Journal of Biodiversity and Environmental Sciences (JBES)
ISSN: 2220-6663 (Print) 2222-3045 (Online)
Vol. 5, No. 4, p. 250-258, 2014
http://www.innspub.net

RESEARCH PAPER OPEN ACCESS

Stady of the effective factors on social forestry in the vegetation kabirkoh areas (Case Study: Dareshahr County)

Somaye Zeinivand-Nejad[1], Ali Roatami[1], Mehdi Heydari[2]

Department of forest science, Islamic Azad University, Ilam Branch, Ilam, Iran

[3]University of Ilam, Iran

Article published on October 21, 2014

Key words: Social forestry, public participation, natural resources, relational factors.

Abstract

Social forestry is a common effort aiming at the formation of forest production along with reserving forestry natural resources in long term for whole community to get benefit. The main objective behind the present study of factors influencing social forestry in the vegetative kabirkoh areas (case study: darreshar county). This descriptive–applied research is considered as a causative – relative study. The findings revealed that there is a direct and meaningful relationship among age, the namber of family members, marriag, educational level, employment, main job, yearly income, relational factors, developmental factors, social and cultural factors, and rustic political factors, and their participation in social forestry variables. As well there is not any meaningful relationship between gender, land ownership and the consuming fuel variables. As well, job situation, main job, behavioral relations, developments, political, social and cultural have been identified and in vestigated in a regression logestic way in which its sixth step has been reported and they show the meaningfulness of the variables. The results show that social and cultural factors, relational and developmental factors, and individual characteristics have a positive impact upon rural participation in social forestry variables.

***Corresponding Author:** Somayeh Zeinivand-Nejad ✉ somayezeinivand@yahoo.com

Introduction

Iran country owns more than 12.4 million hectare of forests which have been distributed in five separate growth areas. Zagros growth area with having 5 million hectare, 40 percent of forests is the most extensive foresting area. But for reasons such as population growth, life need imbalances, amount of production and services, excessive cattle grazing, agriculture land development, wood provision for fuel, paring the trees, etc the forests in this area have been greatly damaged. The compensation and preventation of such a problem needs a decisive and comprehensive decision related to various dimensions, planning based on participation in a stable framework. However, this needs a philosophical contrivance so that it can help protection, growth and development of biology and natural resources. On the other hand, with regard to the vast areas of the forests and inability of the government in keeping and preserving the resources; therefore, participation of people in the form of coorporation in preserving the natural resources is a matter which should be taken into account (Shariati *et al*, 2005). Iranian people coorporation with regard to keeping natural resoures has a long history. Within long decades a large part of natural resources has remained preserved by owners, but due to traditional systems shifts, excessive emphasis on governmental management, inappropriate participation system, population growth and the lack of needed information; the natural resources were transformed to agriculture lands and were followed by consequences such as flood, drought, climate changes, biological variety decrease, soil erosion and other damages (Shaeri and Saadi, 2003). Because of huge population and dependency of the rural life to the forests and their production and inevaitability of their management with the help of local people, in zagros forests, we are tempted to focus on a kind of management (participation (social) management) as a dominant strategy to move toward a stable and ideal forest so that we can prevent the destruction of forests and decrease the need of people to forests. To reach the intended goal the needs of local people to forests should be realized and the opinions should be involved in plans so that they can help solve the problems (Heydari *et al*, 2008). One of the causes of forest destruction is the poor rurals. Farmers in forest areas for having no stable and permanent job and income use jungle and forest resources and add to their agriculture lands and burn the trees for fuel to keep against cold. It seems that forests and natural resources organization from the outset of establishment till now has focused dedicated oll the efforts and energynntoward the more protective planinig, but has been unware of the purposes such as people participation reconstruction along with people participation, understanding the problems rural face and solving rural problems whith have remained unsolved by experts (Yakhkeshi, 2003). Most unsuccessful rural people involving in agriculture and rancheroing that resorted to natural resources such as forests, this failure has been due to financial poverty and biology culture problems and deficiency. If they are provided with needed motivation and their economical and social life be revised, not only the natural resources remain undamaged but also, with the participation of those rural people, a great contribution can be made for natural resources preservation (Mirrajabi *et al*, 2005). Almost, the villages that are located in or near the forests deprive welfare and hygienic or services hence the rural people use forests products and this has caused that directly or indirectly, knowingly or unknowingly people destroy forests (Mirakzadeh *et al*, 2011; Raizada *et al*, 2008; Fisher, 2004). World business bank in recent years has emphasized the positive role of local participation in forest preservation and increasing biological durability. Hence, in recent decade, the forest management developments and biological protection has been basically distincted from emphasis on centralized planning and governmental organizations toward more participatory guidelines (World Bank, 2000). Viewing the vast destruction of forests in ilam province, protection of these endowed resources can not be provided by a single organization and for more protection of these resources, the rural people

