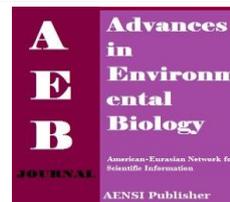




AENSI Journals

Advances in Environmental Biology

ISSN-1995-0756 EISSN-1998-1066

Journal home page: <http://www.aensiweb.com/aeb.html>

Determination of the success factors of executing range management projects in Omidiyeh city

¹Hoshang Tahmasbi Asl, ²Tahmasb Maghsoudi and ³Sirous Salmanzadeh Totonchi

¹⁻²⁻³Department of Agricultural Management, Shoushtar Branch, Islamic Azad University, Shoushtar, Iran.

ARTICLE INFO

Article history:

Received 25 April 2014

Received in revised form

8 May 2014

Accepted 20 May 2014

Available online 16 August 2014

Key words: pasture, range management projects, participation, range management projects success, Omidiyeh

ABSTRACT

This study was aimed at evaluating the rate of success in Omidiyeh city. There are (in this city) 21 range management projects of 48243 hectares which have 238 executors. This study is the descriptive –survive study and, in terms of analysis method, is a multivariable analysis method. This study is also a casual- relational study, which is an applied one in terms of objective. Main study tool was questionnaire. This study's validity was determined by an expert panel and its reliability was resulted to be 0.87 using Cronbach's alpha coefficient. Statistical society was all executors of range management projects of Omidiyeh city (n=238) from which 143 ones were selected as sample using Krejcie and Morgan table, complete random sampling was carried out. Results indicate that there is a negative and significant relationship between the rate of range management projects success and increase of the number of family's children. There is also a negative and significant relationship between the age and range management projects success. It was indicated in the evaluation of factors affecting range management projects success that four variables of rate of producers' awareness of range management projects, number of children, age and number of cattle explain about 42.8 percent of the dependent variable's variance. Evaluation of factors affecting range management projects success indicated that seven factors of producers' participation, access to weed, increase of confidence and sense of ownership, observing the permit of grazing, training, quality of range, and insurance of range management projects explain about 69.17 percent of range management projects success.

© 2014 AENSI Publisher All rights reserved.

To Cite This Article: Hoshang Tahmasbi, Tahmasb Maghsoudi and Sirous Salmanzadeh Totonchi., Determination of the success factors of executing range management projects in Omidiyeh city. *Adv. Environ. Biol.*, 8(11), 312-318, 2014

INTRODUCTION

Range, as the ground of Iran tribes' social and economic evolution is of high importance because it is the source of producing meat, dairy, wool and other livestock products. In addition, a part of industrial and medical plants are obtained from this God-given resource. However, many ranges face a deep crisis because of limitless destruction, which would be followed by disasters such as destructive floods, drying out, storms, sand dunes, environmental pollution, drought, and famine [17].

Khuzestan province with 63633 km² width is located in southwest Iran. Currently, in Khuzestan, there is about 250000 hectares of range, of which 1.000.000 hectares are located in plain, which because of uncontrolled grazing and soil erosion, is not capable of being a range and becomes a barren desert and sand hills [14]. In this respect, Khuzestan is one the most vulnerable provinces of the country because its desert includes 11 cities and 350000 hectares of its desert is covered by sand dunes, which include six crisis centers of wind erosion.

Omidiyeh city, with a width of 264000 hectares is located in southeast Khuzestan, 120 km far from Ahwaz- the center of the province. It has 201000 hectares of range, which are completely winter ranges .21 range management projects with 48243 hectares have been prepared and permitted, which have 238 executors. Modification projects of storing rainfalls in addition of seeding, bush plantation, weed plantation, etc. have been so far conducted on 5000 hectares [14].

Evaluation of range management projects success is necessary because of the importance of range protection of it and, seeing that range management projects are being executed with participation approaches and a high cost is allocated to them. The main point is that the executed projects are evaluated only with technical and performance indicators without considering their rate of success on social and production dimensions.

Participation of stakeholders in modification and revival projects fort range may be a leading part of the project success. nowadays, the role of people's participation in modification, revival, and management of

Corresponding Author: Tahmasb Maghsoudi: Department of Agricultural Management, Shoushtar Branch, Islamic Azad University, Shoushtar, Iran

natural resources is tangible and is considered as one of new approaches of Iran forestry and range organization [9].

