areas of natural, Can provide the data that is important to them. These results indicate that ensure continuity of care to villagers through the allocation of resources and inputs necessary for the proper facilities, will encourage their implementation and protection of biological functions.
Table 2: Spearman correlation coefficients between the level of participation as the dependent variable and independent variables (second group).

<table>
<thead>
<tr>
<th>Variables role</th>
<th>Participation rate</th>
<th>Literacy</th>
<th>Information transfer</th>
<th>How to participate</th>
<th>Attitude</th>
<th>Job</th>
<th>Participation motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation rate 1 0.250* -0.038 0.235* -0.043 0.179 0.193</td>
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<tr>
<td>Literacy 1 0.164 -0.004 -0.162 0.204 -0.106</td>
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<tr>
<td>Information transfer 1 -0.272* -0.18 0.062 0.290*</td>
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<tr>
<td>How to participate 1 0.193 0.049 0.561**</td>
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<td>Attitude 1 -0.027 0.044</td>
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<td>Job 1 -0.082</td>
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<tr>
<td>Participation motivation 1</td>
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</tbody>
</table>

**And* significant at the 0.01 and 0.05 levels, respectively

The Correlation Between Literacy and Participation Rate:

Statistical correlation between education level and participation of villagers, a factor of 0.250 and 95% is observed. This highlights the importance of literacy that will be directly related to the participation of villagers. Therefore, it is recommended that before implementing such projects executors to take care to identify people literate.

Correlation Analysis Between Variables and Data Transmission Rates of Participation:

Statistical correlation between the amount of data transfer and partnerships with rural and small negative coefficient (-0.038), shows that Watershed projects in data transfer mode for the attraction of rural people and their participation will be effective when the Technical and scientific information with clarity and vision, and simply be transferred to farmers.

Correlation Analysis Between Variables of Participation And Contribution:

The correlation coefficient between the villagers and the participation of 235 / 0 and 95 percent is significant. Villagers can plan to have the resources and facilities, Participation in the labor force participation and have provided some inputs.

The Correlation Between Attitude And Level of Participation:

Statistical relationship between the attitudes of villagers (with the approval of projects, biological) biological and extent of their participation in projects with negative correlation coefficient (-0.043) is somewhat remarkable.

Can be concluded that the rural perspective is more positive than the biological Watershed. They can agree to implement such projects and catching them, said the turnout. Watershed development in rural communities and promoting appropriate educational programs, in this regard will be very effective.

The Correlation Between Changing Jobs And Beneficiary Participation:

Statistical relationship between employment and the exploiter of their involvement with the correlation coefficient (0.179) were observed. This view is analyzed so that workers are more willing to cooperate and participate. Other researchers have also found similar results [7].

The Correlation Between Participation And Motivation Levels of Participation:

Statistical relationship between motivation and participation of villagers in partnership with the correlation coefficient 0.193 were obtained, so we can say that participatory activities are attracting people with different motives. This study showed that, Motivated many people to use facilities on inputs and activities are participatory in the Watershed.

Conclusion:

Statistical correlation between education level and participation of villagers, a factor of 0.250 and 95 percent is significant. This indicates the importance of rural education and awareness is the goals Watershed, so to the executors of such projects should be implemented to identify individuals with pre-literate and aware of their local action. Statistical correlation between the degree of involvement and participation of villagers, a factor of 0.235 and 95 percent, meaning. Should be given the resources available and accessible to villagers, Implementation of their plans, Request helped.

For example, participation in the provision of inputs, with emphasis on facilities and free inputs, Can be much more effective than focusing on the financial participation of villagers in the project goals.

Positive and significant correlation between ownership and participation of villagers (0.293) was showed. This shows that the ownership, and create areas for the exercise of private property in the biological will enhance participation incentives.
Positive and statistically significant correlation between knowledge and success in biological control projects have been observed. Therefore, qualitative and quantitative development of workshops and briefing to raise awareness and empowering people can be helped.

Suggestions:

The role of natural resources in human lives, the importance and necessity of protecting it is a good feeling. One of the most effective solutions in the conservation of natural resources, taking advantage of popular participation in watershed management is biological. Planning and decision making related to land one of the ways of the natural resources and watershed management is comprehensive. Government policies in project implementation, including biological, Restructure the rural economy watershed areas, People's participation in projects, biological, Management practices on the fields of natural resources and watershed basins, water and soil conservation, vegetation, and ultimately boost employment and increase income of watershed dwellers. Suggestions on ways to successfully implement the operation of biological and watershed management plan will be presented as follows:

1. Renewable views of villagers, local leaders and trusted colleagues in the decision making and planning and implementation.
2. Using of educational facilities has a certain extension of the local leaders and villagers are interested in other activities outside the regional watershed management.
3. Finding the ways that indigenous knowledge in each watershed to be used by people.
4. The establishment of Associations watershed the participation of farmers in water management and therefore the investment in water and soil is more suitable.

5. Implementation of Principle 44 and Article 11 of the Ministry of Agriculture Law, in association with the watershed management practices on soil and water resources by farmers in watershed areas, which can move in the direction of Government Policies on the transfer of duties, distribution and conservation of natural resources and watershed used.

References