inhabitant in forests should be directly involved in participation of forest protections. It is worth mention to say that people participation in this area is not prevented by external factors. Therefore, the current study is an attempt to identify the factors influencing the social forestry in the growth realm of kabirkoh (Darehshar city). Hence, the present rsearch seeks for a solution to this important question that what are the influential factors affecting social forest in darehshar city? It is hoped that agriculture authorities and plan designers identify the capabilities and the potentialities of forests in rural areas and help preserving the natural resources.

Methodology and materials

The area under study

The area under study includes forester villages around darehshahr city. This area is located in south-east of ilam province in 32° and 30" to 33° and 26" and geographical length of 46° and 17" to 48° and 5". It is located in 135 kilometers from the center of ilam in an area with 3921 square kilometerThe height from sea level is 700 meters. The lowest height is 565 meters and the highest point is 3050 meters (kane seifi). About 30 percent is covered with trees and the rest is nearly bare. It is related to tertiary period and belongs to Iranian-Turani growth area. The are climate based on the method of semi dry to moderate (to the height of 1014 meters), the semi dry cold (to 1950 meters) and semi-wet and cold (in higher points). The amount of rainful in the area under study is between the minimum of 220 milimeter and maximum 760 milimeter. February and July are the coldest and hottest month of the year respectively. The forest coverage in cludes species such as *Quercus persica*, *Pistacia atlantica*, *Amygdalus scoparia*, *Acer monspessulanum*, *Ficus carica*, *Celtis australis*, *Crataegus aronia*.

According to beauru census in 2011 the population of this city was 59551 among which 24961 were city inhabitants and the rest (34288) lived in rural areas and the rest are inhospitable (Table 1).

Table 1. The population of the area under study.

Descripion	population	female	male	family
Darehshar city	59551	29646	29905	14891
City areas	24961	12469	12492	6294
Rural areas	34288	17009	17279	8536
The rest areas	302	168	134	61

Research Method

The research sample consisted of the active individuals living in forester areas of the darehshar city. The data were obtained and analyzed by means of questionnaire and based on documental and library search (Table 2). For reliability of the questionnaire the revised suggestions of ilam and Islamic azad university professors were as well as other experts of the administration of natural resources were used. Meanwhile, the ALPHA CRONBACH coefficient was determined as 89 percent. To analyze data, the descriptive and inferential statistics were used by using SPSS software version 21. As well, to test and measure hypotheses, ETA correlation coefficient and regression analysis of lojestic was used.

Table 2. various parts of the questionnaire.

Row	Part	Number
1	Relational characteristics	15
2	Developmental factors	9
3	Cultural and social factors	10
4	Political factors	11

Research Variables

1- Dependent variables: The dependent variables in the current report are the participation of forester rural in social forestry of the darehshahr city.

2- Independent variables: The independent variables of the present study included factors affecting the participation of forester rural such as age, gender, marriage, education level, the number of family members, main job, annual income, agriculture land ownership, the kind of fuel, relational characteristics, developmental factors and political, cultural and social factors.

Research Hypotheses

1. There is a meaningful relationship between the age of rural and their participation in social forestry

2. There is a meaningful relationship between the rural family members and their participation in social forestry

3. There is a meaningful relationship between rural marriage and their participation in social forestry

4. There is a meaningful relationship between rural annual income and their participation in social forestry

5. There is a meaningful relationship between rural relational factors and their participation in social forestry

6. There is a meaningful relationship between rural developmental factors and their participation in social forestry

7. There is a meaningful relationship between rural cultural and social factors and their participation in social forestry

8. There is a meaningful relationship between rural political factors and their participation in social forestry

9. There is no meaningful relationship between rural participation in social forestry based on gender

10. There is a meaningful relationship between rural participation in social forestry based on job situation

11. There is no meaningful relationship between rural participation in social forestry based on agriculture land ownership

12. There is a meaningful relationship between rural participation in social forestry based on education level

13. There is a meaningful relationship between rural participation in social forestry viewing the main jobs they have

14. There is no meaningful relationship between rural participation in social forestry according to the kind of consuming fuel

Results

1- Individual traits

The individual characteristics of responders were from 17 to 54 with an average aging of 29.73. 61.3 percent of the respondents were women and the most frequency was related to the married subjects of 53.8 percent. From education level, 47.5 percent were B.AS or even higher and 75 percent were unemployed. Almost 30 percent had agriculture land, 81.3 percent lacked agriculture land. 62.5 percent of the rural people stated that training classes were not hold in their habitant place. 81.3 percent of them were interested in participating in training classes. 23.75 of the rural participated in social forestry and 55 percent were a member of natural resources cooperators. 63.8 of the rural used oil as a fuel.