Hematzadeh and Khalighi [9] believe that one factor affecting the success of range and watershed projects is motivating the range managers to participate. Some factors, which can affect the success of range management projects, are the rate of satisfaction of project execution and participation in different stages of the project, literacy of the project executer and its members, range manager's access to health, welfare, and educational amenities in villages near the location of the project, homogeneity of job coordination among stakeholders, existence of secondary and subsidiary jobs, range management experience, little number of range management project's members, social problems, strong management, training and extension, presence of the workers, and nearness of the range manager's residence location to the range realm [5].

Karimiyan *et al.* [12] indicated that the main reasons of grazing systems failure in the winter ranges are nonparticipation of the stakeholder, lack of attention to the human necessities, nonnative designed systems and their lack of consistency with conditions of the region's ranges, and lack of accurate design.

Sanaee Torghabeh [23] concluded that the rate of coordination among tribal farmers in using ranges and executing the project is of high importance in range management projects. Amiri and Khatoonabadi [2] indicated that nowadays there is not any active participation and corporation between relevant departments and stakeholders in terms of protecting, revival, and using the ranges. They believe one of the main causes of range modification and revival projects' failure is the lack of sufficient awareness about the rural society and underestimating their knowledge and experiences.

Alizadeh and Mahdavi [1] show that factors such as lack of specialists, intangibility of the control position and non-defining it as a position rank, range management projects' number, distribution, and wideness, hard climatic conditions, the topography dominant in the ranges, lack of transportation and other amenities, lack of communication and coordination between the projects executers and supervisors, and lack of fixed and defined quantitative criterion to evaluate some projects cause the range management projects to fail.

Arokhi [4] concluded that stakeholders' lack of cooperation has historical, political, social, and technical reasons and the way of executives reaction is also involved in this lack of cooperation.

Khalighi and Qasemi [13] showed that the kind of range ownership and rained land width have a positive and significant relationship with the farmers' participation in range management projects. But, the livestock farming experience, irrigated land hectare, level of literacy, and income don't have any relationship with the participation of livestock farmers in range management projects.

Motahari and Khaksar Astaneh [19] indicated that the variables of receiving the loan, range width, number of training hours, and duration of executing the project have a positive effect and variable of the number of stakeholders has a negative effect on the technical efficiency of stakeholders.

Jalali and Karami [11] indicated that among the constructs of communication with the natural resources employees, fatalism, successes-orientation, individual's technical knowledge, level of literacy, profit of cost, social consequences of participation, promotional services, and providing inputs have a significant correlation with the variable of the rate of individual's participation in cooperative.

Barani [6] pointed out that in preparing range management projects, range management knowledge is required. In this regard, it is necessary in managing a production unit of range to address issues such as marketing, accounting, livestock health management, etc.

Heydari *et al.* [10] concluded that there is a positive and significant relationship between the range situation of each allotment and executers' rate of participation. In addition results of variance analysis showed that the rate of executers' participation in running the range management projects has a significant difference in terms of the degrees of range conditions. Comparing the averages, maximum rate of executers' participation is related to allotments in which the ranges have good and perfect degree of conditions. In addition, results indicated that there is not a negative relationship between the number of predicted authorized livestock in unit area and the situation of each allotment's range.

Rohi *et al.* [22] indicated that the maximum tension among social factors is related to the stakeholders' rate of awareness about range management projects. In addition, if the awareness about range management projects is increased, the possibility of stakeholders' participation would be increased. Variable of age showed a negative and significant affect on the stakeholders' participation, which seems in spite of their high experience, physical inability has affected their lower rate of participation.

Hejazi and Abbasi [8] concluded that the variable of expectations realization among ones related to the characteristics of livestock and range balance plan and the variable of education among ones related the personal characteristics have the most effect on the participation of executers in such plans.

Nazifi [20] showed that there is a positive and significant relationship between the dependent variable of the progress of range and livestock balance plan and ones of holding extension and training lectures, holding extension and training classes, contact with natural resources promoters, holding practical trainings, and performing Method and result demonstration displays.

Mokhtari Zanjani [18] stated that there is a positive and significant relationship between the variables of stakeholders' level of education and their awareness of range management projects' objectives and benefits and their attitude toward range management extension plans.

