

*Full Length Research Paper*

# Analysis of factors influencing people's participation in programs to protect and regenerate forests and pastures from the perspective of expert and managers: Ilam, Iran

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Natural resources is vital to humans exposed to destructive agents of human, So that degradation rate is not comparable with the measures that the government is doing in the conservation of forests and pastures. For the beginning, to overcome the problems, the government's role is important as planning and supporting projects of natural resources. Hence, this study was to identify factors influencing popular participation in the preservation and restoration of forests and pastures. This research has been done based on the descriptive research method survey and study population which includes the expert and managers of natural resources in Ilam province. The sample size was 56 including the number of experts and managers to help using Cochran formula. Research tool known as questionnaire was developed made from the research and theoretical literature from the interviews administered by the experts, and it was used to determine the validity of the panel of experts Agriculture and Natural Resources. Reliability research tool with the ability to complete the questionnaire in 30 tests before qualifying stage and was obtained by calculating Cronbach's alpha equal to 0.88%. Due to the nature of the data, factor analysis technique was used to analyze data. The results showed that political factors (28.49%), extension (10.15%), social-cultural (9.51%), economic (8.71%), psychological (5.90%) and individual (5.71%) with a total of 69.49% explained the total variance and can be considered as the most important factors in maintaining popular participation and regeneration of forests and pastures.

**Key words:** Participation, factor analysis, natural resources.

## INTRODUCTION

Natural resources of every society are the wealth of that society which not only belongs to the present generation, but also a heritage belongs to posterity. But we must admit that the role of natural resources have never been so vital and useful for human beings at no moment in history and their existence have never been threatened by human in such a broad scale (Shariaati and Reze 2004). These warning will be more serious when 1.5 million hectares of agricultural, forestry lands and pas-

tures turn to dessert in our country annually. Whereas, about 200 tons of soil go into the seas, lakes and to the dams in every moment. In fact, around 20 tones of soil is constantly washed by erosion in Iran every year and this means losing of 76 kg Azotes, 24 kg phosphorus, 8 kg potash in each hectares. If we add the value of food in soil, we will lose about 7.6 million dollars of micro-nutritious available in soil yearly. Ilam province is one of the situated provinces in the west of Iran, located

on the path of vegetative zone of Zagros. This province has entirely 11% of the Zagros forests, 4% forests of Iran, 4.97% of whole vegetative pastures of Zagros and 8% of whole pastures of Iran. On the other hand, 87.38% of this province is the base of natural resources (The forests and pastures Organization, 2007).

Besides, with considering the current rate of natural resources in Iran and its provinces and the problem concerned to it which are directed to the present and future generation, there is absolutely no way to compare the rate of destruction with the measures done to protect, revive and using the natural resources. To overcome such problems, the role of government as the planners and protectors of the projects related to natural resources is obvious and important. But this is completely evident that the accomplishment of these projects needs people participation. The main issue is that the people of this province do not associate in protecting, revival, Development, and using projects. Their attitude toward natural resources is more, based on wrong using and use of these resources. Furthermore, it seems that the attitude of rural and tribal society toward the projects presented by government is not positive and these projects are not granted for cultural and historical aspects. In the way that in projects like the balance of livestock and pastures, guide project, the project of preserving of natural resources, the Green Movement, the participation of people, in spite of the spending huge costs by government, had the minimum rate among the other provinces which are situated in vegetative zone of Zagros (The Forests and Pastures Organization, 2007). We can look for the consequences of having not participation of people dealing with the processes like protecting, revival, development and using of natural resources in increasing the rate of destruction of these resources which has the scale of 1.3 times more than other provinces in Zagros zone and also in increasing of pasturage capacity on the scale 5.3 times more than pastures and increasing of exploiters emigration to cities (The Forests and Pastures Organization, 2007).