2- Classifying the influential factors on rural participation in social forestry (based on Likert Model)

2-1- Classifying the relational factors affecting rural partivipation in social forestry

These classifications showed that agriculture and jehad organization employees with the lowest correlation shifts (0.224) was in the first rank order, natural resources promoters in the second rank order, Islamic couselors in the third rank score and natural resources employees in the forth rank order and finally the excutors of natural resources plans in the fifth rank order.

2-2- Classification of species participation motivation in participating activities

These classifications revealed that doing the tasks with the lowest correlation shifts (0.179) was in the first place, feeling responsibility and attatchment to

the environment and age in the second place, interested in something in the third place, helping others in the forth rank and distribution his knowledge to others in the fifth rank.

2-3- Classification of participating in plans and natural resources activities

These classifications showed that guiding and directing other rural inhabitants with regard to protecting natural resources with the lowest coefficiency shifts (0.122) was in the first place, participating in planting in the second place, attempts and execution of group movements with regard to protecting natural resources in the third place, cooperating and informing others with regard to fighting forests calamities and disease in the fourth place and executing instructions was in the fifth place.

2-4- Classification of educational-promotional factors affecting rural participation in social forestry

The classification of these factors indicated that television programs with regard to the importance of factors and their preservation with the lowest coorelation shifts (0.164) was in the first place, radio programs with regard to the importance of forests in the second place, instructional films in the third place, educational-promotional classes in the fourth rank and contact with natural resources employees in the fifth place.

2-5- Classification of social-cultural factors on rural participation in social forestry

The classification of these factors indicated that the feeling of responsibility in preserving the forest with the lowest correlation shift (0.148) was in the first place, the amount awareness toward the role and importance of forest was in the second place, awareness to natural resources plans in the third place, the amount of attention to population control was in the fourth place and finally attention to the customs in executing the natural resources was in the fifth place.

2-6- Ranking the influential political factors on rural participation in social forestry

These kinds of classification showed that the amount of the fossils (oil and gas) with the lowest correlation shifts (0.144) was in the first place, the adequacy of rules for protecting the natural resources was in the second place, the amount of informing from natural resources was in the third place, the amount of efficiency of government plans for keeping and preserving the forests in the fourth rank and the belief of managers in people participation in forest preservation was in the fifth place.

Discussion and conclusion

To measure research hypotheses, the ETA correlation cooefficient (Table 1), and to compare the tests averages the Yu man whitni and Kruscal-valis we used, as well, the lojestic regression was used for the study of dependent variable. However, the results of each of them are as follows:

1- The study of correlation coefficient between the two variables of rural age and their participation in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.323). This coefficient based in Kohen table (1998) shows the amount of the effectin medium to high level. On the other hand, the rural age had impact upon their participation in social forestry. These results are in line with Hejazi and Arabi (2009).

2- The study of the correlation coefficient between the two variables of the number of rural family members and their participation in social forestry indicated that there was a meaningful relationship between these two variables (ETA=0.330). This correlation based on Kohen table (1988) shows the level effect from medium to high. Put another way, the number of rural family members has impact on their participation in social forestry.

3- The study of correlation coefficient between the two variables of rural marriage and their participation

in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.282). This correlation based on Kohen table (1988) shows the level effect from medium to high. On the other hand, the rural marriage had impact upon their participation in social forestry.

4- The study of correlation coefficient between the two variables of rural annual income and their participation in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.523). This correlation based on Kohen table (1988) shows the effect level in high and very high level. On the other hand, the rural annual income had impact upon their participation in social forestry.

5- The study of correlation coefficient between the two variables of rural relational factors and their participation in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.663). This correlation based on Kohen table (1988) showed that the effect level in high and very high level. On the other hand, the rural relational factors had impact upon their participation in social forestry.

6- The study of correlation coefficient between the two variables of rural promotional factors and their participation in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.603). This correlation based on Kohen table (1988) showed that the effect level in high and very high level. On the other hand, rural promotional factors had impact upon their participation in social forestry.

