

Full Length Research Paper

Factors affecting contribution to the improvement of pastures: A view of Iranian pasture owners

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This paper aims to develop a model of sustainable partnerships for the improvement of pastures of Semnan Province in terms of preservation, restoration, operation and development. Path analysis results show that levels of governmental support have the most direct effect on the sustained participation of people in Semnan Province regarding the improved pastures perspective. This is followed by a number of factors such as the significance of technical variables, organized communities, community participation, cultural characteristics of element, social status and attitudes towards participation of element and the extent of individual participation in popular organizations. We believe the findings offer valuable insights to policy makers, expertise, and even farmers, those who are involved with pasture improvement and sustainability.

Key words: Semnan province, participation, sustainable partnerships, pasture improvements, natural resources.

INTRODUCTION

Forests and Rangelands Organization (2007) defined and established pastures as arid lands of mountain or ground, where normal plants are grown. The rainfalls in those regions are low and inhabited by animals. Average forage production in rangelands of Iran is about 119 kg of dry forage per acre. Total areas of pastures of the world have been estimated to be about 30 million square kilometers. Today's natural resources are environmentally and economically important. At the moment and in the Iran context, annual equivalent of 7.15 million tons of forage worth 4,035 billion (RLs), 4.5 million cubic meters of pasture plants worth 22 billion RLs and 2 million cubic meters of timber worth 500 billion RLs in the field of forest and pasture are produced (Azeri, 2005). As reported by Jafari (2003), natural resource accounts for about 85% of the 162,245,556 million hectares of Iran. Approximately, it has 7.53% rangelands, 75.8% forest, 88.20% desert, as well as 4.14% agricultural and residential lands. In other words, the country's total land is 40.14 million hectares of

forest, 1.86 million hectares of pasture and 33.57 million hectares of desert. Human activities on 3.6 million hectares of wilderness areas are added to the world that lives 900 million inhabitants whose livelihoods are threatened. However, the country's tens of meters per second from countries such as lands of deserts come in annually; thousands hectares of rangeland areas are reduced (Forests and Rangelands Organization, 2007). Semnan Province, located in Iran's central desert with arid climate, constitutes 8.9 million hectares of area and is considered as the sixth largest province. More than 90% of this province is considered as natural resources ground which includes forests, pastures and desert. This has caused a 20% share of overall environment limiting Quad countries, including national parks, wildlife sanctuary and conservation area; national phenomenon in the province should be the quality and quantity of first place in the country (Natural Resources Department of Semnan province, 2007).

Despite the high pastures in the area of the province, improving of activities and pastures programs is not yet done. On the other hand, to give the current trend of degradation of natural resources in the country and

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province in this field is to understand the problems that the present generation and posterity have certainly destroyed the speed in the field to preserve, protect and improve pastures. In order to solve these problems, the government's role as the organizer and sponsor, manager and owner of natural resources plans should be made clear and important; but implementation of these projects is not possible without public participation. The main problem is that people in the province plan to improve pastures and little participation-based approach as further exploitation of open sources is wrong. So the destruction of forests and trees while working, fire, housing construction, maintenance of the indiscriminate use of livestock, pasture plants, digging, aggression under the pretext of the dry land pastures, the indiscriminate use of rangelands are seen (the presence of earlier and later departure Meadows) as competition in tapping the indiscriminate use of rangelands and pastures in all parts of the province (Natural Resources Department of Semnan province, 2007). It also looks at the rural community and tribal provinces in terms of historical and cultural programs offered to the government. Projects such as the balance of livestock and pasture, conductor design, layout and preservation of natural resources, green movement were not impressive; despite massive government's spending, there was low turnout (the previous supplier). Sources and studies for attracting people voluntarily to attend various social activities, economic characteristics; social, political and legal psychology are paid for. Gastlyre et al. (2002) suggested that the main principles and features of the participatory approach should include:

- 1) Any individual or group programs and activities should not exclude pasture owners' participation. After that the first meeting to plan and analyze the concept and approach will be formed; all participants should actively comment and participate in discussions across the board.
- 2) To create and strengthen local institutions and structures such as councils, coordinating groups, associations, cooperative organization, and also trust fund and distributing the so-called micro credit; conditions are necessary for successful programs and partnerships to achieve sustainable development pasture owners.
- 3) To achieve the participation of key factors for sustainable development in respect of the right petty legs is one of the main features of the approach.
- 4) To create a change, people must believe this vision, the static and inefficient institutions and structures.
- 5) Promoting partnership programs with only institutional and structural reforms is possible in national community, regional and local community empowerment. This movement participates when fertilizing and sweeping move in the direction of the national community.

