



Factors Affecting Non-Participation of Stakeholders in Rangeland Management Projects

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Abstract

Keywords:

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The purpose of this research was analyzing factors affecting non-participation of stakeholders in rangeland management projects. The research method was descriptive-correlative design in ranches of Piranshahr rangelands in western Azerbaijan province, Iran. All ranches that studied (Zioke Yurd, Ziuke Mirgah Chaku, Khargedashan Yurd and Gardeh Bon), are utilized in common use manner. Simple random sampling was used as sampling method. The sample size was determined by using Krejcie and Morgan table. The 157 stakeholders were determined. Questionnaire served as research tool and was completed through direct interviews with stakeholders. The findings showed significant correlation between age and non-participation of stakeholders. Also prioritization of non-participation of stakeholders in range management plans indicate that low literacy (education level) and lack of sufficient knowledge about the range management project, lack of programs and restoration of projects fitness to regional conditions and small area were the most important social, managerial, technical and economic factors affect the non-participation of stakeholders in the range management projects.

1. Introduction

Natural resources serve as paved way for sustainable development and support for natural life and cultural heritage of human society. Growing population, the urgency for access to alternative employment opportunities, lack of resources and lack of efficient development pattern have caused excessive pressure on renewable natural resource and nowadays degradation of natural resources as a global issue has led most planners and policy makers focused on it (Heidari, 2009; Saedigarghani, 2011). Given the vast natural resources in Iran and increasing trend of its degradation, there are urgent needs to pay much more attention and participation of stakeholders to develop, protect and restore this natural endowment (Khanlari, 2012; Roohi *et al*,

2010). Stakeholders have great contribution for the conservation, restoration and development of renewable natural resources among other resources. Nowadays, participative approaches in natural resources are viewed as holistic efficient strategy so that through attracting stakeholders attention improves success of different projects on conservation, restoration as well as sustainable utilization (Heidari *et al*, 2010).

As a whole, rangelands restoration plans date back to three decades ago, however because of non-participation of people in rangelands management projects, such projects have not achieved their projected goals (Shariati *et al*, 2005). Natural resource projects should seek to meet stakeholder's demands and attempt to find solutions

and improve their livelihoods as well (Liu *et al*, 2010; Guy, 2006). Quinn *et al* (2007) believe that in case of ignoring local stakeholders for rangelands management plans by government, stakeholders will not motivated to participate to expedite such plans trends. Hematzadeh and Khalighi (2006) studied factors affecting stakeholder's participation in range and watershed management plans on Kachik basin in Golestan province (northern Iran). According to the results, 87.7% of stakeholders did not participated in the planning 39% were not informed about the plan and 35% suffered from lack of fund and 25% did not know anything about advantages from plans implementation.

In another study, Khanmohammadi *et al* (2012) prioritized the main drawbacks and impediments for non-participation of local stakeholders in range management plans in expert viewpoint in Dashte Lar, Tehran. Correlation coefficient between studied variables showed that there is significant correlation between education level, range management history, economical issues and managerial drawbacks and participation rate in range management plans. Regression analysis showed that education, ranching history and rangelands quality have positive effect on participation rate and economic and administrative barriers imposed negative effect on the participation rate of stakeholders in range management plans.

Frotani (2014) while comparatively evaluating of professionals and stakeholders viewpoints on local communities participation in the sustainable management of lowland meadows of Bahar city in Hamadan reported that among the eight studied factors, stakeholders investment in the exploitation and reclamation, agricultural lands, and residues, the inputs (fertilizer, seed, forage, etc.), income and education levels had significant effect on stakeholders participation in rangelands restoration and reclamation. Their findings also indicated that the main tendency between economic and social factors is related to stakeholder's investment in restoration projects so that 1% investment in restoration projects increased participation of stakeholders by about 19.2%.

Prager and Posthumus (2010); Faircheallaigh (2010) and Kerchner *et al* (2010) studied personal and social and psychological factors influencing participation rate and concluded that social factors such as education, dependency on government, membership in social institutions and social factors like attitude towards the project, empowering local communities, organizing communities, taking property rights into account, job creation, involving community leaders on projects, social participation, trust in the government and local

authorities all together affect soil and water conservation projects.

Esther and Ndalawa (2003) while assessing public participation in water resource management in Tanzania showed that economic, social and environmental issues result from poor water resources management. They believed that natural resource management is related to policies such as the employees' knowledge, experience and ideas of the local communities in conservation as key factor.