The past experience showed that, the preventing natural resources from destruction and using of stable management to these resources, because of the broadness of resources and limitation of governmental resources is beyond the capacity of government sector). Paying attention to natural resources from different perspectives attracts many scientists' researchers. Every researcher studied the effective factors on natural resources from different points Malekmohammadi (1999); Razaki (2000); Pretti (2003); Samari (2004) and Shariaati and Reze (2004) acknowledged the role of Extension-education (emphasizing on applied education) and its effect on protecting, revival, development and using of natural resources which are renewable. Motavali (2004) and Osman (2007) believe that the personal factors such as (level of education, course of study, work place, the situation of work place, matrimonial status,

the resources of earning income, the interest of the people involved, the number of family members, the kind of job, age) have influenced the processes of protecting, revival, development and using of renewable natural resources (Hosseini, 2006) studied this form the economical point of view and they mentioned the influential factors such as income, the amount of irrigated and non-irrigated lands, the transportations, the number of livestock, granting banking facilities. Razaki (2000); Fisher (1993); Pretti (2003); Malekmohammadi (1999) and Mirbod (2000) acknowledged the effect of institutions and popular organizations and non-governmental organization in processes of protecting, revival, development and using of renewable natural resources.

Some other researchers believe that the government has effects (like obviation of limitations of people ownership, decentralization and granting affairs, enforcing people-government relationship, executing obligations on behalf of government, believing people participation, the professional capabilities of the people in charge and specialists, informing people, finding people's problems and proper policy in making, protecting, revival, development and using of renewable natural resources. Samari (2004), Mousavi (2001), Shariaati and Reze (2004), Motevali (2004), Hosseini (2006), Pop Zan (2006), Barnet (1991) and Koder (1995), construed the social factors like: social class, the kind of job, education, job experience, the kind of attitude towards the project, empowering the local associations, taking into account the indigenous knowledge, considering the right of ownership, making jobs, the being and presence of local leaders) as effective factors as processes of protecting, revival, development and using of renewable natural resources. Pop Za (2006); Azkia (2002); Hosseini (2006) and Malek (1999) found psychological factors as an influential factor as processes of protecting, revival, development, and using of renewable natural resources. Some other researchers like Pop Zan (2006) alluded to the physical and structural factors such as; strength, physical health and physical capability, cornering the processes of protecting, revival, development and using of renewable natural resources natural. Shaeri (1998), Shariaati and Reze (2004) and Samari (2004) considered the professional training of extension agents of natural resources and people and user's participating in structural classes as effective factors in protecting, revival, development and using of renewable natural resources.

In the research which was done between the variables of educational level, the amount of information which people have about the importance and advantages of forests, participation in instructive-extension classes, using of extension magazines and periodicals, using of educational films, using of lecture meetings, using of educational programs of radio, using of TV, the number of contacts with extension agents and contacts with honorary extension agents, supplying fuel by government

and the variable related to rate of people participation in protecting forests, positive and meaningful relationship has not been reported. In this survey between the age variables, using of the programs of literacy crusade, the number of visits, the state of people awareness about the rules regarding protecting and supporting of forests and the variable of people associations, a meaningful relationship have not been reported.

In this survey, the independent variable of supplying of burnable materials by government, being cognizant about the importance of contacts with honorary forest protectors and participation in educative-extension classes have the utmost effect on the dependent variable of people participation, respectively. In the survey which (Moteveli, 2004) have done, there have not been opposite and meaningful relationship between the variables of the corporation of government organizations, supplying burnable materials for rural people by the government and the problems which appear on the way of protecting natural resources. Overview of the results of the studies in this area can be reached to the fact that many factors are involved in the process of popular participation. The general purpose of this study was to identify factors influencing popular participation in the preservation and restoration of forests and pastures from the view point of experts and managers in Ilam province.

