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Investigate and Identify Factors Affecting the Success of Biological Watershed Operation of Gilan

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Abstract: One of the main sources of economic development in any countries is the rate of soil and water resources that conservation and efficient use of them could be an effective step towards achieving sustainable development, watershed activities perform as a conscious, purposeful and deliberate movement on the humanitarian community to avoid waste water and soil erosion,The main use of soil and water resources and the necessity of comprehensive development and implementation of Such activities are not secret to anyone. On the other hand, it seems the success of activities and Watershed Management Projects are depend on Villagers collaboration in all stages of projects implementation In other words, whatever the partnership and the executive activities of the Watershed are more the successful activities will be more either. Thus justifying the importance and performance objectives of Watershed projects for rural farmers also evaluates and identifies factors influencing on the success of biological Watershed of Guilan are very important as well. Besides the destruction of the natural resources in the Guilan province and increased migration, poverty and unemployment among rural (due to single product of the area) and also performing operations in a wide range of biological Watershed lands by Watershed management of jihad-E- Agricultural organization of Guilan. Necessary to investigate and identify factors affecting the success of biological operation in the Watershed of Giulan and provide solutions methods and shows scientific approach in this regards. In this study, the field analysis, the questionnaire has been used as the main tool for gathering information. Effective Factors and independent variables explored include people attitudes towards the biological operation, villagers awareness, use of educational television programs, age, education level, income level and dependent variables, was the success rate of biological operation. Above variables based on Lykrat ranges (a distance scale with five options) were ranked. Statistical community, including residents of villagers which involved in Guilan biological Watershed operation during1992 to 2004 which due to the extent of the area first the whole province, according to people participation involved in activities divided to three area East, West and South and the appropriately. 20% of the samples were randomly selected in each region. Collected data by using of statistical software spss and statistical methods such as (Non-parametric) and by using of Spearman correlation coefficient processed and analyzed. The results showed that among attitudes and awareness of the villagers, age, using level of educational programs and the rate of the project income with rates of the Successful biological operation have a significant correlation but with the education level and participation level in successful of biological operation.

Key words: Rate of successful · Watershed project · Guilan

INTRODUCTION

With regard to issues such as destruction of natural resources and Scio-economic problems in villages such as Low income, unemployment, immigration and other villagers problems as well as the cost of society and government for the destruction of natural resources and rural poverty and unemployment could be tolerate. Considering the experiences of other countries and world and research suggestions and check that the solutions to these problems, the villagers participate in various activities in Scio- economic activities in villages such as Watershed and also Watershed biology and operations in the level of 92,500 hectare carried out on the land in

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Gilan over the past decade by Watershed Management of Guilan and costs of this operation from financial, environmental and social point of view, It is necessary to evaluate on the causes and effective factors in the success of this project and motivate the villagers towards the reduce the related cost and a more active of villagers, Because of the importance and role in the success of the projects that have contributed to the study to examined effective factors influencing participation and success of projects. Motavali [1] in his study entitled "Evaluation of factors contributing to desertification in the Semnan" he reached a significant relationship between awareness of the natural resource projects, age and education, employment and participation rates of villagers. It was clear that between the successes rate of desertification projects and participation rate there is a positive and significant relationship. Ganji, [2] in study on the entitled "The participation is the most important strategy of urban and rural development," concluded without participation, balanced developing, optimal and comprehensive is not possible and lack of public participation, divide between the class will intensified. Nasri, [3] determined that participation in investment of natural resources projects could be very important factor in restoring natural resources lands and reduce the rate of degradation and most important, reduce costs of conservation and restore natural resources. Sharitee & Qomi [reported by 2] showed that extension by the implementation of procedures such as h holding training classes such as educational- extensional and TV and radio programs can attract more villagers and gain their assistance in the preservation and restoration projects and rehabilitate rangeland, In summary, the study showed that the results of participation, will lead to increased production, land integrity, reduce degradation, increase employment and Successful of constructional projects. In the present study also examined to evaluate and identified the effective factors on successful of biological watershed operation of Guilan.

MATERIALS AND METHODS

Order to the goal of project the use of documentary sources in the province projects implemented (research of all the document & south East and west 3 regions of Guilan watershed study booklet) and country and also the experiences of other countries in the form of popular participation in watershed and also research on the subject of study provide more precise context of this plan and this its based on field studies using questionnaire and interviews with experts and managers were performed. As matter of fact the questionnaire is the main equipment for achieving the objectives of project. The main factors and variables that influence the success rate of biological functions that have been considered in this study include:

- The rate of people awareness advantages and disadvantages of biological project [4].
- The participating rural education in biological projects.
- Attitude of villagers towards the biological projects (consent of individuals in biological projects.)
- Rural employment and unemployment before the beginning of their participation [5].
- Role income generation projects.