Karly et al. (2006), in studying the factors that affect decisions of farmers to enter farming cooperatives and

collective contributions, found that to achieve an important role, farmers' education, good communication, gross income, farm size and technology level are in partnership. Damianos and Giannakopoulos (2002), in tapping the contributions of environmental programs - training farmers in Greece, found that farmers, socio-economic status, communication with the media, experts, agriculture, education and communication with neighbors are in harmony. Farmers and partners can participate in programs that affect the environment. Snnap et al. (2002), exploring the state of Gujarat in India, have shown that farm size, income and education level of farmers' participation rate have a positive effect. Hale et al. (2007) manage the common name to other natural resource management practices that refer to the forest. JFM strategy is based on encouraging partnership between government committees and rural development and natural resources. In other words, JFM management is the rural communities and factors affecting conservation volunteers. Existing managerial practice is required in the public institutions and local committees for natural resource management. The overall goal of this research model is to promote partnerships management and to stabilize pastures in Semnan Province. The research is followed by accurate understanding of potential, operational requirements and review aspects of their contribution. People-centered programs achieve improved pastures in Semnan Province.

METHODOLOGY

The research was conducted in Semnan provinces as one of the pastures. View was classified based on objective research, a type of applied research. Study population in this research was 283, selected as statistical samples, using Cronbach's formula. Sampling was used to classify the provinces; the city of Semnan Province was awarded the fourth element, with each city having a quota. Specimens in the location of element were randomly selected in each district and questions answered. In this study, the main tool used in data collection was a questionnaire. There was theoretical review of research and models, and was used to determine the formation of hypotheses. Objectives were prepared according to research questionnaires in the following operations. To ensure the validity of expert, panel consisting of professors and experts was used (from Tehran University and Research and Natural Resources). Research tool for checking the final number of 30 pasture owners was randomly selected in Tehran Province. At last, the final factor questionnaire study was calculated using alpha coefficients cronbach of 0.897. Independent variables in this study include structures that are associated with improving pastures or affecting them. These variables included six factors types: 1) individual characteristics, age, educational level, number of household members, occupation and marital status; 2) social and cultural factors, population control, welfare facilities, awareness of the importance of goals and plans, local leaders, confidence enforcement, increased support for non-governmental organizations, the amount present in Islamic Councils, membership in cooperatives range management, traditions and rural, indigenous knowledge, technical knowledge, culture-building partnerships, identifying operational problems, accountability of individuals, communicating with the operation; 3) psychological factors, belief in

participation rates, operational commitment, learning to participate according to interests and needs, encouraging exploitation, the importance of requiring people to give much priority to needs, attitudes toward teamwork and gaining self-confidence users; 4) economic factors, income, banking facilities, property type, market access, number of livestock, amount of ground water, amount of dry land, ground and getting jobs; (5) extension agents, views, visitations, contact with exploitation, calling advocates, holding seminars, radio and television programs, lectures, publication, participation in extension classes, the amount of desirable training methods, the ability to provide professional planning advocates, professional capabilities in communication, transmission capacity, the mastery of technical issues, decentralization of planning and implementation, giving the amount of field staff, people management and; (6) political factors, belief in operating partnerships, preparing the groundwork for a partnership, laws granting ownership transfer of land, financial resources, taking commitments into action, tapping prior consultation with project, operational awareness, professional capabilities officials, fuel monitoring, projects, resources, security, setting about pastures, allocating loans. Dependent variable in this study is the people's participation share in the improvement of pasture.

RESULTS AND DISCUSSION

In the age range of the most common element, it is clear that 95 people belong to age group of 31 to 40 years. 9.3% operating are fewer than 20 years and 6% have more than 60 years. San rational exploitation is the fact that this group is relatively young and therefore providing appropriate education will be visible and lead to more hope for access to development goals (Table 1). The result shows that 1.77% (218) were married and exploited while 9.25% (65 people) of them were single. Most respondents with literacy level of 63 frequencies can read and write. There is about 19% of illiterate population in general and about half of the community education levels are not appropriate. Therefore, any development program should be designed as most important. Distribution of income levels also indicates that the most common people have income of 10 to 30 million RLS. Most incomes were 250 million RLS and the lowest incomes were 9 million RLS. Average of 46 million RLS indicated the surface elements' normal life; and so much financial power is needed for development programs in private and government cooperations. According to Table 1, 1 9.44% of land owned is shared by their elements between 5 to 10 acres; the minimum frequency on the floor is 16 to 20 acres. Average land under cultivation by every element is 7.8 acres. That adequacy is a normal life. Results showed 9.15% of rural exploitation by council members, 4.60 rural cooperative members, 5.14% of member unions of range management, 2.3% of cooperative members and fattening milk, 2.3% of members of natural helpers, and 8.2% of members of NGOs. Elements of social activities are estimated at an appropriate level.