## MATERIALS AND METHODS

The study was conducted in the area of Ilam, West of Iran. The type of sampling was simple random sampling. In this study, data collected was from the type of research method known as descriptive survey, from the viewpoints of classification based on objective research, the type of practical research, in terms of control variables, due to lack of control variables, the type of quasi-experimental research and from the standpoint of rate monitoring control and degree field research type. The data collected through questionnaires were prepared with the benefit of conceptual framework and to ensure validity and reliability for data collection. To ensure its validity expert from panel of Agricultural extension and education was been used. To test the reliability of questionnaire, 30 questionnaire had been answered and Cronbach alpha calculated ( $\alpha = 88\%$ ) and this number was a suitable (good) final factors in these research.. The sample size was calculated using Cochran formula and it include 56 people of expert and managers. Since the aim was to identify research and classification factors in attracting people's participation in the preservation and restoration of forests and pastures, SPSS software was used in the exploratory factor analysis. Due to the nature of the data, factor analysis technique was used to analyze data.

## RESULTS AND DISCUSSION

### Personal characteristics

Research findings showed that the highest frequency of experts (6 to 39%) was in the age group of 45 to 36 years and lowest frequency (5 to 7%) was in the age group of under 25 years. These data indicate that the composition

and age pyramid experts and managers are often "middle-aged. Based on the information gathered from the community experts, 8/84% (45 cases) of people were male and 2 to 15% were women. 5 to 27% (14 cases) of respondents have between 20 to 16 years of job experience. 8 to 55% (28 cases) of respondents have a bachelor's degree and 8 to 28% of respondents have high school degree and 4 to 15% of them have master's degree. The most frequent field of study is related to people who have their field of natural resources (9 to 46%) and lowest frequency is about people who have their basic science field (1 to 4%).

### Factor analysis

To determine the suitability of the data in this section for factor analysis, coefficient KMO and Bartlett's test were used. In this study, obtained KMO value equal to .884 and showed that the situation is suitable for factor analysis of data. Bartlett was preparing amount equal to the 4670.05, is significant at 1%. Meanwhile, varimax norm rotation method was used to enhance interpretation factor for determining the number of operating factors based on criteria Kaiser. Table 1 refers to the number of extracted factors, with each of them a special number, percentage of variance each factor Eigenvalues and cumulative percentage of variance factors. Special value is the factor indicating the share of total variance of variables and what is greater than its value indicates the importance and the impact factor is more. In total, these six factors have been able to explain the 69 to 49% of the variance factors affecting people's participation in the process of preservation and restoration, the forest and pasture.

Factor for attention has been named to the nature of the variables in each factor and the most important variables in each factor that results are presented in Table 2. The first special value which is 18.57 explains the 29.48% total collection of analysis of variance due to the nature of the variables named in the name of political factors. This place has been operating in nine variables. In this context, previous studies have confirmed the importance of political factors in popular participation. (Samari, 2004; Mousavi, 2001; Motavali, 2004; Hosseini, 2004; Pop zan, 2006; Barret, 1991).

The second factor, which includes 11 variable and accounts for 9.51% of the variance is a factor analysis, considering the nature of the variables, it was named extension factors. Some researchers have acknowledged that their research to the role of extension agents in the participation of grassroots groups. (Malek, 1999; Razaki, 2000; Poetti, 2003; Samari, 2004; Shaeri, 1998).

The third factor explains the 3.54% of total variance factor analysis consists of 9 variables were named with socio-cultural factors. In this context, previous studies have confirmed the importance of socio-cultural factors in popular participation. Razaki (2000), Fisher (1993), Pretti,

**Table 1.** Extracted factors with specific amount, percentage of variance and cumulative percent variance.

Factor	Special value	Specific amount of percentage of variance	Variance cumulative percentage
1	18.57	29.48	29.48
2	6.49	10.15	29.64
3	5.99	9.51	49.15
4	5.48	8.71	57.87
5	3.72	5.90	63.78
6	3.60	5.71	69.49