The first variable (the rate of awareness) based on question about information on biological projects based on the rate of spectrum of rural villagers' knowledge and also their source of awareness and information was classified.

- The second variable (educations) based on academic year was classified.
- The third variable (attitude) based on spectra measured such as likert spectrum was measured and classified[1]
- The fourth variable (employment) the first two categories of employed and unemployed and jobs in rural areas is classified by type [6].
- The fifth variable based on income rate spectrum like likert spectrum was measured and classified.
- Given the above and those in the questionnaires and scales of measurement in research is presented as follows:

In the next stage the villagers responses to questions and appropriate statistical methods to help (Non parametric correlations) between variables were analyzed and it is used in designing a rating scale questions of method of spectrum correlation were used to analysis between variables [7].

Note at this stage of the biological factors affecting the success rate (the rate of people's awareness of advantages and disadvantages of biological project participating in rural education biological project, attitude of villagers toward the biological project, the rate of peoples agreement with implementation of biological

[1] Research method in social science , edited by Bagher Sarokhani

project, occupation owner, project income,…) assumed as independent variables the biological success rate as the dependent variable in the form of questionnaires question, rating based on the quantity and range of likert [8].

After the turn of qualities factors to shortly factors were simply non parametric tests to test the correlation between variables, on the other hand, since west south east region of Guilan in 3 respondents each received a different score, the comparison of these regions were acquired from the rank.

Statistical Population, Few Samples, Sampling Method

Statistical Population in this Research Includes: Residents of villagers that watershed biological practical that due to the sampled population with at least 20 percent (74 family)of the total number of zones by planting trees in logic east west south province that peoples participation in watershed activities and carried out in the selection of appropriate and then percentages specified in each region was determined randomly with concern the above description of 14 regional watershed biological were done with participation of people in Guilan.

- 4 of the 74 participating were introduced as operation follows:

A: The watershed of amlash city polrood number 19
B: Golak watershed areas basins in the siyakal city had total of 16 people (deylaman basin to the east of Guilan).
C: Rudbar biorzin city area (south basin of Guilan) to 20 people
D: Talesh kasmejan city area (west basin of Guilan) to 17 people

Explain that according to available documents and visiting from Guilan Watershed Management and also according to office assessor, in fourteen watershed basins biological operation implemented by people participation in each basin thirty villagers participated and Dispersion of watershed are as followed:

- East zone 8 watershed
- West zone 3 watershed
- South zone 3 watershed

Analysis of Research Findings: This part evaluates and analysis obtained data as presented below:

1-6 Correlation Between Age Variable and the Rate of Success: Relationship between age variable and the rate of success there is positive correlation (0.230) in confident level and has 95 percent significant. Means whatever participators are expertise the rate of success will be more in such projects.

2-6 Correlation Between Variable of Education Level and Rate of Success: Between variable of education and rate of success did not observe significant correlation.

3-6 Correlation Between Variables of TV Program and Rate of Success: The observed relationship between TV programs and the rate of success on watershed projects indicated this matter that there is not any relationship between TV programs and the rate of success on watershed projects.

4-6 Correlation Between Variable of View and Rate of Success: Relationship between variable of view and rate of success in high level has negative correlation (-0.472) it showed the confident level of 99. This relationship indicated that the rate of success depend on individuals which agree with the projects implementation otherwise in absence, implementing of such projects will be very hard.

5-6 Correlation Between Rate of Awareness Variable and Rate of Success: Despite of previous paragraph statistical relationship between two variables, the rate of awareness and success on implementing of biological projects with highly positive correlation (0.498) with 99 percent confident was significant. Its means that awareness of natives from watershed activities is highly determined.

6-6 Correlation Between Project Income Variable and Rate of Success: Correlation relationship between income variable resulted from performing of such projects and its success will verified in future negative (-0.395) and in level of 99 percent is significant. Result showed that in this aspect too much effort needed.

7-6 Correlation Between Level of Participation Variable and Rate of Success: With regarding to the rate of positive and small correlation (0.074) observed between two variables, it showed that people willing to cooperate in different level specially physically to implement watershed projects. This relationship showed that whatever level of participation on implementing of project being more, they will reach more success.