Table 2 shows the relationship between variables. In order to study entry regression model shows professional competence and enforcement variables, income of

element, the element with trust anchors, the rate element is associated with promoters, participation rates in organized grassroots of element, social participation of element, social status of element, the interests and needs of element, cultural characteristics of element, element's attitude towards participation, level of technical knowledge of element, the amount of political and legal support, the amount of intake facilities and organized level of local communities. 99 percent have a significant positive relationship. Participating in training courses - extension, extension services provided to element, the amount and status quo of element and extension programs also have 95 percent. Participation in the improvement of pastures has a significant positive relationship. Professional relationship and enforcing capabilities variables, the use of communications media, participation rate of element in popular organizations, social activities, element's awareness of the benefits of Range Management Plan, the amount of technical knowledge of element and amount of political and legal support have 99%. The relationship between variable rate of element associated with the promoters, the rate of element associated with government institutions, cultural attributes of element, promoting decentralization of management, promotion of Range Management program content, economic and psychological factors, or changing people's participation in improving pastures have a significant relationship of 95%. This research result is consistent with Mendoza (2006), Shariati and Mottavalli (2005), Arayesh et al. (2008), Snapp et al. (2002) and Jalali and Karami (2005) and works of some colleagues (2006) on the relationship of economic and psychological factors are inconsistent with this study (Table 2). For the role of independent variables, multiple regressions are used on the dependent variable of participation in improving pastures. To achieve this objective, entry method was used (Tables 3 and 4). This is calculated by determining the coefficient ($R^2 = 0.748$). This indicates that it is based on the results of regression on the role of independent and dependent variables (public participation in improving pastures). From the table, one can conclude that 8.74 percent variability is caused by the interactive effects of independent variable and 2.25% from the remaining variables which this research has not considered. Participation rates of training element - extension, income of element, the amount associated with the promoters of element, the trust of element on enforcement Range Management Plans, pasture turnout owners in popular organizations, social participation of pasture owners, rangeland owners' social status, cultural characteristics of pasture owners, interests and needs of pasture owners, rangeland owners' attitude towards participation, level of technical knowledge of pasture owners, the state of extension program, the amount of legal and political support, the amount received by the Range facility owners and organizing local communities in their participation in pasture are all involved in

Table 1. Experts promote distribution of age group.

Individual characteristics	Floors	Many (people)	Percent	Cumulative percent
Age:	To 20 years	11	3.9	3.9
N = 290	20 to 30	59	20.8	24.7
Minimum = 19 years	31 to 40	95	33.6	58.3
Maximum = 78 years	41 to 50	65	23	81.3
Standard deviation = 8.03	51 to 60	31	11	92.3
Mean = 38.78	Over 60 years	17	6	98.3
	Unanswered	5	1.8	100
Marital Status:	Married	218	77.1	
N = 290	Single	65	25.9	
Education	Illiterate	54	19.1	
N = 290	Reading and writing	63	22.3	
	Primary	26	9.2	
	Tips	31	11	
	High school	29	10.2	
	Diploma	39	13.8	
	Associate degree	18	6.4	
	Bachelor and above	19	6.7	
	Unanswered	4	16.2	
Income (million rials):	To 10	19	6.7	6.7
N = 290	Between 10 to 30	69	24.4	31.3
Minimum = 0.9	Between 31 to 50	58	20.5	51.6
Maximum = 280	Between 51 to 70	35	12.4	64
Standard deviation = 19.9	Between 71 to 90	24	8.5	72.5
Mean = 46	Between 91 to 110	18	6.4	78.9
	Over 110	37	13	91.9
	Unanswered	23	8.1	100
Arable land:	To 5 ha	49	17.2	17.2
N = 29	5 to 10 hectare	127	44.9	62.1
Minimum = 2	Between 11 to 15	28	9.9	72
Maximum = 100 standard	Between 16 to 20	18	6.4	78.4
Deviation = 9.8	Between 21 to 25	15	5.3	83.7
Mean = 8.7	Over 25	28	9.9	93.6
	Unanswered	18	6.4	100
Social activities:	Village council	45	15.9	
N = 290	Cooperative village	171	60.4	
	Pasture cooperative	41	14.5	
	Livestock cooperative	9	3.2	
	Nature helpers	9	3.2	
	NGOs	8	2.8	

improvement activities.

