Perceptions of Forestry and Rangeland Department Specialists on the Role of Extension-Education Activities to Protect Forests (Case of Mazandaran Province, Iran)

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Abstract: The purpose of this study was to determine the perceptions of forestry and rangeland department specialists in Sari Township regarding the role of extension and education in protection of forests. The population of this study included 230 forest specialists in Sari Township. A stratified random sample of 140 specialists was selected. The research design used for this study utilized descriptive survey research methodology. A questionnaire was developed to assess role of extension-education programs in protection of forests. Findings revealed that education of youth and children at the elementary and secondary school level is also necessary and important in forest protection and conservation. Also results showed that inform to public about worth of forest is very important in protection of forests.

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1. Introduction

There are an estimated 3870 million hectares of forest worldwide, of which almost 95 percent are natural forest and 5 percent are forest plantations. Also, forest cover about 30 percent of the earth's land area (FAO, 2001). Developed countries for years to come to the conclusion that the destruction of forest trees will exacerbate air pollution, so cutting old trees and destroying forests in these countries is prohibited. However, other countries that still believe in the importance of forests have not lost to the massive destruction of natural resources (Khabbaz, 2010). Tropical deforestation and degradation of forests in many parts of the world are negatively affecting the availability of forest goods and services. While forest area in developed countries has stabilized and is slightly increasing overall, deforestation has continued in developing countries. The estimated net annual change in forest area worldwide during the past decade was -9.4 million hectares; representing the difference between the estimated annual rates of deforestation of 14.6 million hectares and the estimated annual rate of forest area increase of 5.2 million hectares(FAO, 2001). The causes of forest degradation are varied. Some, such as overexploitation of forest products, can be avoided or minimized by sound forest planning and management, whereas the effects of others, such as natural disasters, can be mitigated by

contingency planning. Factors responsible for this loss are the conversion of forestland to produce food for a burgeoning world population, especially in developing countries (FAO, 2000; Swanson, 1997), as well as logging for timber and fuel. These are legitimate human needs and uses of forestland. But, lack of knowledge, and legal and social systems often encourage excessive, non-sustainable land clearing resulting in long-term adverse social and environmental impacts (Jones, 1997).

The forestry situation in Iran is no different than other vulnerable areas in the world. There are an estimated 12 million hectares of forest in Iran, while there are 18 million hectares forests in 1950. At present only %11 of this forests are commercial. Figures show that in one year decrease about 12245 hectares forest in Iran (Anonymous, 2009). This forest threatened by unsound forest management activities including inappropriate productivity (too much) by government companies private sector and cooperative. intensive agricultural operations. indiscriminate forest activities and timber use, Lack of vehicles for foresters, smuggling of wood, Lack of near cooperation between forest sector with judicial and disciplinary power, Lack of adequate protection personnel, changing forestlands to agricultural fields, presence of livestock in forests, continuous changes in policies, legislation and programs, lack of education level among personnel, threat of pests and

diseases to plantations, making roads inside forests, lack of participation by forest dwellers in protection of forests, lack of politicians serious belief on the protection of forest, cutting trees by forest dwellers, changing forestlands to agricultural fields, happening of fire and other factors (Anonymous, 2010; Khosrowshahi and Ghavamie, 2008; Farhadian, 2000; Abedi, 2004).

The Forest and Rangeland Organization (FRO) of Iran and its Research Institute are responsible for the management of forests. An office of extension and training was established in the FRO in 1990 to educate and work with these managers and with target audiences of forest landowners and forest dwellers in supporting and participating in forestry. Today, the practice of Extension to improve the management of private and community woodlands is on the increase worldwide (Johnson et al., 2007). Some of the activities including publication of story book in relation to protection of forests for children, the public fair in relation to importance of forests, installing educational poster in the public places, giving presents to students in natural resource week, supplying educational posters in relation to protection of forests and deforestation of forests, organizing educational courses for forest dwellers in relation to preventing and comparing with fire, implementation of theatre in relation to protection of forests and other activities (Abedi, 2004; Farhadian, 2000). Farhadian (2000) studied the FRO's mission and recommended that a strong linkage should be forget between the Office of Extension and Training and the Research Institute. He emphasized that a key responsibility of managers and stuff of the FRO was providing for the participation of people of the planning and implementation of forestry development. According FAO (2000), most forests in the developing world are on land on which indigenous groups and rural communities depend for their livelihood. Therefore, it is essential that they be involved in forest management programs. In a similar vein, Sharma (1999) emphasized that attitude of people influence how they manage and use forests. In a Report of the Islamic Republic of Iran on Forestry Development and key events presented to the twelfth session of the Near East Forestry Commission, it was stated that while forests in different regions of the country important, those of the Caspian Sea Region (Mazandaran and Guilan provinces) are the only economically productive forests in Iran. Mazandaran provinces include Sari and Noshahr Township. Sari Township has important economic role that produces 50% forest products of Iran. There are an estimated 643793 hectares of forest in Sari Township and there are 1186145 forest dwellers and 1628700 livestock in this region. Considering this situation, a study of Forestry and Rangeland Department specialists in Sari Township was considered worthwhile.

The purpose of this study was to determine the perceptions of Forestry and Rangeland Department specialists in Sari Township regarding the role of extension-education in protection of forests.

2. Material and Methods

The research design used for this study was a descriptive survey research methodology. The population of this study included 230 forest specialists in Sari Township. A stratified random sample of 140 specialists was selected. A questionnaire was developed to assess extensioneducation methods that impact on the protection of forests. 5-point likert-type scale was used to assess expert's self-perceived perception. Content and face validity was determined by faculty and graduate students in the Department of Agricultural Extension and Education at Tarbiat Modares University, Iran. The instrument was pilot tested with 10 forestry specialists in the Forestry and Rangeland Organization under Ministry of Agriculture (Jihad-e-Keshavarzi) two weeks prior to the study, and needed modifications were made. Cronbach's alpha reliability coefficients for sections 1-3 of the instrument ranged 0.72 to 0.93. Data collected were analyzed using the Statistical Package for the social sciences (SPSS, 14). Appropriate descriptive statistics such as mean scores and standard deviations were used to analyze the data generated.

