

The Perception of Pasture Owners about Factors Influencing their Participation in the Revitalization of Rangelands in Kermanshah Province

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Abstract: The main purpose of this study was to examine the perception of pasture owners about factors influencing their participation in the revitalization of rangelands in the City of Kermanshah. The research design of this study was carried out by descriptive and analytical methods. Through random sampling technique, out of 1420 respondents 120 were selected for the study. The results show that 36 % of the variance in perception of respondents about the level of participation in pasture revitalization projects could be explained by number of contacts with local leaders, access to resources in cities and expectation of support from authorities. There was a statistically significant relationship between work experience, amount of forages needed, expectation of support from authorities contact with extension agents, and contact with local leaders as independent variables and level of participation in the revitalization of rangelands as dependent variable.

Key words: Kermanshah, Participation, pasture, rangeland, revitalization

INTRODUCTION

Natural Resource has an important status in social and economical development in the world. Unfortunately, in many countries especially in developing countries, increasing population, rapid urbanization, lack of knowledge about importance of natural resources along with inappropriate planning resulted in rapid degradation of forests and rangelands.

Iran is no exception and based on the statistics by Forest and Range Organization in every second about 300 square meters of forest and 400 square meters of rangelands are destroyed in Iran and annually this is accounted the destruction of about one million ha of rangelands.

United Nations, (2005) reported that 616,000 sq km of total surface area in Iran is considered agricultural land in which 71% percent of that is permanent pasture.

It could point out that several factors contributed to the destruction of rangelands and among them are irregular grazing, overgrazing, rapid urbanization and industrialization, converting the rangelands to farming lands and lack of knowledge and training about appropriate use of rangelands (Jafae, 1994).

Comakli, *et al.* (2008) citing the studies by (Comakli and Mentese, 1999; Holechek *et al.*, 2004; Branson *et al.*, 1981) pointed out that heavy grazing and grazing during wrong seasons are the most important rangeland degradation factors. Overgrazing and its attendant effects reduce plant cover and trampling of soil contributes to degradation of rangeland soils.

Human being has caused much of the destruction of rangelands and policy makers have realized that they should look for involving local population in protecting and revitalizing the natural resources.

Empowerment of people in rural areas should be one of the basic elements of any revitalization policy. It should include clear rules and guidelines for decentralization in decision making, participation and empowerment of local people, positive discrimination for marginal groups and institutional development to ensure good governance at local level (Food and Agriculture Organization of United Nations, 2006).

There is a belief among policy makers and planners in many countries that a significant portion of destruction and degradation caused by beneficiaries. Allsopp *et al.* (2007) pointed out to this wrong misunderstanding in the South Africa. They indicated that in South Africa, there is a belief that communal herders have little technical skills and individual livestock keepers are selfish, norm free, and aiming at maximizing short-term off take and that there is no consistent management of the commons. However, the research shows that practices of a diversity of livestock keepers are at odds with this viewpoint: access to

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rangeland and its use are structured by collective norms and concerns regarding both the sharing of resources and their long-term sustainability.

Appropriate management decision may be an important factor for pasture owners which impact the duration or intensity of grazing on rangelands. PROGRAZE is an extension package developed in Australia to assist the pasture owners to improve their decision making ability on maintaining or improving the rangelands (Bell and Allan, 2000).

Traditional knowledge can play an important role in managing the agriculture and forestry (e.g. community rangelands), but this kind of knowledge is gradually lost, because older generation no longer employs traditional practices and there are no young people to continue (Food and Agriculture Organization of United Nations, 2006).

In a project by the Global Environmental Fund (GEF) about the revitalization of traditional grazing practices in Kazakhstan, it was found out that revival and improvement of traditional methods, as well as, training of the local community had impacts on rangelands operation, conservation and rehabilitation (Global Environmental Fund, 2006).

In Iran, the history of people's participation in management of natural resources goes back to 50 years ago and currently about 400,000 ha of forest in Northern Iran is managed by private sector. Shaeri, (2004) reported that more than 7000 volunteers are working along with Natural Resources Departments to help them in protecting the forests and rangelands. Based on the official statistics by Forest and Range Organization about 800 forest and pasture cooperative established in Iran and right now the number should be higher.

The government of Iran, in order to combat the destruction of rangelands, has introduced the revitalization projects. In these projects, efforts were directed to offer pasture owners and herders with the scientific and applied methods in revitalizing the rangelands.