According to the results of regression, direct role can be a prototype in the independent variables on the dependent variable R first displayed (Table 5). According to Table 5, variable level of political support is the legal

structure of the variables in this research, while the most direct effect on public participation is seen in pasture owners in sustainable improvement of pastures in Semnan Province. However, the rate of the intensity of correlation between variables suggests that variables

Table 2. Relationship between the variables of vision of elements.

First variable	r	p
Participate in training courses - extension	0.142*	0.48
Education Level pasture owners	0.088	0.154
Enforcement capabilities of the professional	0.351**	0.000
Use of communication media	0.101	0.99
Income element	0.341**	0.000
Trust enforcement operation	0.298**	0.001
Pasture owners confidence	0.054	0.234
Consultation with rangeland owners before implementing the projects	0.042	0.347
Rates associated with the promoters of pasture owners	0.256**	0.004
Number of pasture owners that communicate with government institutions	0.041	0.384
Pasture main job holders	0.021	0.421
Turnout pasture owners in public organizations	0.350**	0.000
Community involvement pasture owners	0.239**	0.003
Pasture owners social status	0.242**	0.002
Range features cultural owners	0.196**	0.009
Pasture owners that are aware of the benefits of projects	0.255**	0.004
Promote the decentralization of management	0.009	0.631
Considering the interests and needs of pasture owners	0.176**	0.009
Pasture owners attitude towards participation	0.253**	0.001
Rate of extension services provided to pasture owners	0.11*	0.049
Amount of technical knowledge of pasture owners	0.568**	0.000
Situation promotional programs	0.125*	0.043
Preparing the groundwork for partnership	0.095	0.389
Amount of political and legal support	0.312**	0.001
Rate loans	0.248**	0.003
Land value	0.063	0.391
Organizing local communities	0.285**	0.002

** At 0.01 significant and * At 0.05 significant.

Table 3. The role of independent variable rates to improve pastures.

Model	R	R 2	Ad.2	S.E
Enter	0.824	0.748	0.710	0.211

such as technical knowledge, participation in professional organizations and enforcement capabilities have more participation of owners in the improvement of pastures. Few researchers such as Mendoza (2006), Bagdi (2005) and other colleagues have confirmed this result, and also other studies done by Karly et al. (2006) on education levels research and Giannakopoulos Damianos (2002) on Economic factors - social part-nership, have introduced the most important factor.

Much technical knowledge affects most pasture owners directly and indirectly, totally. Correlation test was conducted on technical variables most strongly related with the contributions shown. These findings conform to that of Samari (2003), Hale et al. (2007) and Khaliqi

(2006).

Dimensional variables, respectively, include: organizing local communities (Mendoza, 2006; Field, 2005), social participation of pasture owners, culture of property and pasture owners, social status of pasture holders, range-land owners' attitude towards participation, turnout of pasture owners in formation of people (Usman, 2006), interests and needs of element, trust enforcement initiatives of pasture owners, the amount associated with the promoters of pasture owners, status of quality program, the amount received by the facility owners and companies of pasture owners in the period of training.

The highest has direct and indirect effects on improving pastures.

Table 4. Findings from multivariate analysis and regression-dependent variable (participation in pastures improvement).

Independent variables	B	Beta	t	Sig.
Constant	1.085	0.089	5.323	0.000
Participate in the training element - extension	0.126	0.119	2.99	0.000
Income element	0.065	0.068	1.439	0.079
Professional competence level executives	0.021	0.007	0.048	0.454
Rate element associated with promoters	0.206	0.264	5.54	0.000
Element of trust you have pasture enforcement initiatives	0.198	0.304	3.81	0.001
Rates associated with government agencies pasture owners	0.22	0.254	1.54	0.213
Turnout pasture owners in popular organizations	0.373	0.64	0.53	0.000
Community involvement pasture owners	0.459	0.505	7.754	0.000
Pasture owners social status	0.385	0.478	6.452	0.007
Range features cultural owners	0.307	0.418	5.860	0.000
Pasture owners aware of the benefits of projects	0.002	0.005	0.036	0.972
Promote the decentralization of management	0.153	0.202	1.48	0.156
Considering the interests and needs of pasture owners	0.242	0.382	4.98	0.000
Pasture owners attitude towards participation	0.222	0.329	4.25	0.000
Rate of extension services provided to pasture owners	0.042	0.065	0.351	0.428
Amount of technical knowledge of pasture owners	0.457	0.574	8.170	0.000
Situation promotional programs	0.114	0.168	3.14	0.009
Level political support and legal	0.587	0.695	9.356	0.001
Amount received by the facility pasture owners	0.098	0.134	3.01	0.005
Organizing local communities	0.189	0.296	4.232	0.005

Table 5. Direct and indirect effects of independent variables on participation in improving pastures.

