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Identifying Effective Solutions in the Field of Environmental Protection (case study Naghadeh Township)

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Abstract

This research was conducted with the mean goal of identifying environmental protection solutions in Naghadeh Township. The statistical population of this research included all employees of the Agricultural Jihad, Environment and Natural Resources Office (N=110). Krejcie & Morgan table was used to determine the sample size (n=86). The Random sampling method was used in this research. To determine the reliability of the questionnaire, Cronbach's alpha was used (α=0.894) which indicates that the reliability of the questionnaire was appropriate. To analyze the findings and to achieve the research goals, descriptive statistics and inferential statistics were used. The findings show that awareness raising among people to improve their relationship with the environment (CV=0.215), the promotion of environmental culture and the definition of environmental guidelines among people (CV=0.225) and prevention of destruction of land and its change and destruction of rangelands and forests (CV=0.227) were identified as the most important effective environmental protection solutions in Naghadeh in west Azerbaijan province. Exploratory factor analysis was used to categorize effective environmental protection solutions. The results showed that seven factors were identified. These factors named as legal, socio-cultural, educational and awareness, managerial, economical, and environmental solutions. These seven factors account 74 percent of variations in environmental protection solutions.

Keywords: Environmental, Solutions, Environmental Protection, Naghadeh. Iran.

1. Introduction

The environment is one of the crucial pillars of life and development. The environment is playing many roles to balance the various components of life. But today the destruction of the environment and the creation of various pollution in this area is increasing due to the lack of special laws and regulations, the lack of specific ownership (Maleki and Saiedi, 2016; Ghorbani and Firooz-Zare, 2009).Culture is the main factor in protecting the environment. Improvement of the environment when will be achieved that the natural and cultural environment of humans is interrelated. For access to this goal among society environmental ethics is need. Environmental ethics is an ideal human's attitude towards its environment, including the natural environment, social and cultural environment (Kiani et al., 2015; Ajdari, 2003).

The pressure of environmental pollution is located in critical on the border. Although in the 50 constitutions low principle, the importance of environmental protection has been drafted and enacted, maintenance and conservation of the environment remain only in the slogan. The reason for this phenomenon is lake of educational and environmental awareness, lack of a sense of responsibility in the society and lake of proper social immorality (Kiani-SulmiandShaterian, 2017; Adhami and Akbarzadeh, 2011). The most basic task of humans is accountability in relation to natural resources and man-made manpower (Shobeiri and Hemmati, 2015; Islamzadeh, 2003). Education plays a vital role in preventing environmental degradation and pollution. Therefore, in the international arena the issue of environmental education has been taken

into consideration. One of the main obstacles that caused to distribution in environment was the lacks of awareness about the importance of environment and the lack of awareness about the environment protection methods (Ramezani- Ghavamabadi, 2012; Batebi and Soltani, 2013). Interest is one of the main reasons for the lack of participation of people in protecting the environment. Attracting people to participation in environmental issues will make them aware of the problems. Public opinion has little information about the subject (Salehnia et al., 2016). Therefore the majority of society must be encouraged to identify environmental problems and realities (Marzso, 1980). The environmental crisis seems to be one of the major challenges that mankind faces in the current century. Climate change, biodiversity loss, environmental degradation and disasters caused by it, water scarcity, and many other problems are the realities that make changes to the patterns of life in the current generation. The way to deal with the environmental crisis is definitely determinants in the quality of life of the present and future generations (Marquez et al., 2011).Obviously, environmental education and environmental culture-making will once lead to the strengthening of environmental ethics in the community, based on sufficient research and research. Then follow up the running programs and activities based on scientific principles and effective methods (Nath, 2003).

Today, economic growth is considered as one of the important indicators for assessing the level of development and progress of countries (Rao, 2010). But economic growth and increasing production require more use of natural resources and energy, especially fossil fuels, which in turn leads to environmental degradation. Over the past decades, global warming and climate change have created many concerns around the world. Concurrently with the goal of achieving higher economic growth, these concerns have turned the environmental risk of economic activity into a controversial issue (Chakraborty andMukherjee (2013). Environmental hazards directly and indirectly can affect economic and social conditions. The negative effects of contamination on human health and the quality of the environment, including direct effects and reducing the productivity of production factors caused by problems such as global warming, desertification and deforestation, are its indirect effects.