The methods used are as follows: correct time of grazing, appropriate grazing in accordance with capacity of pasture, controlling the pasture erosion, fertilization of rangelands, and seeding and bushing the rangelands (Moghaddam, 1998).

Research about the participation of beneficiaries showed positive results in protection of rangelands. Shirazi, (1996) in a research about ways to attract the participation of ranchers in rangelands projects in the city of Saveh found out the educational level had impact on their participation.

A study by Shaidi Zandi, (1995) indicated that holding pasture educational classes, social status and available resources for farming influenced the participation of beneficiaries in rangelands projects.

Hosseini Poor, (2002) studied the role of extension in participation of beneficiaries in pasture projects and found out that contact with extension agents, and knowledge about benefits and objectives of pasture projects had positive relationship with the participation.

Abooeh, (2002) reported that income level of ranchers, knowledge about pasture projects, forage needs, attending the extension classes and contact with extension agents had impact on protecting and revitalizing of rangelands in the Semnan Province.

Adhamy Mojarrad, (1996) examined the attitudes of beneficiaries toward new pasture management and found out that establishing the ownership guidelines for rangelands and allocating the credits and loan could result in a better pasture management.

City of Kermanshah is the capital of Kermanshah Province (Bakhtaran) and is located in the western part of Iran. It has about 227604 ha of rangelands in which only 14% is considered to be high quality and more than 44 percent of rangelands are low quality (Kermanshah Natural Resource Department, 2004).

Pasture projects in the City of Kermanshah have shown a mixed results in protecting and revitalizing of rangelands and every year more pasture lands are being destroyed or no longer suitable. However, it was important to study the factors which influence the participation of beneficiaries in pasture projects.

The purpose of this study was to examine the perception of pasture owners about factors influencing their participation in the revitalization of rangelands in the City of Kermanshah.

Methodology:

The research design for this study employed descriptive and analytical methods. The target population included 1420 pasture owners in the City of Kermanshah. By multi-stage cluster sampling technique, 120 respondents were selected (Table 1).

The dependent variable in the study was perception of pasture owners about participation in pasture revitalization project. The level of participation was established through measuring three items. Subjects were asked to respond to each item by using a scale that was categorized and graded as follows (1-5): 1 = very little; 2 = little; 3 = somehow 4 = much; 5 = very much.

Table 1: Samples of the study in City of Kermanshah

Township	Number of Pasture Owners	Sample selected
Central	810	68
Mahidasht	212	18
Koozran	220	19
Firoozabad	178	15
Total	1420	120

A questionnaire was developed which included both open-end and fixed-choice questions. Open-end questions were used to gather information not covered by the fixed-choice questions, and to encourage participant to provide feedback. The questionnaire consisted of three parts and was designed to collect data for the study. In part one of the questionnaires, information was elicited regarding the personal characteristics of pasture owners. Part two was designed to assess the perception of pasture owners about quality of rangelands, level of participation in revitalization methods and level of knowledge about pasture revitalization project. Part three of the questionnaire included open-end questions.

Face and content validity of the instrument were established using an expert panel, which consisted of faculty in the Department of Natural Resources and Extension Education of Islamic Azad University and experts in the Forest and Range Organization. A pilot study was conducted with 20 pasture owners were not included in the sample population to determine the reliability of the questionnaire for the study.

The dependent variable in the study was level of participation in revitalization of rangelands. A Cronbach's alpha reliability coefficient of 83.0% was calculated for the level of participation.

The statistical analysis utilized the Kruskal-Wallis test, Pearson test and multivariate linear regression. For measurement of correlation between the independent variables and the dependent variable two rank correlation coefficients have been utilized and include Spearman. A non-parametric tests; Kruskal-Wallis were employed for comparing the means' perceptions of respondents. The Kruskal-Wallis test is utilized for comparing three or more groups of unreplicated measures in small sizes when the samples are basically the same shape. These statistical procedures were applied to test 4 null hypotheses of no difference or relationship between level of participation by pasture owners in the City of Kermanshah and forage needs (H_{01}); expectation of support from authorities (H_{02}); number of contacts by extension agents (H_{03}); and number of contacts by local leaders (H_{04}).

RESULTS AND DISCUSSION

The mean age of respondents was 43 years. The mean pasture size of the respondents was 222 ha. About half of respondents had 25 years of work experience and sixty four of them worked full time as ranchers and average experience was 18.5 years. More than 38 % of the respondents had an elementary education, and only 9 respondents had diploma and higher degree (Table 2).

