



Research Journal of
**Environmental
Sciences**

ISSN 1819-3412



Academic
Journals Inc.

www.academicjournals.com

Participation and Success: A Study in Range Management Cooperatives, Iran

¹Mohammad Reza Shahraki, ²Ahmad Abedi Sarvestani and ³Hossein Barani

¹Department of Rangeland Management, Gorgan University of Agricultural Sciences and Natural Resources, Iran

²Department of Agricultural Extension and Education, Gorgan University of Agricultural Sciences and Natural Resources, Iran

³Department of Rangeland Management, Gorgan University of Agricultural Sciences and Natural Resources, Iran

Corresponding Author: Ahmad Abedi Sarvestani, Department of Agricultural Extension and Education, Gorgan University of Agricultural Sciences and Natural Resources, Iran

ABSTRACT

Range management cooperative as a coherent participatory system in ranges can play a significant role in solving several problems in managing ranges. This people organization is one approaches by which the participation of exploiters can be attracted for effective decisions of prevention of range destruction and continuation of cooperation between local government and exploiters of rangelands. This study aimed to examine the effect of participation of cooperatives' members in the rate of success of range management cooperatives in Golestan province. This study was done as a survey research. Study population involved ordinary members and board of director of range management cooperatives in which 308 ordinary members and 85 members of board of director were studied by using stratified random sampling. Instrument for data collection was a questionnaire made by researchers and tested by a pilot study. Results of the study showed that participation and cooperation of members in different affairs of cooperative has a strong significant relation with the rate of success of range management cooperatives. Multiple variables regression showed that members' participation in cooperatives affairs determine 56.3% of changes in success rate of range management cooperatives. Furthermore, results showed that the members of board of directors participated more than ordinary members in affairs of range management cooperatives. Based on the findings it is suggested that some arrangements should be considered so that members participate more in performing renovation and improvement operations and election of board of directors and public associations.

Key words: Participation, success, range management cooperatives, Golestan province, Iran

INTRODUCTION

Forests and ranges are of basic factors in sustainable development due to playing a role in water and soil conservation, oxygen production, industrial and medical products and ecosystem balance. In recent decades, dealing with destruction factors of ranges and trying to renovate these resources have been considered as a basic step in sustainable development. However, regards to large area of ranges it seems that exploiters participation in form of a cooperative is the best strategy for

conserving and developing these resources (Jalali and Karami, 2006). Garforth *et al.* (1988) suggested that one of the effective strategies for reducing destruction of ranges is exploiters participation in performing range management plans. Dunn *et al.* (2002) mentioned that cooperative plays an important role in rural development in a manner that it is reminded as a part of a dynamic and active agricultural environment.

Some believe that cooperative plays an important role in making decisions (Alvarez, 1999; Ilskog *et al.*, 2005). For developing rural regions with the purpose of using maximum participation, it should have attracted by participation of all people. In fact, cooperatives involve a group of people who do a team work based on common beliefs for achieving a better life. In addition to environmental conditions of natural resources, the type of applied management imposed by executive authorities and participation of local people will play significant roles in improvement and effective management; because collective and participation approaches are useful for desired management of natural resources for making more effective decisions. Furthermore, participation for making more constant participation of resources with environmental value has become a principle (Margerum, 2001; Mbaiwa, 2005; Steyaert *et al.*, 2007). Participation means motivating people and increasing their understanding and capability in order to response development plans and in other words, participation involves people interference in decision making process, plans performing and sharing the interest of the development plans and interfering in evaluation of plans (Papeli-Yazdi and Labbaf-Khaniki, 2001).