3. Results

According to table 1, the ages of the respondents ranged from 27 to 59. The mean age was 59. Majority (51.4%, n =72) of respondent were 41-50 years old. The mean years served as forest and rangeland experts were 15.5. Majority (53.3%, n =75) of respondent had 11-20 years of experience. Nearly 22.1% of experts had served in Department of Forestry and Rangeland upper than 21 years. 89.2% of specialists had a bachelor's degree and upper and only 10.7.9% of specialists had a technical degree (n= 15).

Table 1. Personal characteristics

characteristics	frequency percentag	
Age		
>30	8	5.7
31-40	39	27.9
41-50	72	51.4
51<	21	15
Level of education		
Technician	10	10.7
Bachelor	108	108

Graduate	17	17			
Field of study					
Forestry	72	52.9			
Related discipline to	30	22.1			
rangeland					
Agriculture	15	11			
Non-related (others)	19	14			
Years of experience					
>10	34	24.3			
11-20	75	53.6			
21>	31	22.1			

Table 2 shows the rank important of 38 extension-education methods that effect on protection of forests as perceived by specialists. The most effective extension-education methods were publication book for children about protection of forest (M=4.582), putting forest subjects in schoolbooks (M=4.478) and writing device on vehicles regarding protection of forests (M=4.464). Organizing educational courses for forest dwellers in relation to preventing and comparing with fire and implementation of camp for students in relation to importance of forests were considered to be the least important factors. Also high rate of mean scores indicated that extension-education methods were very effective in protection of forests.

Table1: extension-education methods that effect on protection of forests as perceived by specialists

Rank	Extension-education methods	Mean	SD
1	Publication of story book in relation to protection of foracte for children	4.582	0.61
2	Inserting appropriate subjects in relation to protection of forests in school books	4.478	0.67
3	Writing device on the public vehicles in relation to	4.464	0.70
4	Writing sub-title in relation to protection of forests in TV	4.464	0.76
5	presenting video movies in relation to protection of forests for forest dwellers	4.463	0.73
6	Establishing special radio of forest for giving information to protection power	4.463	0.75
7	Existence technical- professional courses in relation to protection of	4.400	0.82
8	forests Educational courses for experts in relation to protection of forests	4.400	0.85

9	The public fair in relation to	4 392	0.81
-	importance of forests	1.372	0.01
10	Presenting program in relation	4.385	0.81
	to protection of forests in		
11	before and after news of TV	1 255	0.07
11	calendars and books in	4.333	0.87
	relation to protection of		
	forests		
12	Distribution of publication for	4.347	0.85
	public in relation to protection		
10	of forests	4 2 2 1	1 0 1
13	Sending experts to other	4.321	1.01
	forestry methods		
14	Impression of stamp in	4 271	1 10
	relation to protection of	, -	
	forests		
15	Writing device on schools	4.270	0.90
16	educational tableau	4.262	0.00
16	Diffusion successful patterns	4.262	0.89
	narticipation		
17	Installing educational poster	4.251	0.90
	in the public places		
18	Giving presents to students in	4.221	1.01
	natural resource week		
19	Implementation of	4.085	0.97
	dwellers		
20	Writing device in relation to	4.078	0.98
	protection of forests in		0.20
	administrative letters		
	elderhand		
21	Organizing educational	4.035	0.90
	courses for forest dwellers in		
	fire		
22	Implementation of	3.964	1.10
	competition for forest		
	dwellers		
23	field trip for forest dwellers	3.907	1.13
24	Supplying educational posters	3.900	1.07
	in relation to protection of		
25	forests	2 000	1.05
25	Ringing schools bell due to	3.899	1.05
26	Radio educational programs	3 821	1 14
20	in relation to protection of	5.021	1.1.1
	forests		
27	Publication subject in relation	3.764	1.12
	to protection of forests in		
28	newsletter and magazines	2 725	1 20
20	children of forest dwellers	5.155	1.20

29	Implementation of camp for students in relation to	3.712	1.13
	importance of forests		
30	Promoting literacy of forest dwellers	3.650	1.13
31	Publication important individuals speech (scientific,	3.618	1.13
	athletic, artistic,) in relation		
32	Existing extension agent of forest	3.607	1.07
33	Implementation of theatre in relation to protection of forests	3.550	1.15
34	Public walking due to natural resource week	3.528	1.23
35	Using literacy campaign programs for forest dwellers	3.525	1.11
36	presenting TV movies in relation to protection of forests for public	3.514	1.32
37	implementation of competition(scientific, painting,) in relation to protection of forests for public	3.364	1.28
38	Selecting pattern forester	3.300	1.20

Likert-type scale: 1= strongly disagree, 2= disagree, 3= moderate, 4= agree, 5= strongly agree

4. CONCLUSION

A range of extension methods was considered by specialists to be effective in protection of forests. Among this methods, publication of the story book in relation to protection of forest and inserting appropriate subjects in relation to protection of forest in school books was presented as most important methods. Therefore education of youth and children at the elementary and secondary school level is also necessary and important in forest protection and conservation. Also conclusions showed that inform to public about worth of forest is very important in protection of forest.

The study showed that extensioneducation methods are important factors in protection of forests in comparing with other factors. Therefore, there is a necessity that we work on the extensioneducation methods in relation with protection of forest in various countries proportion with diverse cultures.

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