Table 2 : Personal Characteristics of Pastures Owners

Variables	Average	Minimum	Maximum
Age (Year)	43	25	67
Work Experience (year)	18.5	5	36
Amount of pastures owned (ha)	222.5	30	1100
Income (Rials)	1.740.000	500000	5.500.000

A Likert scale was used to find out the perception of respondents about the quality of rangelands (Very good=5 and very bad=1). The results showed that 57 percent of owners indicated that their rangelands were in good quality. Forty one respondents said the rangelands which they owned were in medium quality (Table 3). The respondents were asked to prioritize the methods that were used in the revitalization projects. The findings showed that pasture owners indicated that they used the observation of right time of grazing as the most important methods in revitalization of rangelands. It was also mentioned that appropriate grazing of livestock in accordance with capacity pasture was the second most important method in revitalization of rangelands. The seeding and bushing rangelands was the least important methods that were used by pasture owners (Table 4).

The respondents were asked to identify their level of knowledge about the benefits and objectives of the projects and less than half of them indicated that their level of knowledge was little or very little. Only 11 rangelands owners said their level of knowledge was much and very much (Table 5).

Table 3: Perception of respondents about quality of pastures

Quality of pastures	n	Percentage
Very Good	9	7.5
Good	69	57.5
Medium	41	34.2
Bad	1	0.8
Very Bad	-	-
Total	120	100

Table 4: Means and Standard deviations for perception of respondents about their Level of using revitalization methods.

Topic	Mean	Std.Dev	Rank
Correct Time of Grazing	3.18	0.97	1
Appropriate Grazing in accordance with Capacity of Pasture	2.99	0.874	2
Controlling the Pasture Erosion	2.47	1.045	3
Fertilization of pastures	2.16	1.037	4
Seeding and bushing the pastures	1.99	0.957	5

Very Little 1 Little, 2. Medium, 3. High, 4. Very High 5

Table 5: Level of Knowledge of respondents about pasture revitalization project

Level of Knowledge	n	Percentage
Very Little	28	23.3
Little	31	25.8
Medium	49	40.8
Much	8	6.7
Very Much	3	2.5
No Response	1	-
Total	120	100

The first hypothesis was to test for statistically significant relationship between respondents forage needs and participation level. At an alpha level of .05, the null hypothesis was rejected and it was concluded that there was a meaningful relationship between respondents forage needs and participation level. The second hypothesis was to test for statistically significant relationship between expectation of support from authorities and level of participation. At an alpha level of .05, the null hypothesis was rejected and it was concluded that there was a relationship between expectation of support from authorities and level of participation. The third hypothesis was to test for statistically significant relationship between number of contacts by extension agents and level of participation. At an alpha level of .05, the null hypothesis was rejected and it was concluded that there was relationship between number of contacts by extension agents and level of participation. The fourth hypothesis was to test for statistically significant relationship between number of contacts with local leaders and level of participation. At an alpha level of .05, the null hypothesis was rejected and it was concluded that there was relationship between number of contacts with local leaders and level of participation. The Kruskal Wallis analysis showed that work experience of respondents had impact on their participation in revitalization projects.

The regression analysis showed variables that were statistically significant. The result indicated that 36 %($R^2 = .36$) Of the variance in the level of participation in pasture revitalization projects could be explained by number of contacts with local leaders, access to resources in cities and expectation of support from authorities.

Discussion:

The findings of the study provide evidence for policy makers to propose recommendations that could increase participation of rangelands owners in revitalization projects. Based on the findings of this study, the following conclusion and recommendations were drawn:

It is recommended that extension classes should be organized in a manner that is suitable for owners to attend. Due to the relationship between number of contacts with extension agents and participation, the Natural Resource Department should train some of the extension agents as pasture agents.

As findings of the study suggest, local leaders should be given an important role in encouraging the rangelands owners to participate in the revitalization projects.

Based on the results of this study, majority of respondents indicated that the quality of rangelands owned was medium to good range. In order to preserve the quality of rangelands, it is recommended that authorities should encourage and persuade this group of pasture owners to use revitalization methods.

It is recommended that pasture owners is informed about the right time of grazing, since this was the most important revitalization methods. It is also important that right information about the capacity of grazing is provided to the pasture owners.

Based on the findings of the study and low level of knowledge of respondents about pasture revitalization projects, authorities should use different methods to inform and increase level of knowledge about the projects.

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