Marshall [15] showed that farmers' readiness to cooperate in executing the agreed programs is mostly affected by social factors such as their perception of the society advantages and their trust in the cooperation of other members, so this leads to their success in work. Mendoza [16] concluded that the participants are younger and more educated. In addition, farmers with more income, land, and organizational native relations had more participation. In other words, age, income and area under plantation have a positive and significant relationship with the participation of farmers.

Ekaya and Macharia showed that uncontrolled use of range species causes the range to be weak, reduces the coverage, and changes the plant diversity and composition. In addition, they believed that execution of grazing system requires an attention to the main principles of graze management such as season of using the range, number of uses, kind of animal, and selected animals.

Method and Materials

This is a descriptive- survey study aimed at answering questions about factors affecting range management projects success in Omidiyeh city. In terms of analysis method, it is multivariable analysis study. The present study is a casual- communicative one which, in terms of objective, is applied and, because evaluates the relationship between the study's variables, it is also a correlational study. In the present study, the statistical society includes all range stakeholders (238 ones) in range management projects of Omidiyeh city. To determine the sample size, Morgan and Kerji table was used, which according to the society of 238 stakeholders, 143 ones were selected as sample size. Sampling method was completely random. Main data collection tool was questionnaire. To this end, 30 questionnaires were pretested and Cronbach's alpha coefficient was calculated for different parts of the questionnaire. Results indicated that the study tool is reliable enough (0.87).

Findings:

Evaluating the success rate of executed range management projects in the region, stakeholders stated the most important item of success is participation and cooperation with the project experts and executors; other priorities are keeping the number of livestock based on the issued permit and protecting the range against the entrance of unauthorized livestock to the range. Lowest success item is the participation in the project's costs. Results are indicated in table 1.

Table 1: frequency distribution of respondents' answers about the success rate of executing range

Item	Mean	Sd	CV	Rank
I accept some of the costs of executing the range management project	2.87	1.207	0.421	23
I participate and cooperate with the experts and executors of range management project	4.34	0.755	0.174	1
The needed weed about my livestock is provided by executing the range management	3.43	0.938	0.287	14
Executing the range management project increased the weed	3.36	1.044	0.311	16
executing the range management project reduced the cost of providing weed	3.01	1.150	0.382	21
With all stakeholders, I participate in executing the range management project	3.90	0.915	0.235	5
There is an appropriate cooperation among the executors of the range management project	3.69	1.060	0.288	15
I consult and cooperate with all stakeholders about the enter and exit time of the livestock	3.94	0.950	0.241	8
Stakeholders have a good cooperation with the village Islamic consultative in resolve the disputes among them	3.33	1.116	0.335	20
executing the project caused an increase of tasty species	3.39	1.090	0.322	18
By executing the range management project, there is more trust between stakeholders and natural resources agents	3.90	0.905	0.232	4
Range management project increased the confidence and solidarity among social groups	3.57	1.012	0.283	13
I am agree with range management insurance	4.04	1.053	0.261	9,5
I determine the number of my livestock based on the issued grazing permit	4.13	0.821	0.199	2
Other stakeholders determine the number of their livestock based on the issued grazing permit	3.68	0.989	0.269	11
I believe that executing the range management project is beneficial to the region's animal farmers	4.23	1.002	0.237	6
I have sense of ownership by assigning the range management project	4.10	1.072	0.261	9,5
range management project is integrated with all watershed and promotional training projects	3.51	0.981	0.279	12
Instructions of executing the range management project have many problems and limitations	3.19	1.003	0.314	17
Together with all other stakeholders, i protect the project by preventing the entrance of unauthorized animal farmers	4.08	0.895	0.219	3
I participated in the classes of range management and the ways of protecting and	3.53	1.159	0.328	19

keeping it				
I will warn every stakeholder who break the law	3.94	0.939	0.239	7
Executing the range management project caused an increase in other productions	2.85	1.191	0.417	22

(1-much little, 2-little, 3-medium, 4-much, 5-very much)

In the analysis of range management project success, stepwise regression was used to identify the variables affecting the success of range management project. In this analysis, variables (which became significant in the correlation analysis) were entered the analysis as independent variables and the success of range management project was considered as the dependent one, which was measured at a semi-interval level. Results of this analysis indicate that 5 variables explain about 42.8 percent of the dependent variable's variance. Results are shown in tables 2 and 3.