Chakraborty and Mukherjee (2013) were states that besides commercial factors other factors also have an impact on environmental sustainability. Economic factors (such as gross domestic product per capita), socioeconomic factors (such as human development) and factors related to government structure (such as democracy, corruption) come from this category.

Schumacher's (2013) research results shows that low-income communities cannot afford to spend on environmental culture.

Azad-Khani (2017) showed that environmental education has a positive and significant relationship with the establishment of sustainable ecotourism. Also, there is a positive and significant relationship between the amounts of utilization of mass media on people's behavior towards the establishment of sustainable ecotourism.

Azad-Khani et al. (2018) showed that knowledge of students were low about general and specific environmental problems. In the regression equation, the positive effect of the new environmental view and environmental education on environmental behavior was rejected and only environmental literacy had a positive effect on environmental behavior. The results of the Adhamie and Akbarzadeh (2011) showed that variables such as responsibility sense, social morality, education, and traditional and religious values are effective in protecting the environment and environmental behaviors. Malekiand Saiedi(2017) factors such as inconsistency in implementation, lack of required infrastructure, parallel management practices in organizations, failure to formulate executive regulations at the right time, and overcoming economic considerations regarding environmental protection requirements have reduced the effectiveness of environmental programs.

Salehi and Imam-Gholi (2009) showed that different age groups were having different exhibit environmental behaviors. This means that older generations support more environmental behaviors than the young generation. Other findings of this study indicate that there is a negative relationship between income and environmental behaviors.

Findings of the study Marcoes et al. (2011) have shown that students have a low level of environmental awareness and lack the knowledge and skills to make environmentally friendly changes in their lifestyle. Metcalf (2012) believes that environmental education has a positive relationship with environmental culture. Environmental goals have an impact on environmental culture. Manager's support on environmental projects have a positive relationship with environmental culture.

Shahnoushi and Abdollahi (2008) were states that almost 20% of citizens have low environmental awareness, 70% moderate and 10% high environmental awareness. Also, the relationship between variables such as age, education level, place of birth, native, socioeconomic status with environmental culture has been confirmed.

Batebi and Soltani (2013) have focused on the key role of women in education and culture. They also emphasize on the participation of women in the institutionalization of environmental culture. In their opinion, recognizing the factors affecting women's participation in sustainable development, implementation of environmental education projects and programs is crucial for empowering women in environmental management. Kamali-Mohajer and Farahani (2012) argue that unsustainable measures such as inappropriate use of energy, excessive exploitation of natural resources, poverty, population growth, improper patterns of production and consumption, increased pollution are mostly environmental problems. They believe that culture is the determining factor in the behavior of individuals in a society. Especially culture is impact on environmental behaviors. Naghadeh is located in the southern part of the West Azarbaijan province of Iran .The city is located in the Solduz plain and is a fertile plain connected to the Lake of Urmia from the north. Hassanlou Hill is a historically important place. This area is located next to a village of the same name and in the west of Naghadeh, in the plain known as Selduz. Over the past few years, environmental degradation measures have been taken in the city of Naghadeh. This justifies the need to control and monitor all activities that affect the environment. Nowadays, in Naghadeh, there are numerous environmental crises such as air pollution, groundwater contamination, the drying of some rivers, faulty sewage systems, the unnecessary use of chemical pesticides in agriculture, traditional agriculture and erosion Soil, population growth and lack of appropriate environmental education threaten the environment. Accordingly, it is essential that a study be conducted to identify effective solutions for environmental protection and conservation in the city.

2. Materials and methods

This is an applied research work. In terms of collecting data, this research is descriptive and survey type. The purpose of this research was to identify effective environmental protection solutions in Naghadeh Township. Library and field study method was used to collect data. The data gathering tool was a questionnaire. In order to determine the validity of the questionnaire, the views and suggestions of faculty members and environmental experts from the West Azarbaijan province and the agricultural management department were used. The statistical population of this research includes all employees of Agriculture Jihad Department of Environment and Natural Resources Administration of Naghadeh (N=110). The Kerjece and Morgan tables were used to determine the sample size (n=86). The Random sampling method was used in this research. To determine the reliability of the questionnaire, Cronbach's alpha was used. The calculated Cronbach's alpha was 0.894 that indicating the research tool was suitable. $SPSS_{22}$ software was used to analyze the data. Descriptive statistics and inferential statistics were used to analyze the findings and to achieve the research goals.