7- The study of correlation coefficient between the two variables of rural social and cultural factors and their participation in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.543). This correlation based on Kohen table (1988) showed that the effect level in high and very high level. On the other hand, rural social and cultural factors had impact upon their participation in social forestry which is in line with Muhamadi (2004), Hosseiny & Aboiyeh (1999) and shaeiry (1999) studies.

8- The study of correlation coefficient between the two variables of rural political factors and their participation in social forestry showed that there was a meaningful relationship between these two variables (ETA=0.608). This correlation based on Kohen table (1988) showed that the effect level in high and very high level. On the other hand, rural political factors had impact upon their participation in social forestry.

9- Comparing the average of rural participation in social forestry according to gender based on Yu man-whitni and also comparing (U=614/000 & Z=-1.949), obtained from the table in the meaningfulness level (P=0.051), can be stated that there is no meaningful level between rural participation in social forestry viewing their gender.

10- Comparing the average of rural participation in social forestry according to job situation based on Yu man-whitni test and also comparing (U=390.000 & Z=-3.165), obtained from the table in the meaningfulness level of (P=0.02), it can be deduced that is a meaningful level (5 percent) and probable error of 95 certainty level between rural participation in social forestry. On the other hand, there is a meaningful relationship between employed and unemployed participation in social forestry which the results are in line with Hejazi and Arabi (2009) works.

11- Comparing the average of rural participation in social forestry based on land ownership by using Yu man-whitni test and also comparing (U=430.000 & Z=-0.962), obtained from the table in the meaningfulness level of (P=0.336), it can be ststed that is no meaningful relationship between rural participation who owns land and those who lack owning lands in social forestry.

12- By using Kroskal-valis, as well as, comparing (Chi-Square=12.471) obtioned from the table of meaningful level (P=0.014) of rural participation in social forestry based on education level, it can be stated that in 5 percent probable error and 95 percent certainity there is a meaningful difference.

13- Based on the comparision of rural participation in social forestry with regard to educational level by using Kroskal-Valis test and also comparing (Chi-Square=12.471) obtained from the table in a meaningful level of (P=0.001), it can be stated there is a meaningful difference between their participation in 5 percent probable error and 95 percent certainity.

14- Viewing rural fuel consumption and rural participation in forestry by using Kroskal-Valis test and also comparing (Chi-Square=1.860) obtained from the table in a meaningful level of (P=0.395), it can be stated with regard to consuming fuel there is no meaningful level between rural participation is social forestry.

In order to investigate the influential factor upon social forestry, the Lojestic Regresion with step to step (Forward: LR) was used. The Chi-square (-2Log Likelihood), 48.303 in the first step changed to 13.322 in the sixth step. This showed a considerable decrease in Chi-Square amount. The amount of Snell & Cox and Nagelkerke whith show the coefficient the 0.605 to 0.909 percent of the dependent variables (rural participation is social forestry) can be predicted (Table 5).

As it is seen in table 6, employment situation, main job, relational factors, political factors, social and cultural factors and promotional factors variables in the sixth step have been entered into Lojestic Regresion model and Sig shows the meaningfulness of these variables in this step.

Table 3. The study of analyztical statistics used for the research hypotheses.

Row	Independent variable	scale	dependent variable	scale	Correlation coefficient
1	age	Spatial	Rural participation in the social forestry	Twofacet noun	Eta
2	gender	Nominal	"	"	Yuman-whitni
3	Marriage	Nominal	"	"	Eta
4	Family members	Spatial	"	"	Eta
5	Educational level	Nominal	"	"	Kruscal-valis
6	Employment		"	"	Yuman-whitni
7	Main job	Nominal	"	"	Kruscal-valis
8	Annual income	Spatial	"	"	Eta
9	Fuel kind	Multifacet noun	"	"	Kruscal-valis
10	Land ownership	Multifacet noun	"	"	Yuman-whitni
11	Promotional factors	Quasi-spatial	"	"	Eta
12	Social & cultural factors	Quasi-spatial	"	"	Eta
13	Relational factors	Quasi-spatial	"	"	Eta
14	Political factors	Quasi-spatial	"	"	Eta

Table 4. The results of coefficient variables based on Eta.

dependent variable	independent variable	correlation coefficient Eta	intensity effect
Participation in social forestry	Age	0.323	Mid to high
	Family members	0.330	Mid to high
	Marriage	0.282	Mid to high
	Annual income	0.523	High and very high
	Relational factors	0.663	High and very high
	Promotional factors	0.603	High and very high
	Social and cultural factors	0.543	High and very high
	Political factors	0.608	High and very high