Based on the results of stepwise regression, rate of awareness of range management projects was entered the analysis in the first step, which, on its own, explains 28.7 percent of the range management project success variance. Increase of awareness, which is one of the advantages of range management project, is an important factor in increasing the success factor in range management project. In the second step, variable of the number of children was entered the analysis, which explains 6.2 percent of the range management project success variance. But this effect is negative and the increase of the number of children reduces the rate of the range management project success. Large number of children increases the tendency of keeping more livestock which leads to a higher pressure on the range, so stakeholders with more children are not willing to execute range management projects, In the third step, variable of age was entered the regression, which explains 3.9 percent of the range management project success variance. Effect of this variable on the dependent one is negative as well meaning that when getting older, stakeholders' believe in the project success would be weakened. Finally in the fourth step, number of livestock variable was entered the analysis, which explains about 4 percent of the range management project success variance. Big livestock such as cattle more appropriate for a range and the increase of such livestock in the region, because of its limited number and type of nutrition, will put a lower pressure on the range.

Table 2: determination coefficients of variables affecting the rate of range management project success

Step	model	R	R ²	R ² _{Ad}
1	Rate of awareness of range management projects	0.536	0.287	0.279
2	Number of children	0.591	0.349	0.335
3	age	0.623	0.388	0.367
4	Number of cattle	0.654	0.428	0.402

Table 3: amount of the effect of variables affecting the rate of range management project success

Variable	B	Error standard	Beta	t	Sig
Constant coefficient	0.781	0.200	-	3.905	0.00
Rate of awareness of range management projects	0.415	0.075	0.459	5.531	0.00
Number of children	-0.069	0.029	-0.205	-2.404	0.018
age	-0.004	0.001	-0.211	-2.607	0.011
Number of cattle	0.044	0.017	0.213	2.491	0.015

From evaluating the importance of variables entered in the regression analysis based on Beta coefficient, Rate of awareness of range management projects with Beta coefficient of 0.459 has the most important and effect on the success of range management projects. Number of cattle variable with Beta coefficient of 0.213 is the second important variable in the success of range management project and the variable of age with a Beta of 0.211 and number of children with a Beta of 0.205 is the other important variables in the success of range management project. According to the results and regression coefficients, linear regression equation can be written as below:

$$y = 0.781 + 0.415 x_1 - 0.069 x_2 - 0.004 x_3 + 0.044 x_4$$

Conclusion:

Results indicated that the rate of awareness of range management project is the most important item in its success. Rohi *et al.* [22] indicated that the maximum tension among social factors is related to the stakeholders' rate of awareness about range management projects. In addition, Barani [6] stated that in preparing range management projects, range management knowledge is required and the awareness of stakeholders is necessary. Jalali and Karami [11] stated that the individual's technical knowledge affect the rate of his/her participation and Sanaee Torghabeh [23] concluded that the way in which head range managers and livestock farmers get together and range management projects are executed through visits of natural resources experts are the success factors of range management projects. Mokhtari and zanjani [18] concluded that range mangers' awareness of the objectives and advantages of range management projects has a positive and significant relationship with range management extension programs. Hematzade and Khalighi [9] believed that one factor affecting the the success

of range management and watershed projects is to create the motive of participation among range managers. Most of developed countries believe that targeted and organized trainings granted their success in such projects.

Qafari and Jamshidzede [21] concluded that participation in projects increases the social and political awareness of people. Some people are not familiar or have a little information about the duties of public organizations and this is because of lack of relationship among them. Informed participation of people in tasks reduces their resistance against change, transformation, and renovation, so that participation increases social welfare and *flourishing* of thought. So, in addition to the fact that awareness of range management project increases the rate of success and stakeholders' participation, participation is a factor increasing the rate of awareness.

