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Role of Cultural and Social Factors on Rural Participation in Conservation of Natural Resources' Plans (Case Study: Rural District of Azadlo, Moghan Township)

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Abstract: The purpose of this study was analysis of role of cultural and social factors in attracting rural participation in plan's of conservation of natural resources. Applying a random sampling, a survey was conducted among 260 head of households in Azadlo rural district in Moghan Township in Ardabil province, Iran. To collect data, a questionnaire was designed. Results showed that among the cultural factors "encouraging local leaders during meetings" and "holding sessions for solving problem by public participation"; and among social factors "involving villagers in decision making" and "developing cultural and literacy centers" have high priority. Results also revealed that variable participation in plan's of conservation of natural resources has a positive significant correlation with income, the kind of main job, cultural and social factors. Regression analysis showed that the ability of predicting 0.21% variance between cultural factors and the amount of arable land.

Key words: Rural Participation · Culture · Social · Natural Resources Conservation · Moghan

INTRODUCTION

History of human culture can be called the history of crisis and destruction of environment [1,2] which from 18th century, by beginning of industrial revolution, this problem have increasingly accelerated [3]. On the other hand, considering the current trend in destruction of natural resources in the country and problems that make for present generation, degradation pace is not comparable to the action that are related to conservation and revival of natural resources. On the other hand, strategies applied in rural development are the main cause of environmental issues in most countries [4]. Because of close relationship of ecological and environment elements and rural people livelihood it can be said that natural resources are the main link in the chain of rural development [5].

Participation in development is a process that includes active and equal participation of all beneficiaries in setting the policies and strategies of development, planning, applying, controlling and evaluating of activities [6]. In other word, participation is a process that is caused by intervention of people who are interested in determining and meeting their own needs [7]. This action is neither passive involving in planned activities by others nor exploitation of social and economic activities but is a kind of active involvement in decision making about what to do, how to do and finally doing the work [8]. Theoretical and practical implication about participation potential abilities can be summarizes in five phrases [9, 7]:

- There is not a "best solution" For solving problems and planning.
- Expert's decisions is not necessarily better than non-specialist one.
- Planning Task can be transparent.
- All people and groups should be gathered in democratic and open atmosphere.
- Processes are being continued and continuously are being changed.

Because of importance of participation, governmental organization from the last three decades seriously have started to attract public participation in management of natural resources as a fundamental step in sustainable development. In this regard some of them emphasized that deprivation of people from participation in these activities makes development and growth significantly meaningless [10, 11].

In recent years, especially from the beginning of 1970s, participatory approach of development, have received increasing attention [8]. On the other hand, emphasis on public participation in activities and decisions related to the natural resources, is one of the simplest and most efficient methods of these resources

conservation that goes back to 1930s, since that decade attempts for creating the appropriate condition and increasing motivation and willingness of local communities for the conservation of natural resources and improvement of biological condition has been started [12]. Among the reasons which led to public participation use in conservation of natural resources are: 1) to match predetermined rules and regulations with people desires and needs 2) to provide people access to their personal benefits without endangering environment 3) to apply potential characteristics of the region for improving productivity without adverse effects on environment 4) to rise society motivation for conservation of environmental value [13]. One of the main activities of conservative – extension programs, is institutionalization of managerial methods and mechanisms based on preparing local communities with the purpose of stimulus and mobilization of local people so that they collaboratively realize their ability in the region for the sustainable development [14]. Furthermore the purpose of the natural resources conservation plans is improving livelihoods, sustainable ecological systems and agricultural productivity, offering environmental services to improve financial, social, natural, physical and human capital and help solve complex problems affecting natural resources [15]. In fact, the concerns are expressed about public participation in natural resources conservation, will lead to questions like: which factors are effective in attracting public participation in natural resources conservation activities? What is the contribution of each factor in participation process? And which factor have stronger relation to people's participation? while several studies have been done by researcher in relation to effective factors in attracting public participation in natural resources' conservation's activities in other countries which have been reviewed as following, there is a lack in researches specifically addressed this issue in Iran context:

Mohammadi [16] in a study pointed to factors like social awareness, confidence in directors of plans, ethnic conflicts and social status as the most effective factors on public participation in watershed's plans. Shahrodi and Chizari [17] in a study investigated effective factors on the farmers' attitude toward participation in water users' cooperatives in Khorasan Razavi province and concluded that the variables of level of education, level of yearly income, area of cultivated land, social capital components, irrigation condition from villagers viewpoint and level of farmers' participation in management of irrigation networks, had a positive, significant correlation with farmer's attitude toward participation in water users' cooperatives. Ghasemi [18] in investigating effective social and economic factors on rural participation in development plans concluded that wealth, active membership in rural associations and owning orchard and agricultural field are among the most important factors affecting rural people participation in development plans. Shaeri [19] noted that economic, extensional, legal and regulatory factors are among the effective factors on participation. Movahedi [20], about effective factors in public participation, believed that the most important variable that caused people work collaboratively was their common benefit and interest. Hedjazi and Abaasi [21] in a study investigated the rate of participation among directors of "balance of livestock and pasture plan" concluded that level of education, symbolic ceremonies and meeting with environmental experts have the most effect on participation of director. Zarei *et al*. [22] in a study investigated effective factors on farmers' participation in management of irrigation networks in Jarqavieh district in Isfahan province and reported that the amount of cultivated land, agricultural experience and level of education were effective factors. Hedjazi and Arabi [23] in a study concluded that effective factors on attracting of nongovernmental organizations participation in conservation of environment were education, experience of environmental activities, providing the necessary field for social activities, mutual relationship of beneficiaries and authorities, familiarity with participatory process and methods and awareness about public participation capacities. Hassannejad *et al*. [14] in a study investigated the effective factors on members of rural development groups participation in conservative-extensional activities of international projects of Iran's carbon and pointed out that the most important effective factors on participation of rural developmental groups in conservative activities were the marital status, accommodation, age, the number of family members, yearly income of family and family lands area. Hematzade and Khalighi [24] in a study entitled analysis of effective factors on lack of participation of beneficiaries in rangeland and watershed projects concluded that age, level of education, lack of sense of belonging to plan, unfamiliarity with beneficiaries about the plan, not informing beneficiaries by the plan's authorities, low capital of beneficiaries, lack of extensional class and low investment of government are among factors affecting lack of participation. Farhadi [25] believed that the most

important principle in methodology of planning for public participation is establishing an independent and powerful local organization in each district or small city consisted of beneficiaries' groups in order to direct changes in environment around them. By establishing such an organization the whole following stages of participation plans will be facilitated through these organizations and their members. Rahmani and Majidi [26] mentioned that variables like age, education, family expenses, the duration of residence, status of housing were effective factors on increasing rate of women environmental participation. Huntsinger and Fortman [27] in a study showed that most of the demographic characteristics influenced on decision of peoples in conservation activities, he believed that not only benefits but also social factors, values and trends like education, age, income, location and area of pasture were effective on ranchers' decisions about conservative activities. Nadcar and Franklin [28] considered gender as a significant factor in participation in conservation activities of jungle resources. Vari [29] believed financial support and providing budget for participation's plans, stimulating factors, type of functions and activities of social institutions and personal characteristic were important factors in participation. Akabayashi [30] concluded that personal characteristic such as gender, age, development of ideas and familiarity of people with process of participation, being alert of the prevailing problems and acquiring information from previous attempts and activities of people and government were among the most important factors in participation. Stevens *et al*. [2] in a study about methods of attracting public participation in governmental planning concluded that personal and local attributes, values and culture are effective on participation. Khadka and Nepal [31] in a study entitled local responses to participatory conservation in Annapurna conservation area, Nepal, noted that for participation in conservative programs, plans should be matched with needs, values, motivations, benefits and specific social characteristic of local people.

Totally, economic, social and cultural factors and social characteristic of beneficiaries in participation in any activity like conservative activities influence participation. In other words, according to empirical evidences, recognizing local people's needs and other practitioners and recognizing the real place of them in effective participation in all stages of process, is the first step in any successful intervene in process of sustainable development of natural resources [32].