Wilson and Hart (2001) believe that a trend toward conservation-based views of rural people via participating them in participation programs should become as an index for determining effectiveness of politics related to agriculture and biological environment. In addition, Dolisca *et al.* (2006) mention that exploiters participation in forestry plans is the development basis and tool of performing strategies of natural resources management. Some studies indicated the important role of individuals participation in cooperatives success and development (Huntsinger and Fortmann, 1990; Ladele *et al.*, 1994; Finsterbusch and Van Wicklin, 1989; Fleischer and Applebaum, 1992). Hakelius (1996) emphasizes on the role of participation and loyalty of members in success of cooperatives. Baticados (2004) believe that members integration and homogenization and durability of small groups are effective. He also emphasized on the role of participation in exploiting resources and success of cooperatives. Russoa *et al.* (2000) suggest that in addition to member familiarity of cooperation principles and their belief about human factors, member participation is also important. They believe it is one of the effective factors in cooperatives performance. Amini and Ramezani (2008) mentioned that extend of members participation is effective factor in cooperatives success. Nekooee-Naeeni (2006) mention that responsibility of members and their interest in participation in decision-making have been effective in cooperatives success. The objective of this study was to examine the effect of participation of cooperatives' members in the rate of success of range management cooperatives in Golestan province.

MATERIALS AND METHODS

This study has been done in Golestan province with an area of 20437.7 square Kilometers, includes 1.25% of area of Iran. This province is located between 53° and 51' and 56° and 22' East Longitude and between 36° and 30' and 38° and 8' North Latitude at the end of Eastern South of Caspian sea. It limited from North to Turkmenistan, from South to Semnan province, from East to Northern Khorasan province and from West to Caspian sea and

Mazandaran province. Regards to its geographical situation and climatic conditions and soil type, Golestan province involves various vegetation cover such as massive forests, natural woods, ranges, steppe and even desert. It includes 1126000 ha of the area of entire ranges of Iran. Golestan province consists of 28 range management cooperatives with 1315 members that possess 111248 animal units and the management of 56 plans of range management with areas of 171000 ha has been assigned to them.

Survey research was used. First, all cooperatives which their activity period have been minimum 3 years from 2000 (28 cooperatives) were selected. Study population includes ordinary members ($N = 1350$) and members of board of director ($N = 140$). Regarding to the table Krejcie and Morgan (1970) sample for ordinary members ($N = 308$) and members of board of director ($N = 85$) were estimated. For dividing this sample to the proportion of the number of members of each cooperative, random sampling was used by proper attribution in each class of cooperative. A researcher made questionnaire was used and its validity and reliability were confirmed by doing a pilot study. Required information was collected by questionnaire completion and interview. In this study, extent of realization of cooperatives goals was treated as extent of cooperatives success. The extent of cooperatives success was measured by asking 25 questions which were designed as 9 items of range management cooperatives goals. Each of questions was evaluated by using a question with 5 point choices, from never (0) to very good (4) (list of questions related to success was attached in appendix).

After calculation of final scores, the extent of realization of cooperatives goals was estimated. The way of changing acquired scores were evaluated to 4 levels of extent of cooperatives success (Sadighi and Mohammadzadeh, 2002):

- Success of cooperative was evaluated low, if : $S < \text{Mean} - \text{Sd}$
- Success of cooperatives was evaluated medium (average) if: $\text{Mean} - \text{Sd} < S \leq \text{Mean}$
- Success of cooperatives was evaluated high, if: $\text{Mean} < S \leq \text{Mean} + \text{Sd}$
- Success of cooperatives was evaluated very high, if: $\text{Mean} + \text{Sd} < S$

It is worth full to say in above relations Mean is the extent of realization of cooperatives goals and Sd is standard deviation from Mean. The extent of members participation in cooperatives was evaluated with 5 questions based on members participation in performing ranges improvement operations, cooperation in paying ranges renovation and improvement costs, cooperation in animal arrival and departure (grazing season) from ranges, participation in extra and public association and also participation in election of board of director. Each of questions was measured by using 5-point choices questions from nothing (never) (0) to very much (4).

The entire presented questions in measuring extent of range management cooperatives and extent of members participation in cooperatives affairs were designed based on exploratory interviews and meetings with natural resources organization's experts and exploiters and also experts of cooperation organization. First, related indices were determined for each factors and then, questions were designed for measuring each of them.