3. Results and discussion

The results show that 65% of respondents were male and the mean age of respondents was 11.39 years. Most respondents were between the ages of 31-40 groups (40.7%). Also, 52.3% of the respondents had undergraduate degrees. On the other hand, 88.4% of the respondents had an organizational post and 11.6% of them had a managerial post. Meanwhile, the respondents' experience was 11.67 years.

Prioritizing Effective Strategies for Environmental Protection in Naghadeh

The results of the prioritization of respondents' views points on effective environmental protection solutions are presented in Table 2. The findings show that awareness raising among people to improve their relationship with the environment (CV=0.215) and the promotion of environmental culture and the definition of environmental guidelines among people (CV=0.225) and prevention of destruction of land and its change and destruction of rangelands and forests (CV=0.227) were identified as the most important effective environmental protection solutions in Naghadeh. Other results are shown in Table 2. Exploratory factor analysis was used to categorize effective environmental protection solutions in Naghadeh city. The KMO index and Bartlet test were used to determine the suitability of the data for factor analysis. Bartlett's test shows that factor analysis is an appropriate factor model for identifying the structure. Also the KMO statistic is equal to 0.881 and the number of samples (in this research is the number of respondents) is sufficient for factor analysis (Table 3). In order to maximize the correlation between variables and some of the factors, the varimax method was used to rotate the factors (axes). Using factor analysis method, especially varimax rotation, decreased the 39 indicators in 7 factors. In this analysis, the total of 7 factors explained about 74% of the environmental protection variance in Naghadeh. Regarding the variability of variables in each of the factors, appropriate titles were chosen for each factor. Among the seven extracted factors, the first factor alone accounts for 16.69% of the variance, and the subsequent factors are 13.16, 11.17, 9.67, 9.29, 8.96 (Table 4).

Table 2. Prioritizing Effective Strategies for Environmental Protection in Naghadeh The results of the prioritization of respondents' views on effective

Options	Mean	S.d	C.V	Rank
Creating awareness among people to improve their relationship with the environment	4.02	0.867	0.215	1
Promoting an environmental culture and explaining environmental guidelines among people	3.91	0.884	0.225	2
Prevention of land degradation and land use change and destruction of grasslands and forests	4.17	0.947	0.227	3
Qualitative development and attention to justice and social values and traditions and the environment	3.69	0.855	0.231	4
Establishing and expanding the coordination of government and public sectors with environmental issues	3.78	0.873	0.231	5
Applying technical facilities and organization and organization to meet the needs of today's and future generations	3.81	0.887	0.232	6
Efficient management and utilization of basic resources to achieve optimal consumption patterns	3.94	0.924	0.234	7
Capacity building to create commitment and accountability for people to protect the environment	3.94	0.924	0.234	8
Increasing the efforts of natural and environmental resource activists and authorities to protect the environment	4.02	0.957	0.238	9
The dissemination of sustainable ways in production and consumption through the fight against environmental degradation	3.81	0.914	0.239	10
Separation of waste and recycling	4.10	0.982	0.239	11
Participation of farmers in the optimal use of resources, especially water	4.08	0.996	0.239	12
Understanding the use of recycled and refurbished containers and containers	3.84	0.976	0.253	13
Emphasis on local and national interests based on the interaction of local organizations with the government in the field of environmental protection	3.79	0.971	0.256	14
Avoid human interference in the architecture of nature and the destruction of habitats	4.12	1.06	0.256	15
Training and information activities for maintaining resources	3.76	0.978	0.259	16
Preservation of vegetation and animal diversity	4.03	1.05	0.261	17
Preventing the pressure of cattle breeders	4.06	1.08	0.265	18
Encouraging farmers to attend environmental education and training courses	3.82	1.02	0.266	19
Establishing green areas for forestry and the development of vegetation in and around urban areas	4.03	1.07	0.267	20
Use of public transportation services to protect the environment	3.86	1.04	0.269	21
Preventing the elimination of useful species and reducing biodiversity	4.09	1.10	0.269	22
Prioritizing Peugeot Environmental Protection	4.08	1.10	0.270	23
The role of government as facilitator of local and non-governmental organizations	3.84	1.05	0.274	24
Informing people of the losses of poisons left in nature	3.96	1.10	0.277	25
Avoiding overcoming economic considerations about the need to preserve the environment	3.66	1.02	0.279	26
Maintaining the culture of local communities	3.73	1.03	0.279	27
Financial penalties for units that generate large amounts of residual waste	4.01	1.14	0.284	28
Flood prevention and erosion with development forestry	4.04	1.15	0.285	29