The main purpose of this research was to identify the role of cultural and social factors in rural participation in conservation of natural resources' plans in Azadlo rural district.

Of particular interests were to:

- Prioritize cultural and social effective factors in attracting rural participation in natural resources plans conservation.
- Identify personal characteristic which are associated with participation in natural resources conservation plans.
- Explore the relationship of cultural and social factors with participation in natural resources

MATERIALS AND METHODS

The study was conducted in Azadlo rural district in Moghan township which is located in Ardabil province, Iran. The rural district is constituted of 24 villages. This area has the population of 4932 people [33]. The capital of this rural area is Azadlo rural district is 150 Km far from Ardabil; the capital of province and it is located near the Iran-Azerbaijan border. The existence of broad areas of pastures and jungles provide a valuable potential for tourism and livestock but degradation of jungles and pastures have become a matter of great concern (Fig. 1).

Statistical population was including families of rural district of Azadlo in Moghan township in Ardabil province which were 750 households [33]. Applying Cokeran formula and a random sampling method, the appropriate sample for this study was calculated 260 households.

The main instrument of the study for data collection was questionnaire. This questionnaire was designed based on the literature review and constructed to meet the objectives of the study. Face validity of this questionnaire was approved by a panel of experts and reliability of which was measured by computing Cronbach's alpha coefficient, a measure of internal consistency. Cronbach's alpha coefficient was calculated at 0.97.

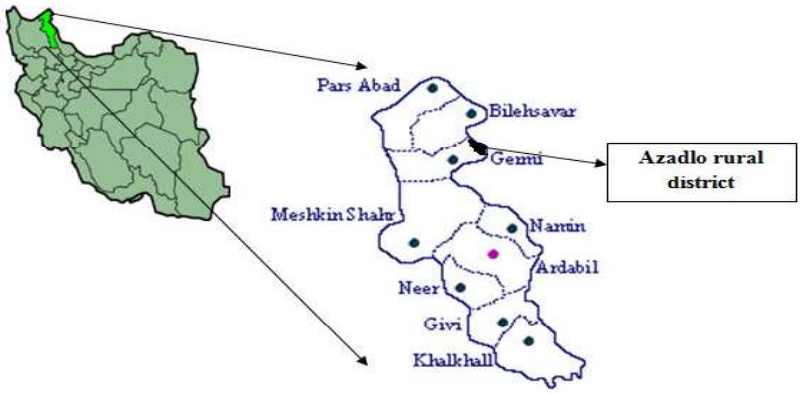

Fig. 1: Location of Azadlo rural district with in Iran

Dependent variable, participation in natural resources conservation plans, was measured by 7 items which were examining different levels participation. Except for the demographic characteristics, all of the variables in this study were assessed on a Five point Likert scale (where 1 = strongly disagree/very low and 5 = strongly agree/very high).

The obtained data were analyzed by SPSS for windows software. In this research, descriptive and inferential statistics were used to analyze collected data. For analysis of data, correlation analysis and stepwise regression has been used besides descriptive.

RESULTS AND DISCUSSION

Personal and Professional Characteristics of Respondents: Analysis of information showed that the studied sample consists of 192 male and 68 female. The average age of people was 44.70 years which were ranged from 23-87. The average number of family members was 5.31 people and the average monthly income is approximately 2760000 Rials. 80% were farmer. 90% of fields were managed by personal ownership. 29% of studied people had the diploma and higher degrees and 71% of them had degrees lower than diploma.

Prioritization of Effectiveness of Cultural Factors in Attraction of Participation of Villagers in Natural Resources' Plans as Perceived by Villagers: According to information provided in (Table 1), the most important cultural factors that were effective in rural participation in natural resources plans were encouraging local leaders during the meetings, holding sessions for solving problems related to natural recourses with public participation, publishing about methods of natural resources conservation in newspapers and present regulations about conservation's plans that shows that villagers are inclined to participate and attend in important decisions and acquire information. Visiting conservative plans, distributed poster in public areas and awareness about the activities that have been done are among the least important one among the cultural factors in attracting rural participation in natural resources conservation's plans.