RESULTS

Extent of participation: As it is shown in Table 1, trivial percent of respondents (7%) mentioned that they did not participate in any renovation and improvement operations with cooperatives and 14% had a very low participation in these operations. Also, 34.5% of individuals participated in

Table 1: Distribution of respondents in terms of measuring factors of extent of members participation in cooperatives affairs

Measurement factors of participation extent	Percent of respondents				
	Never	Little	Average	Much	Very much
Members participation in renovation and improvement operations	7.0	14.0	34.5	25.9	18.7
Members cooperation in controlling time of animal arrival and departure in range	4.4	19.4	30.3	35	10.9
Members cooperation in paying renovation and improvement cost of range	7.3	19.4	32.1	31.1	10.1
Participation in electing director general and board of directors	10.1	17.6	39.4	23.6	9.3
Participation in extra and public association	21.8	22.5	25.1	23.1	7.5

Table 2: Distribution of respondents in terms of rate of cooperatives success

Performance status of cooperatives	Number of respondents	Percent	Cumulative (%)
Weak	53	13.7	13.7
Average	152	39.4	53.1
Good	119	30.8	83.9
Excellent	62	16.1	100

improvement and renovation operation at average level. However, about 26% at high level and 18.7% at very high level in these operations, supported range management cooperatives. In general, most members participated in improvement and renovation operations and just few percent did not participate in these operations.

Most of members of cooperatives have cooperated much or too much in controlling arrival and departure time of animals in ranges and also paying renovation and improvement cost of ranges. Table 1 indicates that just few members cooperated very much or nothing. In addition, about 39.4% of treated members participated at average level or too much in electing board of director. Few percent of members (7.5%) participated too much in extra and public meetings of cooperative.

Rate of success: Results of examining rate of effectiveness (success) of cooperatives indicate that 39.4% of members, both ordinary members and board of directors, of treated cooperative were placed in group with average performance. In other words, most of treated members believe that range management cooperatives reached average success in achieving their goals. However, 30.8% of treated samples evaluated cooperatives with good performance and 16.1% with high performance (Table 2).

Relation between rate of participation and success of range management cooperatives: Results of pearson's correlation coefficient ($r = 0.751$, $p = 0.000$) between two variables of members participation in cooperatives affairs and rate of cooperatives success in achieving their goals indicate that there is a positive and meaningful correlation between these two variables. In other words, rate of cooperatives success in achieving mentioned goals can highly depend on members' participation in cooperatives affairs. In this case there are various studies that some of them such as Baticados (2004) confirm results of the study. It mentions that the more participation in a cooperative, the more success a cooperative achieves. For examining the effect of rate of member

Table 3: Results of stepwise multiple regression for determining effect of members participation in cooperative affairs in rate of change in success dependent variable of cooperatives

Independent variable	B	Multiple R	R ²	R ² adjust	Sig.t
Members participation in cooperative affairs	2.25	0.751	0.564	0.563	0.000

Dependent variable: Success of cooperatives (Constant = 16.18 F = 497.67 Sig. F = 0.000)

Table 4: Comparison of participation rate of ordinary members and board of director in cooperatives affairs

Grouping variable	Level	Mean	Standard deviation	Statistics value (t)	Significant level
Membership type	Ordinary	9.507	2.786	-20.912	0.000
	Board of director	14.795	1.738		

participation in cooperatives affairs, on rate of cooperatives success (dependent variable) regression method was used. Results are shown in Table 3, value of Fischer statistics ($F = 497.67$ at 95%) was significant and it indicates that there is a significant relation between inserted independent variable and dependent variable. Value of coefficient R^2 (0.564) shows good rate of variance of dependent variable which is shown by inserted independent variable. In other words, 56.4% of success changes of cooperatives can be explained by members' participation. It is useful indicate that in social and behavioral researches, value of coefficient R^2 is usually low due to large effective factors in systems, identifying and explaining all factors in a study are very difficult (Amini and Remezani, 2006). Regression coefficient, for inserted independent variable in model was positive and meaningful; it indicates that this variable has positive effect on cooperatives success.

Regression equation equals to:

$$Y = 16.18 + 2.25 X$$

Where:

Y = Rate of cooperatives success in achieving related goals

X = Rate of members participation in cooperative affairs

T-test was used for comparing participation cooperative affairs from view of ordinary members and board of directors. Results show that members of board of director participate more than ordinary members in cooperation affairs (Table 4). It can be for this reason that members of board of director are direct executives of performing range management plans in ranges and several cooperatives activities and plans.