Independent variables	Direct effects	Indirect effects	Direct and indirect effects
Level of political support – legal	0.695	-	0.695
Amount of technical knowledge of pasture owners	0.574	0.021	0.595
Organizing local communities	0.296	0.24	0.536
Community involvement of pasture owners	0.505	0.03	0.535
Range features of cultural owners	0.418	0.086	0.504
Pasture owners	0.478	0.008	0.486
Pasture owners attitude towards participation	0.329	0.139	0.468
Turnout of pasture owners in the popular organizations	0.439	-	0.439
Considering the interests and needs of pasture	0.382	0.0027	0.385
Trust pasture owners has to do projects executors	0.304	-	0.304
Rates associated with the promoters of pasture owners	0.264	-	0.264
Situation of promotional programs	0.168	-	0.168
Amount received by the facility of pasture owners	0.134	-	0.134
Pasture owners in the company training - extension	0.119	0.0016	0.121

CONCLUSION AND IMPLICATIONS

Based on the results, rangeland owners tend to be physically involved in the various activities of improving pastures. It is suggested that natural resource agencies are involved in organizing institutions to perform these activities. Moreover, the following suggestions are

provided. Determination of training needs in most development programs that can promote our country. No good mechanism and exploit should be hidden in the development activities. Therefore, the recommended strategies to determine training needs to be used by pasture owners are:

1. Improve pastures by using more coercive methods and

without cash. Cash fines are used to provide information necessary for proposing the owners of the pasture in their comments such as planting grazing pastures and using of similar items.

2. Limited awareness of the benefits of collaborative projects of pasture; lack of consultation with rangeland owners before implementing plans and programs and projects and not complying to meet the requirements of the main obstacles to the participation of rural pasture owners in the meadows should be improved. Therefore there should be recommended solutions to this serious problem. Due to education and information in general, pastures and natural resources are considered as national treasure; they are seen as investment. Therefore, there should be more about cash flow and be pasture owners should be part of policymakers.

3. Based on the results, the contents needed to promote programs and applications according to pasture owners need to be designed. Based on the results of path analysis, information of pasture owners, political support and public law have the most direct effect on the participation of owners in Semnan Province to improve rangeland pastures; therefore, it is recommended to give attention to political and legal support public notification and the necessary confidence for building.

4. Based on the results, in the political and legal support, pasture owners' participation depends on a positive attitude. It is important it is done in the full rule of law on executive processes (the legal transfer of pastures, providing facilities) to create the necessary transparency for attracting Range owners' trust, which do well in this cycle and move towards improving pastures.

5. The results of path analysis are considered as technical pasture owners' variables affecting participation. Therefore, it is recommended that more attention be given to technical issues with the owners being taught to have enough knowledge for pioneering partnership to improve rangelands.

6. In the results of path analysis, organizing local communities is also one of the important variables in the development and institutional participation. In our country except religious organizations, they mobilize appropriate measures to shape other social activities such as voluntary organizations in public affairs. Considering the impact of this important proposal, it is important to organize local community councils for production and performances.

7. Based on the results of path analysis, unfortunately at the end of the training courses, stabilizing factors list of participation is a serious pathology that would be created at first step in this section in the development and innovative activities. Holding periods based on demand of pasture owners is required.

8. Experts on the research results have emphasized on the assessment and the responsibility to improve rangeland of pasture owners. Therefore, based on Article 44 of the constitution emphasizing the process of placing

responsibility and authority of rangeland owners, they should be vested with the development and transfer of knowledge, skills and attitudes.

9. The results showed that whenever their attitude is better in participation, their activities in improving pastures increase. Therefore, it is recommended to make training necessary in order to increase the knowledge and awareness of the concept of rangeland owners; and to show them the importance of and how to create a spirit of partnership.

10. The results of correlation showed the relationship between variables in consulting with rangeland owners before implementing plans and based on the interests and needs of owners. In the variable, participation of range owners does not need the vision of experts. However, experts believe that their responsibilities to the grassland pastures should be deposited to the owners. So it is also necessary for partnership experts to improve their philosophies and ways of participation.

11. How to control livestock pastures is one of the most basic cases; there are disagreements between owners and experts of pasture. It is recommended to establish institutions of executive, support alternative programs regarding the number of livestock on pastures and to control the way they run the interests of pasture owners; they should be to be considered as appropriate. This point can lead to implementation of plans for increasing participation.

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