Options	Mean	S.d	C.V	Rank
Improving the ability of individuals to learn better and make more effective use of the environmental economy	3.62	1.05	0.290	30
Products goods with reduce the environmental responsibility	3.98	1.16	0.291	31
Tax exemptions for companies that use technologies that are less generous	3.67	1.07	0.292	32
Increasing coordination and participation among peoples and universities and related organizations	3.67	1.10	0.299	33
Creating employment and foreign exchange through the development of ecotourism activities	3.66	1.11	0.303	34
Restoration with the lowest cost in the event of environmental degradation	3.59	1.11	0.308	35
Distribution of capital resources to production units in environmental protection	3.61	1.15	0.317	36
Preventing excessive use of fossil resources	3.72	1.18	0.318	37
Fines for car owners who become infected	3.59	1.31	0.365	38

Table 3. KMO statistics and Bartlett test results

KMO	Bartlett	df	Sig.
0.881	3.635	861	0.000

Table 4. Extracted factors with eigen value, percentage of variance and cumulative percentage of variance

Factors	Eigenvalue	percentage of variance	cumulative percentage variance
First factor (legal)	7.01	16.693	16.693
Second factor (government)	5.529	13.164	29.858
Third factor (socio-cultural)	4.693	11.173	41.031
Fourth factor (education and awareness)	4.061	9.60	50.700
Fifth factor (managerial)	3.904	9.296	59.996
Sixth factor (economic)	3.763	8.960	68.956
Seventh factor (environmental)	2.256	5.370	74.327

Table 5. Factors and variables related to Effective Solutions in the Field of Environmental Protection with factor load

Factor	Options	Coefficients
Legal	Preventing excessive use of fossil resources	0.657
	Restoration with the lowest cost in the event of environmental degradation	0.634
	Avoiding overcoming economic considerations to preserve the environment	0.606
	Fines for car owners who become infected	0.682
	Products goods with reduce the environmental responsibility	0.597
	Create legal frameworks and facilitation with local and non-governmental organizations	0.771
Governmental	Creating employment and value through tourism development	0.546
	Prioritizing to research projects inenvironmental protection	0.640
	Avoid human interference in the destruction of habitats	0.530
	Establishing and expanding the coordination of government and public sectors with environmental issues	0.552
Socio-cultural	Promoting environmental culture and explaining environmental guidelines	0.642
	Emphasizing local and national interests based on the interaction with local organizations	0.689
	Capacity building to create commitment and accountability for people to protect the environment	0.604
	Increasing coordination and participation among peoples and universities and related organizations	0.690

Factor	Options	Coefficients
Educational and awareness	Understanding the use of recycled and refurbished containers and containers	0.595
	Promoting an environmental culture and explaining environmental guidelines among people	0.663
	Encouraging farmers to attend environmental and educational training courses	0.578
Managerial	Separating waste and recycling them	0.554
	Use of public transportation services to protect the environment	0.695
	The dissemination of sustainable practices in the production and control of environmental degradation	0.570
	management and utilization of basic resources to achieve optimal consumption patterns	0.657
Economical	Tax exemptions for companies that use technologies that are less generous	0.682
	Financial penalties for units that generate large amounts of residual waste	0.611
	Distribution of capital resources to production units in environmental protection	0.614
	The head of the proper disposal of garbage	0.711
Environmental	Preservation of vegetation and animal diversity	0.704
	Use of crops that use water for work.	0.530
	Preventing land degradation and changing its use and destroying grasslands and forests	0.565
	Preventing the elimination of useful species and reducing biodiversity	0.637