Results of one-way variance analysis show that cooperatives with low success, participate less (Mean = 6.925) than other cooperatives. By comparing to other groups of Cooperatives, it is clear that the more success a cooperative have in a group, the more participation member have (Table 5).

Regards to necessity of participative management of natural resources and constant principled exploiting, spontaneous and public associations in natural resources are of important actions for attracting and facilitating local communities' participation. Cooperatives are also people organizations which develop conditions for individuals participation. In protecting natural resources, cooperatives can play an important role in solving several problems.

Results of Pearson's correlation coefficient between two variables of members participation in cooperatives affairs and success rate of achieving goals indicates that there is a positive and significant relation between these two variables. In other words, the extent of success of cooperatives in achieving mentioned goals can highly depend on members' participation in

Table 5: Comparison of different cooperatives groups in terms of success regard to members, participation in cooperative affairs

Cooperatives success based on achieving goal	Average of members participation in cooperative affairs	Standard deviation	F	Significant level
Weak	6.925a	2.464	136.386	0.000
Average	8.993b	1.965		
Good	12.370c	2.730		
Excellent	14.130d	2.308		

cooperatives affairs. There are various researches such as Amini and Remezani (2006), Sadighi and Darvishinia (2002), Karami and Agahi (2010), Baticados (2004), Hakelius (1996), Amini and Ramezani (2008), Russoa *et al.* (2000), Nekooee-Naeni (2006), Safari *et al.* (2009) which confirm results of this study.

CONCLUSION

It is suggested that cooperatives consider arrangements that members participate more in decision-makings related to cooperative and regards to region's conditions. Some strategies to members to participate more in renovation and improvement operations are: more training and extension courses with more emphasis on members' participation in cooperatives affairs and also protection of natural resources, pay attention to whatever makes members participate more.

APPENDIX

List of question of measuring success of range management cooperatives

Number	Questions (Cooperative performance in)	Never	Weak	Average	Good	Very Good
1	Performing range management plan					
2	Increasing forage production in range					
3	Improving range condition					
4	Preventing range turning to Low efficient rain fed farms					
5	Supplying and extending Animal drinking water the sources					
6	Developing stock pond in range					
7	Developing and keeping enclosure					
8	Performing seed sprinkling					
9	Seeding					
10	Transplanting					
11	Developing faros counter					
12	Developing pitting					
13	Reducing stock surplus in range					
14	Controlling animal arrival and departure time to range					
15	Increasing ranchers (range managers) livelihood level					
16	Increasing exploiters income					
17	Developing jobs for ranchers					
18	Preventing rural and exploiters migration (motivating to live in village)					
19	Promoting knowledge of exploiters in the field of range management					

Appendix 1: Continued

Number	Questions (Cooperative performance in)	Never	Weak	Average	Good	Very Good
20	Promoting knowledge of exploiters in the field of cooperative and its activities					
21	Range insurance					
22	Providing and producing range feeds					
23	Providing and distributing available forage for exploiters					
24	Providing bank loan for exploiters					
25	Providing a context for exploiters participation in performing range management plans					