Prioritization social factors in attracting rural participation in natural resources conservation's plans: according to the result that is offered in (Table 2), effectiveness of social factors in attracting rural participation in conservation plans showed that participating in decision making, expanding cultural and literacy centers, setting penalty for destructors of environment, creating owning right for people, had the highest rank. Also villagers believed that presence of active participating organization about conservative activities, lack of rules and regulations in governmental related organizations for rural participation, existent views in society about conservative activities, the relationship of natural resources research centers with executive sector have the least importance.

Effective Factors on Attracting Participation in Natural Resources Conservation: in (Table 3) relationship between participation and studied variables has been shown. Results of correlation analysis represented that participation is positively correlated with the kind of main job, amount of income, cultural and social factors. But it is negatively correlated with amount of arable land.

Table 1: Prioritization of the degree of effectiveness of cultural factors on attracting and participating in natural resources conservation's plans from villager's perspective

Cultural factors	Mean	Standard deviation	C.V	Priority
Encouraging local leaders during meetings	3.10	1.67	0.53	1
holding sessions for solving problems related to natural recourses with public participation	2.88	1.66	0.57	2
publishing about methods of natural resources conservation in newspapers	2.82	1.70	0.59	3
Present regulation and rules about natural resources conservation plans	2.81	1.74	0.61	4
Improving the level of awareness and people's information about conservation of natural resources	2.70	1.68	0.62	5
Holding extension workshops about the issues conservation of natural resources	2.68	1.58	0.59	6
Holding exhibition about methods of natural resources conservation	2.66	1.62	0.61	7
Holding presentation about different methods of conservation	2.65	1.66	0.63	8
Using local people in organizing conservative activities	2.63	1.65	0.62	9
Presenting training program related to conservation activity of natural resources	2.62	1.67	0.63	10
Holding cultural workshops	2.60	1.65	0.62	11
Awareness of performed actions in regards to conservative activities	2.57	1.64	0.63	12
Distributed poster in public areas	2.55	1.70	0.66	13
Visiting conservative plans	2.50	1.64	0.65	14

Table 2: Prioritization of effectiveness of social factors in attracting participation in natural resources conservation's plans from villager's perspective

Social factors	Mean	Standard deviation	C.V	Priority
Rural participation in decision making	3.38	1.65	0.48	1
Expanding cultural and literacy centers	3.23	1.74	0.53	2
Setting penalty for destructors of environment	3.16	1.67	0.55	3
Establishing property right for people	3.00	1.73	0.57	4
Creating cooperation among local people in implementing projects	2.99	1.52	0.50	5
Rural belief in importance of participation in projects	2.97	1.57	0.52	6
Creating common interest among villagers and directors of plans	2.95	1.75	0.59	7
delivering management of conservative plan to people	2.94	1.71	0.58	8
Creating spontaneous NGOs	2.93	1.68	0.57	9
Ability to communicate with villagers	2.92	1.63	0.55	10
Paying attention to main needs of region	2.89	1.73	0.59	11
Rural people trust in agents of plans	2.84	1.60	0.56	12
The way environment agent deal with rural people	2.81	1.59	0.56	13
The appropriateness of plans for region	2.80	1.55	0.55	14
Teaching culture of participation to planners of project	2.79	1.66	0.59	15
Existence of common benefits from conservation plans of natural resources	2.70	1.90	0.70	16
Responsibility of government about conservation activity	2.68	1.58	0.58	17
Research centers relationship with natural resources executive sector	2.57	1.61	0.62	18
Presence views in society about conservation plans of natural resources	2.55	1.63	0.63	19
lack of rules and regulations in governmental related organizations for rural participation	2.54	1.59	0.62	20
Existence of participating active agencies about protective activities	2.49	1.73	0.69	21

Table 3: The relationship between participation in natural resources conservation plans and the selected variables

variables	correlation	coefficient
Age	0.078	0.210
Number of member of family	-0.055	0.379
Education	-0.062	0.321
Time of residence in village	0.091	0.145
Kind of main job	0.130*	0.037
Active experience in main job	0.019	0.764
Amount of income	0.138*	0.026
The type of land ownership	0.027	0.666
The amount of arable land	-0.120*	0.050
Number of livestock	-.010	0.873
Cultural factors	0.447**	0.000
Social factors	0.343**	0.000

p<0.05. ** p<.01.