Table 1: Scale measuring the level of education

Illiterate	Primary	Guidance school	Post-diploma-diploma	MSc-higher
1	2	3	4	5

Table 2: Scale measuring the rate of people's awareness from biological project

Very little	Little	Moderate	Much	Too much
1	2	3	4	5

Table 3: Scale measuring the people attitudes towards the biological project

Strongly disagree	Disagree	Apathetic	Agree	Strongly agree
1	2	3	4	5

Table 4: Scale measuring the income role of project in success rate

Very little	Little	Moderate	Much	Too much
1	2	3	4	5

Table 5: Scale measuring the rate of success operation

Very little	Little	Moderate	Much	Too much
1	2	3	4	5

Table 6: Spearman correlation coefficients between variable rate of success as dependent and independent variables (first group).

Role of variables	1	2	3	4	5	6	7	8
Rate of success(1)	1	0.230*	-0.087	-0.340**	-0.472**	0.498**	-0.395**	0.074
	0	0.049	0.0463	0.003	0.000	0.000	0.000	0.533
Age(2)		1	-0.482**	-0.375	-0.188	0.164	-0.163	0.071
		0	.0…	0.001	0.109	0.162	0.164	0.548
Education level(3)			1	0.093	-0.162	0.126	0.012	-0.265*
			0	0.433	.0167	.0284	0.919	0.022
Tv program(4)				1	.0333**	-0.253*	0.200	0.349**
				0	0.004	0.030	0.088	0.002
View(5)					1	-0.598**	0.395**	-0.107
					0	0.000	0.000	0.366
Rate of awareness(6)						1	-0.379	0.005
						0	0.000	0.963
Project income(7)							1`	-0.078
							0	0.510
Participation level(8)								1
								0

Coefficient in level 5 percent** Coefficient in level 1 percent*

Table 7: Spearman correlation between rate of success and independent variables (second group)

Role of variables	1	2	3	4	5	6	7	8
Rate of success(1)	1	0.015	0.096	0.702**	0.110	0.640**	0.093	0.146
	0	0.897	0.414	0.000	0.351	0.000	0.429	0.214
Participation method(2)		1	0.561**	0.157	0.054	0.149	-0.368**	0.030
		0	0.000	0.180	0.650	0.206	0.001	0.797
Motivation Of participation(3)			1	0.269*	0.100	0.235*	-0.228	0.006
			0	0.020	0.398	0.044	0.051	0.957
Government role (4)				1	0.055	0.610**	-0.160	0.060
				0	0.642	0.000	0.172	0.613
Goal of participation (5)					1	0.187	0.044	0.179
					0	0.110	0.707	0.127
Project income(6)						1	0.029	0.302**
						0	0.805	0.009
Role of wise men(7)							1	0.394**
							0	0.001
Land ownership (8)								1
								0

Correlation in level of 5 percent* Correlation in level of 1 percent**

Table 8: Spearsman correlation between rate of success and dependent variables

Role of variables	1	2	3	4	5	6
Rate of success(1)	1	0.074	0.015	0.096	0.110	0.050
	0	0.533	0.897	0.414	0.351	0.670
Participation level(2)		1	-0.259*	-0.315**	-0.152	-
		0	0.026	0.006	0.195	
Participation method (3)			1	0.561**-	0.054	0.235*
			0	0.000	0.650	0.044
Motivation of participation (4)			1`	0.100	0.193	
				0	0.398	0.099
Goal of participation (5)					1	-
					0	
Rate of participation(6)						1
						0

Correlation in level of 5 percent* Correlation in level of 1 percent**

Table 9: Spearsman Correlation between rate of success and independent variables(forth group)

Role of variables	1	2	3	4
Rate of success(1)	1	0.323**	0.262*	0.442 **
	0	0.005	0.024	0.000
Role of education (2)		1	0.273*	0.299**
		0	0.019	0.010
Long yield (3)			1	0.279*
			0	0.016
Banking facility (4)				1
				0

Correlation in level of 5 percent* Correlation in level of 1 percent**

1-7 Correlation Between Variable of Participation Method and Rate of Success: Relationship between these two variables is positive and rarely small (0.015). This variable is component of underlying factor.

2-7 Correlation Between Motivation of Participation Variable and Rate of Success: Relationship between these two variables is rarely good and positive (0.096).this variable is also component of underlying factor.

3-7 Correlation Between Role of Government Variable and Rate of Success: Observed correlation between role of government and rate of success is very high and positive (0.702) and level of confident with 99 percent significant. This relationship showed that still government position is very important in successful of project implementation.

4-7 Correlation Between Variable of Participation Goal and Rate of Success: Correlation between this two variables are positive (0.110) and acceptable. This relationship showed that enhancing motivation and clear definition of approaching the goals of cooperation is about to determined.