REFERENCES

- Alvarez, J., 1999. Independent agricultural cooperative in Cuba. Cuba in transition, ASCE 1999, <http://www.ascecuba.org/publications/proceedings/volume9/pdfs/alvarez.pdf>
- Amini, A. and M. Ramezani, 2006. Examining effective factors in success of poultry cooperatives companies in Isfahan province. *Agric. Sci. Tech. Nat. Resour. Mag.*, 10: 121-135. (In Persian)
- Amini, A. and M. Ramezani, 2008. Investigation the success factors of poultry growers cooperative in Iran's Western provinces. *World Applied Sci. J.*, 5: 81-87.
- Baticados, D.B., 2004. Fishing cooperatives' participation in managing nearshore resources: The case in Capiz, central Philippines. *Fish. Res.*, 67: 81-91.
- Dolisca, F., D.R. Carter, J.M. McDaniel, D.A. Shannon and C.M. Jolly, 2006. Factors influencing farmers participation in forestry management programs: A case study from Haiti. *For. Ecol. Manage.*, 236: 324-331.
- Dunn, J.R., A.C. Crooks, D.A. Frederick, T.L. Kennedy and J.J. Wadsworth, 2002. Agricultural cooperatives in the 21st century. United States Department of Agriculture, Rural Business-Cooperative Service. Cooperative Information Report 60. <http://www.rurdev.usda.gov/rbs/pub/cir-60.pdf>.
- Finsterbusch, K. and W.A. Van Wicklin III, 1989. Beneficiary participation in development projects: Empirical tests of popular theories. *Econ. Dev. Cult. Change*, 37: 573-593.
- Fleischer, A. and L. Applebaum, 1992. Spatial differences in the labour force participation of married women: The case of Israel's peripheral areas. *J. Rural Stud.*, 8: 293-302.
- Garforth, C., C. Van Schoot and L. Maarse, 1988. The role of extension in developing the use of rangelands. *Agric. Admin. Extens.*, 30: 325-334.
- Hakelius, K., 1996. Cooperative values: Farmers cooperatives in the minds of the farmers. Ph.D. Thesis, Department of Economics, Swedish University of Agricultural Sciences, Uppsala.
- Huntsinger, L. and L.P. Fortmann, 1990. California's privately owned oak woodlands: Owners, use and management. *J. Range Manage.*, 43: 147-152.
- Iliskog, E., B. Kjellstrom, M. Gullberg, M. Katyega and W. Chambala, 2005. Electrification co-operatives bring new light to rural Tanzania. *Energy Policy*, 33: 1299-1307.
- Jalali, M. and E. Karami, 2006. Determinants of ranger's participation in rangeland cooperatives in Kurdistan province. *J. Pajouhesh Sazandegi*, 70: 35-45. (In Persian)
- Karami, S.h. and H. Agahi, 2010. Effective factors on cooperatives success: Case study of production cooperatives of products of out of season in Kermanshah province. *Village Dev. J.*, 13 : 31-60. (In Persian)
- Krejcie, R.V. and D.W. Morgan, 1970. Determining sample size for research activities. *Educ. Psychol. Meas.*, 30: 607-610.

- Ladele, A.A, T.A. Olowu and C.O. Igodan, 1994. Socio-economic impact of agricultural cooperative organizations empirical evidence from Nigeria. *J. Rural Dev. Administration*, 26: 1-15.
- Margerum, R.D., 2001. Organizational commitment to integrated and collaborative management: Matching strategies to constraints. *Environ. Manage.*, 28: 421-431.
- Mbaiwa, J.E., 2005. Wildlife resource utilisation at moremi game reserve and khwai community area in the Okavango Delta, Botswana. *J. Environ. Manage.*, 77: 144-156. (In Persian)
- Nekooee-Naeeni, A., 2006. Effective factors on cooperatives success. *Taavon*, 185: 54-56.
- Papeli-Yazdi, M.H. and M. Labbaf-Khaniki, 2001. The pasture: Exploitation system. *J. Geogr. Res.*, 15: 7-40. (In Persian)
- Russoa, C., D. Weatherspoonb, C. Petersonb and M. Sabbatinia, 2000. Effects of managers power on capital structure: A study of Italian agricultural cooperatives. *Int. Food Agribus. Manage. Rev.*, 3: 27-39.
- Sadighi, H. and A.A. Darvishinia, 2002. An assessment of the success of rural production cooperatives in Mazandaran province, Iran. *Iran. J. Agric. Sci.*, 33: 313-323.
- Sadighi, H. and G. Mohammadzadeh, 2002. Extension professional staff's attitude toward participatory approach of extension activities and rural development. *J. Int. Agric. Extension Educ.*, 9: 7-14.
- Safari, H., K. Arianfar and A. Ebrahimi, 2009. Effective factors on success of better consumption cooperatives. *Taavon*, 20: 33-51. (In Persian)
- Steyaert, P., M. Barzman, J.P. Billaud, H.L. Brives, B. Hubert, G. Ollivier and B. Roche, 2007. The role of knowledge and research in facilitating social learning among stakeholders in natural resources management in the French Atlantic coastal wetlands. *Environ. Sci. Policy*, 10: 537-550.
- Wilson, G.A. and K. Hart, 2001. Farmer participation in agri-environmental schemes: Towards conservation-oriented thinking? *Sociol. Ruralis*, 41: 254-274.