4. Conclusion and recommendations

As it was observed, prioritizing respondents' viewpoints about effective environmental protection solutions showed that awareness raising among people to improve their relationship with the environment and the promotion of environmental culture and the definition of environmental guidelines among people and prevention of destruction of land and its change and destruction of rangelands and forests were identified as the most important effective environmental protection solutions in Naghadeh. Therefore, it is essential that measures be taken to inform people of the damage caused by the nature of the remaining poisons, efforts to build capacity to create commitment and accountability in the public to protect the environment, more role of the state as the source of legal frameworks, empowerment and facilitating local and non-governmental organizations to protect the environment, increasing coordination and participation among groups or sectors in the community for the use of recycled and recyclable materials and containers, raising awareness among the masses to change their attitude towards the environment and Improving their relationship with the environment. The findings research are matched on the results of Azad Khani's (2018), Adhamiand Akbarzadeh (2011) and Salehi and Imam-Gholi (2009); Shahnoushi and Abdollahi (2008); Batebi and Soltani (2013); Kamali-Mohajer and Farahani (2012); Nath (2003)and Chakrabortyand Mukherjee (2013).

The results of Factor Analysis on identifying environmental protection solutions in Naghadeh showed that seven factors were identified under the name of legal, socio-cultural, educational and awareness, managerial, economical, and environmental solutions. These seven factors account 74 percent of variations in environmental protection solutionsin NaghadehTownship. The first factor was named the legal solution. This includes the prevention of excessive use of fossil fuels, the restoration of the least cost in the event of environmental degradation, the prevention of overcoming the economic considerations of the need for environmental protection, the fines of owners of cars that cause contamination, products goods with reduce the environmental responsibility and create legal frameworks and facilitation with local and non-governmental organizations. On the basis of this, the government should take activities to protect the environment by adopting the government's deterrent laws and treating the offenders with legal and punitive measures

The second factor was the government's decision to protect and preserve the environment in the Naghdah. This factor includes Creating employment and value through tourism development, prioritizing to research projects in environmental protection, avoid human interference in the destruction of habitats and establishing and expanding the coordination of government and public sectors with environmental issues. The role of the

government always plays a role in the implementation of targeted environmental programs. When the government establishes and properly manages a structured and enforceable plan, coordinated by the NGO sector and NGOs, the effects of that program will well protect the environment. The findings of the study were mached with Chakrabortyand Mukherjee (2013), Maleki and Saiedi (2016).

The third factor was the social-cultural solution in the field of environmental protection and preservation in the city of Naghdah. This includes Promoting environmental culture and explaining environmental guidelines, emphasizing local and national interests based on the interaction with local organizations, capacity building to create commitment and accountability for people to protect the environment and increasing coordination and participation among peoples and universities and related organizations. It can be concluded that socio-cultural strategies affect the protection of the environment in Naghadeh. Culture is a key factor in the engine of sustainable development and environmental protection, and the improvement of the environment will be achieved when the natural and cultural environment of humans is interconnected. The realization of such an ideal is the existence of ecological ethics in society, the formation of unofficial and popular groups and the formation of spontaneous non-governmental organizations is an example of the development of environmental ethics and attention to the environment in human societies. The crystallization of the environmental culture in society is that all people in the community regard the environment as a vital and valuable phenomenon and never harm its constituent elements, including air and land. The findings of this research are same on the results of the research by Adhamieand Akbarzadeh (2011) and Salehiand Imam-Gholi(2009); Shahnoushi and Abdollahi (2008); Batebi and Soltani (2013); Kamali-Mohajerand Farahani (2013); Nath (2003).