5-7 Correlation Between Income Variable of Projects and Rate of Success: Correlation observed between this two variables are very high and positive (0.640) and confident level 99 percent significant (0.01). Implementing watershed projects are revenue able and villagers willing to cooperate more.

6-7 Correlation Between the Role of Wise Men and Rate of Success: Relationship observed between these two variables is (0.093). Although this is small but positive relationship between the researchers reported such a relationship (9).

7-7 Correlation Between Land Ownership and the Success Rate Varies: Correlation observed between the two variables is positive with correlation (0.146). The concept is that people tend to work in the field of Watershed Management in the future become the owner of land.

1-8 Correlation Between the Level of Participation and Success Rates: Relationship between success and various aspects correlation of participation is small

and positive and observed (0.074). This correlation is not significant and shows that this variable expression is a mechanism of substrate.

2-8 Correlation Between the Variables of Participation and Success Rate: Small but positive correlation is between these two traits (0.015). It is not significant but can be as a component of predisposing factors for success.

3-8 Correlation Between Variable Participation of Motivation and Rate of Succeed: Correlations between these variables with the success rate are higher than the previous two variables although this relationship is not significant. Motivation variable participation is a variable to achieve success.

4-8 Correlation Between the Variables of Participation and Success Rate: Statistical relationship between these two variables shows positive correlation (0.110) like some of the variable is component of success to achieve goal.

5-8 Correlation Between Variable of Participation Rate and the Success Rate: A positive relationship was observed between these two variables but that does not show any compelling reason for a participation leads to success.

1-9 Correlation Between Role of Education Variable and Rate of Success: Significant correlation and positive relationship (0.323) between education effect and approach to successful level and confident observed was 99 percent. Above result showed that rate of success on biological projects of watershed had close relationship with success of education. Role of education is raising capability of individuals.

2-9 Correlation Between Variables of Long Yield and Rate of Success: There is statistical relationship between long yield of watershed biological operation (Seedling, such as Nut, Hazelnut … etc) and rate of success, positive correlation is (0.262) with confident level 96 percent. This result showed that to cover expectation of native people to harvest Nut and Hazelnut production and also to enhance income basket in future they willing to cooperate and reach to success.

3-9 Correlation Between Variable of Banking Facility and Rate of Success: In this research there is close relationship between awarded banking facility to villagers and success of biological projects in developing watershed in the area. Positive and significant correlation (0.442) observed and level of confident was 99 percent. Concept is that, enhancing people motivation through financial assist for attending in biological watershed operation this can help them to reach success in watershed developing.

CONCLUSION

Present research conducted to evaluate and identify the effective factors on success of biological projects by villager's cooperation and watershed management. Result obtained as followed;

- Observed correlation between role of executive administration and rate of biological projects is positive and confident level 99 percent significant. This relationship showed that position of executive administration on performing of projects was determined and increasing watershed credit is necessary.
- Also, statistical correlation between role of awareness and success of implementing biological projects was positive and level of confident was 99 percent and significant.
- Significant correlation and positive relationship observed between educations and approaching to success on implementing watershed projects, confident level 99 percent, above result showed that rate of success on biological projects of watershed has close relationship with education and will raise individual's capability.

Suggestions: The role of natural resources in life importance and necessity of protecting it well being felt.

One of the most effective solutions in the conservation of natural resources is taking advantage of popular participation in the Watershed biological activities. Planning and decision making related to the natural land is one of the strategies of natural resources and watershed management. Government policies in project implementation, including biological, economic organization of predominantly rural watershed, People's participation in biological projects, the system acts on the fields of natural resources and watershed basins, Water and soil conservation, vegetation and ultimately boost employment and increase income of rural settled in watershed basin. Suggestions on ways to successfully implement the Biological and Watershed Management Project will be provided as follows:

- Comments from the villagers, trusted colleagues and leaders in decisions, planning and implementation.
- Use of educational and extensional facilities and prepare promotional visits to local leaders and villagers are interested in other activities outside of the Watershed basins.
- In each watershed to find ways that indigenous knowledge is used by people.
- To set up a WUA farmers to participate in watershed management in water and consequently more investment in water and soil department.
- As a matter of law and Article No 44 of establishing of Ministry of jihad- E-Agriculture and by establishing watershed organizations caused to management action on watershed soil and water resources has been predominantly by farmers This part of the tasks can be used to transferred with Governmental Policies on the transfer, distribution and conservation of natural resources and watershed.

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