With respect to public participation importance in the restoration and management projects in rangeland Piranshahr for Western Azerbaijan province by an area of 7728 hectares was considered. Given livelihood and cultural condition predominant in areas it should be noted that it is an unwise and unreasonable expectation to comprehensive participation on the part of stakeholders in rangeland management plans unless economic and social issues be taken into account. So in relation to importance of conduct of applied researches, the present study tries to shed lights on determinant factors affecting lack of stakeholders participation in rangeland management projects in Piranshahr rangelands.

2. Materials and methods

Piranshahr rangelands have an area of 7728 ha and stretched over Western Azerbaijan province (northwest of Iran). The rangelands are spanned over coordinates 44° 54" to 44° 58" N and 36° 49" to 36° 52" E. It is bounded by Kani Kuj and Balakandalneh vraz in the north, Bran Mountain in the south, Lavin River and Mullah Isaac cemetery and Kandmidel bravan in the west ending in Lavin River. The average maximum and minimum elevations are 3200 m and 2100 m above sea level respectively. The maximum temperature in the warmest month (August) is 31.4 ° C and minimum temperature in the coldest month (January) is 7.6 ° C. The area is characterized with cold and dry climate.

The methodology used in this research was survey which included the use of correlation and descriptive analysis as data processing methods. This research was done in summer 2015. A questionnaire was developed based on interviews and the relevant literature. The questionnaire included both open-ended and fixed-choice questions.

A 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was applied as a quantitative measure. Content and face validity were established by a panel of experts consisting of faculty members and experts in the social science. A pilot study was conducted with farmers who had not been interviewed before the earlier exercise of

determining the reliability of the questionnaire for the study.

The Cronbach's alpha value for the four items of managerial and technical factors affecting non-participation $\alpha = 0.78$ and economic factors about five items $\alpha = 0.76$ and the four social factors were $\alpha = 0.84$ was estimated. The population subjects for this research included 265 stakeholders from Zioke Yurd, Ziuke Mirgah Chaku, Khargedashan Yurd and Gardeh Bon in Piranshahr County from Western Azerbaijan. Sampling was carried using simple random method and sample size was determined using Krejcie and Morgan (1970) table was determined by which 157 stakeholders were considered.

After collecting and extracting data from questionnaires completed by the target stakeholders, questionnaire options were reviewed, coded and initial processing was performed with software Excel and then data analysis was performed by the software package SPSS22. To describe variables with respect to the questionnaire items descriptive statistics were used. In this section results are displayed in tabular manner (number, percentage and cumulative percentage). The items related to the lack of participation of stakeholders in range management projects were prioritized considering the coefficient of variation. To investigate the relationship between age, education and utilization history with total index of non-participation of stakeholders in range management plans, Spearman correlation test was used.

3. Results and discussion

3.1 Demographic Characteristics

The results showed that 20.4% of stakeholders were less than 40 years old, 26.8% in age class of 50-40, 30.6% in age class of 60-50 and 22.3% older than 60 years. also results show that 59.9% of stakeholders were uneducated, 28.7 percent low educated, 11.5 percent characterized with secondary school and no stakeholder had diploma or higher qualification. The results from opinions of from stakeholders about the ranching history showed that 15.9% have less than 15 years utilization history, 28 % with 25-15 years, 22.3% between 35 -26 years and 33.8% of respondents had more than 35 years history (table 1).

Field studies indicate that out of total stakeholders, 26% were characterized with livestock number less than 79 animal unit 42% with 171-220 animal unit, 15.9% with 121-170, 6.4% 81-100 and 8.9% of them had up to 220 animal units. Average livestock number was estimated at about 117 animal units. As whole results indicated that stakeholders use

more livestock beyond allowable threshold specified by natural resources experts in rangelands surveys and plans (table 1).

According to results from range management plans conducted in area, out of total stakeholders, 10.8% of them owned livestock less than 40, 42% between 40-60, 14.6% ranged 61-80, 21.1% 81-100, and 20.4% up to 100 animal units. An average allowable animal unit for stakeholders was found to be 76 (table 1)..

3.2 Prioritization of determinant factors on non-participation of stakeholders in range management plans

Table (2) presents frequency distribution of stakeholder's priority attitude towards the socio-economic and technical - administrative factors on non-participation on range management plans. The table shows that low education and lack of sufficient knowledge about the range management plans and the large number of stakeholders in the regions are the most negligible social factors affecting participation in range management plan. The results showed that the index mismatch between programs and restoration projects to climate conditions by the coefficient of variation 0.21 and item no consistency of range management plans to indigenous knowledge by 0.22 were the most and least important management and technical factors affecting non-participation in range management plans for the region. Small rangeland area (0.18) and lack of tendency to corporation in meeting labor demands followed by project costs by stakeholder (1.98) served as most and least important economic factors affecting non-participation in range management plans for the region (table 2).