Results indicate that the rate of range management project success has a negative and significant relationship with the number of children and age. In addition, a positive and significant relationship was observed between the number of cattle and success and the variable of animal farming experience and eructation don't have any relationship with the success of range management projects. Hejazi and Abbasi [8] indicated that the variable of education has the most effect on the participation of executors in the livestock and range balance plans; such a relation was not observed in the present study. As well, Mendez [16] believed that age and income have a relationship with the rate of stakeholders' participation in range management projects; this finding is not confirmed in the present study and income is not related to the success of projects in different sections. Faham *et al.* [7] stated that there is a positive and significant relationship between the level of education and rate of participation in protecting the forests; this is not confirmed by this study. Mokhtari and Zanjani [18] believed that there is a positive and significant relationship between the range managers' attitude toward the extension range management programs and the variables of level of education and awareness of range managers of the range management projects' objectives and advantages; this study emphasizes on the relation of rate of awareness but it doesn't confirm the relation of the level of education variable. Khalighi and Qasemi [13] indicated that there is not any relationship between the livestock farmers participation in range management projects and livestock farming experience, level of literacy, and income, which is in line with the findings of the present study.

One factor affecting the success of range management projects is the training for stakeholders in the form of promotional trainings and integrates it with range management programs. On this basis, increase of the stakeholders' level of access increases the success of range management projects. Najafi [20] indicated that there is a positive and significant relationship with the success of range management project and variables of holding extension and training lectures, holding extension and training classes, contact with natural resources promoters, holding practical trainings, and performing Method and result demonstration displays. Arayesh and Farajollah Hossieni [3] concluded that there is positive and significant relationship between the variable of people participation and extension organizations' structure and planning and economic and psychological variables. Mazhari and Khaksar Astaneh indicated that variable of training hours has a positive effect on the technical efficiency of range managers.

–Given that the rate of stakeholders' awareness of range management projects is the most important variable in the success of range management project, enough justification of advantages, disadvantages and opportunities of executing the range management project is necessary before starting the project. So, it is suggested that before starting the project, feasibility survey of executing the project is carried out and in places selected based on this feasibility survey, public awareness programs should be created using appropriate media such as TV and newspaper, which have an important role in such programs. In this regard, it is suggested that each range management project employ an elite extension expert and manage the range management project during the execution of training programs.

–Given the results, households having more children think that range management projects are restrictive because they cannot have an optimum use of their work force. Thus, it is suggested that by developing entrepreneurial and job creation programs such as livestock finishing in closed systems or granting credits of job creation, employ a part of their work force in other activities so that the pressure on ranges will be reduced.

–Other variable affecting the success of range management projects is the age of stakeholders, which has a negative effect.

–Factor of participation in range management projects is the most important factor of success so in executing range management projects, determining the rate of stakeholders' participation and share each one receives in executing the project is suggested. In addition, it is recommended that in order to have a real participation, stakeholders hold joint meeting in terms of income and costs of the project and report the results to the public.

–Access to weed and granting it during the execution of the range management project is a factor of success. Thus, in the joint meetings, way of providing weed should be described to the stakeholders and both parties should be responsible of it. Frequently, stakeholders have no other income, so their income of livestock farming should be granted.

–Increase of confidence and sense of ownership in stakeholders is an important factor in the success of range management projects. Consequently, in executing the projects, considering the native forces of the region with

the external observers to attract their trust is suggested. In addition, clarifying the process of assigning ranges to the range managers and legal procedures increases the sense of ownership in the stakeholders.

–Stakeholders` observance of grazing permit is a factor of range management project success. Thus, it is suggested that stakeholders in cooperation with the project executors identify an observer group on the permit execution and observe the execution of grazing permit.