Table 4: Effective variables on rural public participation in natural resources conservation plans based on stepwise regression analysis

Variables	correlation coefficient (R)	R^2	Std. Error of the Estimate (B)	Std. Error	Beta	t	Sig
Constant	-	-	3.718	1.104	-	3.368	0.001**
Cultural factors (X1)	0.447	0.200	0.190	0.024	0.445	8.031	0.000**
The amount of arable land (X2)	0.461	0.212	-0.073	0.037	-0.110	-1.992	0.047*

F= 34.604

Y= 3.718+0.19X1-0.073X2

To assess the relative contribution of significant variables, a multivariate stepwise regression analysis was employed. According to the findings of (Table 4) two variables namely cultural factors and arable land were found to have a respectively positive and negative effect on the rural public participation in natural resources conservation plans. According to the standardized coefficients (Beta) it can be noted that cultural factors have positive and more relative importance and amount of arable land have negative and less relative importance in determining participation. The R^2 value of 0.212 with F value of 34.604 indicates the power of model for prediction its significance at 0.05 level of probability and reveals that 21.2% of variance in participation could be explained by 2 mentioned variables.

CONCLUSION

Considering the importance of human as the development aim on one hand and environment as the context of human activity on the other hand, the right of having a healthy environment for the current and future generations come to force, in this condition the role of public participation as a key factor in achieving human development and conservation of environment draw attention to itself so that human as the development axis can beside acquiring new capabilities and offering opinions and ideas, play an active and effective role in development. As results of the study shows, conditions and effective factors on attracting rural participation should be identified to design conservation plans based on characteristic of local people.

Analysis of the study's results show that most of the heads of the families were male and the job of most of them was agriculture therefore a focus on men and farmers can be more effective especially regarding the limited resources. Prioritization of effective cultural factors in attracting public participation showed that three most important items emphasizes more on participation of local leaders and increasing of awareness and informing. Prioritization of effective social factors on public participation implied that in rural people opinion they must have a continuous attendance in decision making process and also cultural and literacy centers should be developed. So, one of the most important factors in attracting rural participation is paying attention to local leaders and applying them, establishing cultural and literacy centers, offering necessary information about new methods in conservation's plans and in short more rural people participation in planning, implementing and evaluating in different phases of plans which will lead to their satisfaction must be considered. These results are consistent with the results of Stevens *et al*. [2], Khadka and Nepal [31] and other scholars. As Mushi [34] and Goulding [35] suggested that providing sufficient information about participation and identification of informative needs of people is one of the important factors in attracting participation.

Bivariate correlation analysis showed that variables amount of income, the kind of main job and cultural and social factors have positive and significant relation but the arable land area negative and significant correlation with attracting public participation. So it is suggested that for attracting rural participation in conservation plans of natural resources there should be more focus on peoples who have high income and less area of arable land which is consistent with results of Huntsinger and Fortman [27], Mohammadi [16] and Hasannejad *et al*. [14].

Stepwise regression analysis revealed that cultural variables and of arable land area are highly important in attracting rural participation. This consistent with Huntsinger and Fortman [27] and Akabayashi [30] findings.

According to this study findings, it is recommended that by establishing non government organizations (NGOs) and fostering mutual relationship between people and authorities, preparing appropriate specific environmental plans based on condition and capacities of beneficiaries, delivering the responsibility of plans maintenance to beneficiaries and also providing negotiations about environmental issues among beneficiaries can be lead to higher participation of rural people. Furthermore, raising the level of familiarity and knowledge of villagers through holding exhibitions and conferences in different field of environmental conservation and forming training workshops for raising

rural participation and attempting for raising their knowledge for attracting rural participations is highly recommended.

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