3.3 The correlations between stakeholder's age and non-participation criteria

The results of Spearman correlation showed that different classes of stakeholders age is correlated significantly to total stakeholders non-participation indices in range management plans significant at probability level of 99% (Table 3).

The correlations between stakeholder's education and non-participation criteria

According to Pearson correlation test, there was no significant correlation between stakeholder's education and non-participation criteria.

The correlations between stakeholder's ranching history and non-participation criteria

According to Pearson correlation test, there was significant correlation between stakeholder's ranching history and non-participation criteria (table 4).

Table 1. Demographic Characteristics

Variables	Classification	Number	Percent	Cumulative percent
Age	<40 Years	32	20.14	20.4
	40-50	42	26.8	47.1
	50-60	48	30.6	77.7
	>60 Years	35	22.3	100
Education	Uneducated	94	59.9	59.9
	Preliminary	45	28.7	88.5
	Secondary or high school	18	11.5	100
	Diploma or higher	0	0	100
Utilization history	<15 years	25	15.9	15.9
	25-15	44	28	43.9
	35-26	35	22.3	66.2
	>35 years	53	33.8	100
Stockholders based on the number of animal units	<70	41	26.1	26.1
	70-120	67	42.7	68.1
	121-170	25	15.9	84.7
	171-220	10	6.4	91.1
	>220	14	7.9	100
Average: 117.28 Variance: 62.08 Standard deviation: 3854.21				
Allowable livestock number	<40	17	10.8	10.8
	40-60	66	42	52.9
	61-80	23	14.6	67.5
	81-100	19	12.1	79.6
	>100	32	20.4	100
Average: 76 Variance: 4.5 Standard deviation: 2.03				

Table 2. Frequency and prioritization criteria stakeholder's non-participation in rangeland management projects

Stakeholder's non-participation criteria	Relative frequency*						SD	CV	priority	
	1	2	3	4	5	Mean				
Social	Lack of ownership sense	0.6	1.9	24.2	51	22.3	3.99	0.87	0.218	3
	Low education and lack of sufficient knowledge about the range management project	1.3	4.5	11.5	34.4	48.4	3.96	0.75	0.189	1
	Having exceeded the allowable animal unit	0	2.5	22.9	50.3	24.2	4.24	0.91	0.214	2
	The large number of stakeholders in the region	0	5.7	21	41.4	31.8	4.12	0.91	0.220	4
Technical and administrative	Mismatch between restoration plans and projects with the intrinsic patterns in the region	0.6	4.5	29.9	38.9	26.1	3.79	0.81	0.213	1
	Lack of executive oversight	0	3.8	29.3	41.4	25.5	3.88	0.83	0.214	2
	Lack of information through publication in local newspapers	0.6	7	22.9	49.7	19.7	3.80	0.85	0.223	3
	range management plan mismatch to indigenous knowledge	0	6.4	26.1	49	18.5	3.85	0.88	0.228	4
Economical	Lack of money to afford forage	0	4.5	18.5	37.6	39.5	4.12	0.86	0.208	2
	Unwillingness to cooperate in the supply of labor and the cost of the project by stakeholder	0	5.7	30.6	45.2	18.5	3.76	0.81	0.215	5
	Poverty and low stakeholder's income	0	1.9	28	31.2	38.9	4.07	0.86	0.211	4
	Unemployment and a lack of sustainable employment	0	5.1	15.3	30.6	49	4.23	0.89	0.210	3
	Low rangeland area	0	5.7	15.3	25.5	53.5	4.26	0.75	0.176	1

*1=Very low, 2=low, 3=moderate, 4=high, 5=Very high

Table 3. The correlations between stakeholder's age and non-participation criteria

Variable	Status	Significance level	r_s
Stakeholders age	<40	0.001	0.57
	40-50		
	50-60		
	>60		

Table 4. The correlations between stakeholder's ranching history and non-participation criteria

Variable	Status	Significance level	r_s
Stakeholders ranching history	<15	0.001	0.53
	15-20		
	26-35		
	>35		

4. Conclusion and recommendations

In general, the results showed poorly educated stakeholders in the study area. Under such circumstances it is essential to apply indigenous knowledge measures to reduce illiteracy rates to attract more development and economic participation in community. This part of the research is in line with studies by Saeedigaraghani (2011) and Heideri *et al* (2010) who suggest that educated people has fewer tendencies to herding and occupied in other jobs.