REFERENCES

- [1] Alizadeh, A. and F. Mahdavi, 2011. Necessity of employing agriculture experts and engineers in observing the range management projects. Available at: <http://vista.ir/article.370630>.
- [2] Amiri, F. and S.A. Khatonabadi, 2004. Evaluation of traditional organizations utilizing the ranges of kohgiluyeh and Boyer-Ahmad province and their role in the modification and revival of ranges; forest and range, 63: 50-55.
- [3] Arayesh, B. and S.J. Frajollah Hosieni, 2010. Regression analysis of factors affecting people participation in protecting, revival, development and utilization of renewable natural resources from the view of Ilam province natural resources experts. *Economy and agriculture development (agriculture sciences and industries)*. 1(1): 49-58.
- [4] Arokhi, S., 2001. Evaluation of factors affecting the non-participation of range managers in range modification and revival projects (with an emphasis on Kamishan ranges in Golestan province), range management association. *Papers of the 2nd national seminar of range and range management in Iran*. pp: 73-89.
- [5] Azkia, M., 2006. Social dimensions of range utilization management in Iran (with an emphasis on Fars and kohgiluyeh and Boyer-Ahmad provinces). Available at: <http://www.olumensani.com>
- [6] Barani, H., 2004. Recognition and analysis of allotments as range management units; forest and range. 63: 8-11.
- [7] Faham, E., A. Rezvanfar, T. Shamekhi, 2008. Analysis of Factors Influencing Motivation of Villagers' Participation in Activities of Social Forestry (The Case Study of West Mazandaran). *American Journal of Agricultural and Biological Sciences*, 3(2): 451-456.
- [8] Hajazi, Y. & A. Abasi, 2007. The analysis of the effective factors on rancher's participation. *Journal of Economy and Agriculture*, 60(2): 683-692.
- [9] Hematzadeh, Y. and N. Khalighi, 2006. Evaluation of factors affecting the non-participation of stakeholders in range and watershed projects(case study: stakeholders of Kechik catchment basin of Golestan province).
- [10] Heydari, Q., S.M. Aghili, H. Barani, J. qorbani and M. Mahbobi, 2010. Correlational analysis between the range condition and rate of the participation of range managers in executing the range management projects(case study of Baldeh ranges- Mazandaran province). *Range.*, 4(1): 138-149.
- [11] Jalali, M. and A. Karami, 2006. Determination of factors affecting the range managers` participation in range management cooperatives in Kurdistan province. *Construction researches*, 70: 35-45.
- [12] Karimiyan, A., H. Barani, M. Mahbobi and F. Yaghmaee, 2008. Evaluation of grazing systems in range management projects of Semnan province. *Agriculture and natural resources sciences*, 16(3): 202-2014.
- [13] Khalighi, N.A. and T.M. Qasemi, 2004. Evaluation of the effect of economic and social issues on the rate of livestock farmers` participation in range management projects. *Journal of agriculture and natural resources science*. Year 11, no. 1, Tehran.
- [14] Khuzestan natural resources and watershed office, 2011. The appearance of the province`s natural resources. Available at: <http://khuzestan.frw.org.ir>.
- [15] Marshall G.R., 2004. Farmers cooperating in the commons? A study of collective action in salinity management. *Ecological Economics*, 51(3-4): 271-286.
- [16] Mendoza C.C., 2006. Factors influencing participation in environmental stewardship programs: A case study of the agricultural and forestry sectors in Louisiana. Ph.D. dissertation, Louisiana State University and Agricultural & Mechanical College, United States -- Louisiana. Retrieved August 5, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 3244976).
- [17] Moghadam, M., 2007. Range and range management. Tehran university press. 4th edition.
- [18] Mokhtari zanjani, M., 2003. Analysis of pastoralists and experts` viewpoints of Zanjan Natural Resources Office about range management extension programs and policies of Forest, Range and Watershed Management Organization, Msc thesis, Sciences and Researches Branch, Islamic Azad University, Iran
- [19] Motahari, M. and H. Khaksar Astaneh, 2009. Evaluation of the effect of executing range management projects on the range efficiency (case study of Khorasan Razavi province). *Economy and Agriculture development (agriculture sciences and industry)*. 23(2): 12-20.
- [20] Nazifi, H., 2006. Analysis of extension role in progressing plan of equivalence between number of livestock and range capacity among pastoralists in Dasht-e-Moghan, Msc thesis, Sciences and Researches Branch, Islamic Azad University, Iran.

- [21] Qafari, Q. and A. Jamshidzadeh, 2011. People participation and urban affairs(evaluation of barriers, problems, and guidelines of people participation development). Tehran municipality office of social-cultural studies. Society and culture.
- [22] Rohi, F., H. Amirnehjad and J. Qorbani, 2010. Evaluation of the social role of stakeholders on the rate of their participation in executing the range management projects(case study: Qaemshahr city`s ranges). *Range.*, 4(3): 473-483.
- [23] Sanaee Torghabeh, M., 2010. Evaluation of range management projects allocated in Khorasan province. Agriculture Jihad ministry. Institute of planning researches, agriculture economy and rural development, Khorasan Razavi center of agriculture and natural resources researches, pp: 1-82.