The fourth factor was the education and awareness campaign in the field of environmental protection and conservation in Naghad city. This includes understanding the use of recycled and refurbished containers and containers, promoting an environmental culture and explaining environmental guidelines among people and encouraging farmers to attend environmental and educational training courses. Therefore, it can be concluded that educational – awareness solutions in the protection of the environment in Naghadeh.Organizing one-day camps for up to a week in the natural environment, holding festivals and conferences on urban environmental conservation, reviewing old traditions in the field of environmental protection and rehabilitating them, educating people at the family and community level, and various careers in the field It is environmentally effective. It seems that although activities at the macro level are important and effective, in order to promote the environmental education of our country, we should look at the national (macro) level at the local level (wisdom). The findings of this research are mach with the findings of Azad Khani (2017); Azad Khani et al. (2018); Salehiand Imam-Gholi(2009); Metcalf (2012).

The fifth factor was named management solution in the field of environmental protection and maintenance in Naghade city. This includes separating waste and recycling them, use of public transportation services to protect the environment, the dissemination of sustainable practices in the production and control of environmental degradation and management and utilization of basic resources to achieve optimal consumption patterns. The research findings are consistent with the studies by Metcalf (2012) and Batebi and Soltani (2013).

The sixth factor was the economic solution in the field of environmental protection and preservation in the city of Naghdah. This includes tax exemptions for companies that use technologies that are less generous, financial penalties for units that generate large amounts of residual waste, distribution of capital resources to production units in environmental protection and the head of the proper disposal of garbage.

Economic development is closely linked to the pollution of the environment, as one of the key pillars of the country's policy mix. The experience of developed countries shows that economic project (the industrial sector and non-normative exploitation of the environment) poses a serious threat to sustainable development. Air pollution is one of the environmental problems that has intensified with industrialization and increased energy consumption. The findings of this study are based on the results of the research by Elbasha and Roe(1996); Rao (2010); Chakraborty and Mukherjee(2013) and Schumacher (2013).

The seventh factor was named environmental solution in the field of environmental protection in the city of Naghdah. This includes preservation of vegetation and animal diversity, use of crops that use water for work, preventing land degradation and changing its use and destroying grasslands and forests and preventing the elimination of useful species and reducing biodiversity. The degradation of the environment is due to unsustainable exploitation of the villagers from natural resources, which in various forms such as the

use of natural resources for fuel (firewood), excessive slaughter of livestock, change in the use of forest land and pasture land, the use of chemical fertilizer for the fertilization of the land and the greater harvest of the product that causes the pollution of the environment. The utilization and exploitation of the environmental power can cause poorer villagers. This Mather is an effective factor in the destruction of the environment. The findings of this study are consistent with the results of the study by Ramezani- GhavamAbadi (2012), Elbasha and Roe(1996) and Adhamiand Akbarzadeh(2011).

Recommendations were:

Promote the level of information provided by the media and social networks among people in the field of environmental protection and preservation.

Government provides material incentives to attract people's participation and proportionate to the extent to which environmental protection is being done, appropriate benefits are provided through clear guidelines to individuals.

Organize environmental protection festivals and exhibitions to promote public awareness for conservation and efforts to protect the environment from famine.

Drafting and enforcing strict and binding laws by the legal authorities in dealing with violators of environmental degradation.

Use the capacity of social behaviors, religious, and cultural events to familiarize people with their responsibility in the environmental protection.

Encouraging entrepreneurs to invest in environmental protection projects through lending and tax exemptions.

Expand the coordination of government and non-government organizations in environmental issues.

Prevention of land degradation and destruction of pastures and forests and the environment with more detailed monitoring and offending.

Improve and improve the current management practices of organizations in the field of environmental protection.

References

1. Abdi, Z. (2014). The role and function of mass media in the design of environmental issues, Journal of Social Welfare, 14(55): 315-347.

2. Adhami, A. A., Akbarzadeh, A. (2011). Investigating the Effective Cultural Factors on Environmental Protection in Tehran (Case Study: Tehran, 5th and 18th Districts). Journal of Sociology, 1(1): 38-45.

3. Ajdari, A. (2003). Cultural Development and the Environment, Journal of the Environmental Protection Agency, 39(80): 28.

4. Azad-Khani, P. (2017). Investigating the Role of Environmental Knowledge and Knowledge in Creating Sustainable Ecotourism (Case Study: Ilam City). Journal of Sustainability, development and environment. 4(1): 83-97.