The findings show that aged utilizers is one of the fundamental problems in range management plans in the study area. This has led to inability of most stakeholders involving in most of ranches. However, it is recommend apply native knowledge and stakeholders experiences within rangeland management plans. This is in line with findings of Frotani (2014), Liu *et al*(2010) and Heidari (2009) who stated that age and utilization(herding) history have great contribution in range management.

Frequency distribution of stakeholders attitude forward to most important social, economic, technical and administrative factors in non-participation of range management plan show that low education and awareness on range management plan and much number of stakeholders in areas are the most and least important factors non-participation of range management. This may be attributed to very low education so that 60% of people are deprived from enough education. This is consistent with researches of Prager and Posthumus (2010), Esther and Ndalawa (2003) and Khanmohammadi *et al* (2012) who stated that education level is a crucial determinant factor in non-participation of stakeholders in range management plans. Similarly, results from stakeholder's viewpoints showed that mismatch between restoration plans to regional intrinsic pattern and mismatch between range management plans and indigenous knowledge are of lowest important management and technical factors on -participation of range management plan. Since

most of ranches are utilized in common manner, selecting technical indices including stakeholders intrinsic knowledge in rangeland restoration may strengthen motivation for range management plan among policy makers and stakeholders (Khanlari, 2012). Also other measures such as knowledge on management and monitoring and evaluation principles may motivate people for implementation of the project effectively. This is in line with findings obtained by Roohi *et al* (2010), Quinn *et al* (2007) and Hematzadeh and Khalighi (2006) who believed that training, extension, supervision and project duration are positive factors on the technical efficiency of range manager.

Small rangeland area (0.18) and lack of tendency to corporation in meeting labor demands followed by project costs by stakeholder (1.98) served as most and least important economic factors affecting non-participation in range management plans for the region. Given undesirable financial conditions and low credit like low interest rate loan, economical factors should not ignored since the necessity for correct watershed management plans execution is to having wealthy stakeholders considering ecological conditions.

It is worthy to note that the more credit and financial funds, the more family income from farming and herding, whereby, the more sustainable economy and motivations for active participation in natural resources plan will be. This findings is confirmed by some studies in literature (Khanlari, 2012; Frotani, 2014; and Heidari, 2009) stated that the best warranty for regulate range; management plan is to take stakeholders livelihoods conditions into account.

As per results, the estimated coefficient for stakeholder's age and history was significant in probability level of 99% so this variable is significantly related to stakeholder's non-participations criteria in range management plans. Apparently, as the stakeholders get aged, they show

less tendency to communicate to regularity agency and to adopt new methods and gave up traditional habits will be difficult. This is in line with findings of Roohi *et al* (2010) and Hematzadeh and Khalighi (2006). In light of above obtained results, the main barriers and drawbacks for participation of stakeholders in range management plans include mismatch between projects to range manager demands, ignoring financial issues, low education and finally lack of suitable culture. So there is urgent need to offer an approach to obviate these issues. The main necessity for approach is nativity. By nativity, it means their consistency to economic, social and natural conditions so that it can attract local's satisfaction to implement project in all study, implementation and maintenance stages.

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عوامل مؤثر بر عدم مشارکت ذینفعان در پروژه‌های مدیریت مراتع

سلیمان رسولی آذر، انور کردی و لقمان رشیدپور

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هدف از این تحقیق تحلیل عوامل مؤثر بر عدم مشارکت ذینفعان در پروژه‌های مدیریت مراتع در شهر پیرانشهر، استان آذربایجان غربی، کشور ایران بود. روش تحقیق توصیفی و همبستگی استفاده شد. تمام مراتعی که مورد مطالعه قرار گرفت به طور مشارکتی استفاده می‌شد. روش نمونه‌گیری تصادفی ساده به عنوان روش نمونه‌گیری انتخاب شد. تعداد نمونه بر اساس جدول کرجسی و مورگان تعیین شد ($n=157$). بر اساس نتایج حاصل بین سن و عدم مشارکت ذینفعان در پروژه‌های مدیریت مراتع رابطه معنی‌داری به دست آمد. همچنین اولویت‌بندی دلایل عدم مشارکت ذینفعان در پروژه‌های مدیریت مراتع نشان داد که سواد پایین، عدم دانش کافی در زمینه مدیریت مراتع و عدم وجود تطابق بین برنامه‌ها با شرایط مراتع از مهمترین موارد است.

چکیده

کلمات کلیدی: عدم مشارکت، پروژه‌های مدیریت مراتع، ذینفعان، شهر پیرانشهر