**Table 2.** Variables related to each factor and load factor obtained from the matrix during results.

Factor name	Variables	Load factor
Political factors	Preparing the grounds for the participation of government operation	0.73
	Easier to get bank loans and facilities	0.58
	Government support	0.66
	Consultation with operational plans before implementation	0.71
	Security of natural resources	0.67
	Pastures abound	0.66
	Granted ownership to exploit	0.74
	Loan allocation to exploit	0.61
	Correct monitoring the projects of natural resource	0.62
	Extension factors	Visits to successful projects of natural resource
Desirability training methods		0.61
Radio- television programs		0.69
Holding of seminar		0.74
Ability of extension worker in communication		0.71
Ability of extension workers to transfer Results		0.81
Advocates to dominate technical discussions		0.77
Attention to people on natural resources management		0.75
Demonstration techniques		0.66
Communication and contact with rural people		0.74
Extension factors	Attend classes extension	0.66
	Rural traditions	0.58
	Access to welfare facilities	0.50
	Health facilities being provided	0.57
	Awareness of the benefits and importance of natural resources projects	0.68
	Considering the knowledge and operational experience	0.50
	organizing of natural partners	0.60
	Supporting NGOs	0.74
	Attend classes extension	0.66
	Socio – cultural factors	Rural traditions
Access to welfare facilities		0.50
Health facilities being provided		0.57
Awareness of the benefits and importance of natural resources projects		0.68
Considering the knowledge and operational experience		0.50
organizing of natural partners		0.60
Supporting NGOs		0.74
Presence of local leader		0.61
Population Control		0.75
Identify exploiting problems		0.76

Table 2. Contd.

	Total livestock	0.62
	Income	0.62
	Obtaining land	0.75
Economical factors	Amount of water and dry land	0.64
	Access to the market	0.57
	Banking facilities	0.58
	Job creation	0.58
	Encourage the exploitation	0.69
	Priority needs	0.80
Psychological factors	Operational level commitment	0.55
	Considering the interests and needs	0.64
	Tendency towards teamwork	0.54
	Self- confidence of exploiters	0.59
	Level of education	0.59
Personal factors	Job type	0.89
	The main occupation	0.64

(2003), Malek (1999), Mirbod (2000), Hosseini (2004) and Pop zan (2006) have emphasized on social and cultural factors in the participation of grassroots groups in the preservation and restoration of forests and pastures.

The fourth factor is to take responsibility with 8.71% of total variance factor analysis covers 7 variables was named as the economic factors. This place has been operating in eight variables. Previous studies in this field have also mentioned the role of economic factors in attracting people's participation in the preservation and restoration of forests and rangelands (Motavali, 2004; Osman Poor, 2007; Hosseini, 2004; Kaliqi and et al., 2004).

The fifth factor, which consists of 6 variables, explains the 5.90% of the total variance and was named the factor analysis known as psychological factors. This confirms previous studies, the results of this research field, (Pop zan, 2006; Azkya, 2002; Hosseini, 2004).

The sixth factor includes four variables that explains the 5.72% of the total variance, and Due to the nature, the variables were named after the name of the individual factors. In this context previous studies have stressed the importance of the role of individual factors on the participation of grassroots groups, (Motavali, 2004; Osman, 2007; Pop zan, 2006).

## CONCLUSION AND RECOMMENDATION

This study was conducted in order to identify the categories and factors affecting participation and key groups of people in the regeneration of forests and rangelands. Considering the research objectives and results in the results section, the following suggestions are offered for the participation of grassroots groups:

i) Considering a high percentage of economic factors in explaining the participation in popular areas of natural resources, it is recommended to banks and financial institutions like Bank of Agriculture to offers loans to people with low interest and long repayment.

ii) Considering the low share of promotional and educational role in attracting people's participation, it is recommended that the Department of Natural Resources take action on updating information advocates of natural resources and benefits from effective teaching methods

iii) Areas suitable for popular participation should be of priority in the government actions. Today, many funds are spent for the preservation and restoration of forests and pastures in the form of central planning, which in practice not yield much benefits. Therefore, it was recommended that, before any action government should consult with groups of people, should also determines the correct ranges of the province and take into consideration that, conversion of natural resources for education are the major tasks of government in this area.

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