5. Azad-Khani, P., Sadat Nezhad, M., Sharfkhani, J. (2018). Study of environmental education and environmental protection behavior of high school students in Ilam city. Journal of Human and the environment. 16(1): 139-153.

6. Batebi M., Soltani, Sh. (2013). Strategies for increasing the participation of rural women in Iran's environmental management. Journal of Agriculture and Sustainable Development, 47: 23-29.

7. Chakraborty,D., and Mukherjee, S. (2013). How do Trade and Investment Flows Affect Environmental Sustainability? Evidencefrom Panel Data". Environmental Development. 6: 34-47.

8. Elbasha, E. and Roe, T (1996). "On EndogenousGrowth: the Implications of Environmental Externalities". Journal of Environmental Economics and Management, 31: 240–268.

9. Environmental Performance Index (EPI) report, (2014). Available in: http://epi.yale.edu/epi/country-profile/iran.Access in: 04/16/2015Evidence, Princeton UniversityPress.

10. Ghorbani, M., and Firooz Zare, A. (2008). An Introduction to Environmental Valuation. Ferdowsi University Press, Mashhad.

11. Islamzadeh, V. (2003). Introduction to the sociology of the environment. Publishing of Green Organization of Islamic Labor Party.

12. Kamali-Mohajer, M., Farahani, B. (2012). Environmental culture A strategy for the development of sustainable tourism, the first national tourism and nature tourism conference in Iran.

13. Kiani, F., Ansari, R., Sanctification, A. (2015). Economic, social and environmental effects of Hegmatan Cement Factory on Shanjarin Village.Quarterly journal of space economics and rural development. Year 4, Issue 2, Pages 133-144.

14. Kiani-Sulmi, P., Shaterian, M. (2017) Identification of socio-cultural factors affecting environmental protection (Case study: Citizens of Kashan). Quarterly Journal of Environmental Education and Sustainable Development. 6(2): 101-115.

15. Maleki, S., and Saiedi, J. (2016). Environmental Dimension and Urban Environment Status in Iran's Development Plans.Urban Management Studies. 8(27): 69-89.

16. Marzso, S. (1980). Toward interdisciplinary environmental education proceeding of the international. Seminar education and environment some ideas on the interdisciplinary nature of the environmental education.

17. Metcalf, A. Y. (2012). Green culture: The impact of employee environmental culture. Southeast Decision Sciences Institute Conference, Hilton Columbia Center Columbia, South Carolina, February 29 – March 2, 2012.

18. Nath,B.(2003). Education for Sustainable Development: The Johannesburg Summit and Beyond, Environment, Development and Sustainability, 5, pp. 231–254.

19. Ramezani- GhavamAbadi, M. H. (2012). Strategic study of environmental education in Iran: necessities and bottlenecks. Strategic Magazine. 21(65): 233 -257.

20. Rao, B. B. (2010). Estimates of the Steady State Growth Rates for Selected Asian.Countries with an Extended Solow Model". Economic Modeling, 27: 46-53.

21. Salehi, S.A. Imam-Gholi, L. (2009). Empirical study of the relationship between knowledge and 012environmental behaviors (Study of urban and rural areas of Sanandaj city) Iranian Journal of Social Issues. Volume 3. Number 1. P. 121-147

22. Salehnia, M. Hayati, BH, Mola'i, M. (2016). Identification of Effective Factors on Environmental Behavior of Urmia Lake Basin Residents: Application of Factor Analysis Method, Journal of Agricultural Economics and Development Research, Volume 47, Issue 2, Pages 343-354.

23. Schumacher, I. (2013). The indigenous formation of an environmental culture. Working Paper, Ipag Business School.

24. Shahnoushi, M., Abdollahi, A. (2008). An analysis of the environmental culture of the people of Isfahan and some of the factors affecting it. Journal of Humanities Research, University of Isfahan, 23: 15-34.

25. Shobeiri, M., Hemmati, Z. (2015). An Analysis of the Components of Promoting Environmental Culture (Case Study: Citizens of Shiraz City). Quarterly Journal of Cultural Studies of Iran, 8(4): 197-215.