Kohen table of intensity effect (1988): low: 0.10 mid: 0/24 high: 0.37 high and very high: 0.45

Table 5. The obtained on value dials from lojestic regression.

steps	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1st step	48.303[a]	0.389	0.584
2nd step	36.555[a]	0.472	0.709
Threeyth step	32.213[a]	0.500	0.751
Fourth step	25.008[a]	0.543	0.816
Fifth step	19.552[a]	0.573	0.861
Sixth step	13.322[a]	0.605	0.909

Table 6. The results obtained from Lojestic Regresion in relation to influential factors on rural participation in social forestry.

	independent variable	S.E	Wald	df	Sig	Exp(B)
Sixth step	employment situation	1994.894	0.000	1	0.001	0.000
	main job	498.723	0.000	1	0.013	0.008
	relational factors	6598.714	0.000	1	0.000	3.36
	political factors	3778.977	0.000	1	0.001	3.10
	social and cultural factors	3797.930	0.000	1	0.005	2.18
	promotional factors	2058.245	0.000	1	0.001	2.14
		23585.865	0.000	1	0.000	0.000

Recommendations

1. Fucusing more attention on the presence and participation of local people in forests related activities.

2. Creating corporeal and ideal motivation in or do attract the attention of rural participation in preserving natural resources.

3. Promoting economic situation of inhabitants by executing various plans.

4. Developing continuous public awareness in the field of importance and role of natural resources in public heath.

5. Holding training classes on promoting culture for better preservation of natural resources through close contact with promotional-educational experts with rural living in the factors.

6. Replacing fossile fuel to herbal ones.

7. Focusing more attention to governmental organizations such as related organizations like jehad agriculture and natural resources organizations and also aquiferous in providing welfare needs of rural living in forests in order to keep the forest resources.

8. Poverty removing of rural living in the forest and reduving the destruction of natural resources by government by means of providing facilities to rural living in forests.

References

Ebrahimpour M. 1999. Human factors affecting forests destruction and natural resources with special emphasis on Zagros. Jehad scientific journal. 19 th year, No 232-233, p:32.

FAO 1992. Forest and cultures in Asia. Workshop and project proposal on focus. Regional unit of social and Human sciences in Asia and the pacific. Bangkok.

Fisher M. 2004. Household welfare and forest dependence in southern Malawi, Environment and development economics. Cambridge University Press **9**, 135-154.

Heydari M, khusropure A, Hosseiny SA, rezaei D. 2010. The study of people is social and economic situation living in Zagros middle forests and it, s impact on natural resources destruction (case study: Shirvan chardavol).

Hosseiny F, Aboyieh F. 2000. Attracting people participation methods in natural resources for protecting natural resources in every country. A

collection of the 1st conference of development and participation of natural resources, the office of promotion and public cooperation in jehad ministry, 677-678.

Mirakzadeh AA, Baharmi M, Ghiasy F. 2011. Analysis of the effective factors on sustainable exploitation of forests wood (case study: Dejhen village in Kamyaran County), journal of Forest and wood products (JFWP), Iranian journal of Natural Resources **64**, 91-106. (In Persian)

Mirrajabi H, yakhkeshi H, emadian E, fallah F. 2007. The role of management in improving economical and social situation of rural living in forests. Magazine of forest and natural resources, No 71, p 26

Raizada A, Dogra P, Dhyani BL. 2008. Assessment of a multi-objective decision support system generated land use plan on forest fodder dependency in a Himalayan watershed, Environmental modeling and software **23**, 1171-1181.

Rezvanfare A. 2002. Public participation in social forests. The presented article in natural resources conference. Participation and development of forests organizations, Ramsar.

Shaditalab Zh. 1999. Social forestry. Social scince project planning, Tehran University.

Shaeri A. 2000. The influential factors in attracting ranchmen in organizing sheep in Iran north forest the 1st natural resources conference, Participation and development, p 162.

Shariati MR, Ziadbakhsh S, Varamini N. 2005. The factors which affect on participating forest rural people in conservation of the factors in the North and West of Iran, Forest and Rangeland journal **67**, 47-57.

Thamari D, Heydari M. 2006. Designing a proper pattern about social forest promotion in the realm of zagros growth area. Agricultur promotional and scientific Journal, 11th year **3**, 31-47

World Bank 2001. A revised forest strategy for the World Bank group. Washington D.C., World commission on environment and development (WCED), 1987, our common future, Oxford: Oxford University Press.1-65p

Yakhkeshi A. 2001. Nations talks and understanding. Mazandaran university cultural and scientific publication, **p**. 148.