

The Analysis of Problems in the Certification Application in State Forestry Administration in Turkey

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Abstract

The use of natural sources and increase in environmental damage around the world have come to a state in which it threatens the existence and functionality of forest resources as well as other natural resources[?]. The idea that economic development can only be achieved through the mentality of sustainable forest management supported by community involvement has ensured the improvement in certification systems of forestry and forest product. Therefore, in this study, the opinions of directors of state forestry administration in Turkey concerning the difficulties encountered or hardships which are possible to encounter in forestry and forest products certification are addressed. In this context, a questionnaire based on the face-to-face interview method has been carried out on 147 participants in manager position in 71 different State Forestry Management. While 11 of the forestry managements, on which the questionnaire is conducted, have FSC forest management certificates, 60 are non-certified businesses. At the end of this study, that bureaucratic procedures will increase within the management and that malfunctions will be experienced with respect to the operation, low level of certification awareness in Turkey, the inadequacy of collaboration between stakeholders and the incomplete forest cadastre all are determined as major obstacles to the certification. On the other hand, it has been detected that there are noteworthy differences in opinions between employees in certified companies and workers in non-certified businesses in respect to worker's health and safety, and stakeholder collaboration. In addition, it is conducted that there are significant differences between the working hours of participants and the participants' opinions concerning the problems encountered in the forest products certification.

Keywords: Forest management, Forestry and forest products, Certification, state forestry administration

INTRODUCTION

In recent years, while there is a rapid increase in the human population across the world, greater problems have occurred concerning environmental problems and natural resource use towards meeting the needs.

The consumption rate exceeding the tolerance of natural resources' renewal has become to an extent where it threatens the sustainability of natural sources as well as the sustainability of economic recovery (Baykal & Baykal, 2008; United Nations, 2015).

Since 1980s, it has been widely acknowledged that perpetual continuation of the existence and functional features of the ecosystem and natural resource depends on economic recovery and keeping the development process inside the ecological boundary (Ruckelshaus, 1989).

In the United Nations Conference on Environment held in Rio in 1992, it was stated that every single country needs to form its own sustainable recovery act plan by indicating that countries themselves cannot provide sustainable recovery and that environmental damage could not be decreased (Toprak, 2006). However, processes developed in following years made obvious that public services alone would not be successful in that terms and it should be supported with social participation (Özmehmet, 2012). This process promoted the development of forestry and forest products certification systems which include the comprehension of social responsibility towards development of sustainable management of forest resources (Kiker & Putz, 1997).

Forestry and forest products certification systems rely on the basis of creating a relationship which will lead to improvement of sustainable forest management between producers and consumers with a high environment consciousness (Durusoy & Türker, 2005; Chen & Innes, 2013).

These systems secure that raw material sources are managed according to international sustainable forest management principles and the whole production processes beginning from raw material source are based on the international criteria and in a transparent structure.

In the global level, the Canadian Standards Association (CSA, Sustainable Forest Initiative (SFI), Programme for the Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) certifications systems make forest management certification (Baharuddin, 1995). Among these certification systems, CSA stands out as the only certification system in Canada, SFI stands out as operating in Canada and USA, FSC and PEFC stand out as operating worldwide and having the widest usage area. Since 2015, the forest land taken into the scope of forest management certification around the world has reached to %10.9 of whole forest land (UNECE/FAO, 2015).

In Turkey since 1999, the legislative alignment practices have started in the forestry alongside other domains with the adaptation process to the Europe Union (Dölarslan, 2007). Within this context, the national sustainable forest management criteria's and indicators were generated. The General Directorate of Forestry (GDF) has adopted FSC forest management certification and started certification practices in 2010 (FSC, 2015). These certification operations are dealt at level of State Forest Management Directorate (SFM) and Forest Management Chieftaincy (GMC) in the provincial organisation.

This study aims to analyse challenges which are encountered or likely to be encountered by the forest management certification system, which is put into practice by general directorate of forestry provincial organisation units at the level of technical workers and several variables and aims to develop suggestions for a solution.

MATERIAL and METHOD

Material

This study handles countrywide State Forest Management (SFM) units of GDF which holds about %99 of Turkey forest land ownership on behalf of the public, and organizes forest activities. 243 SFMs connected with 28 Regional Directorate of Forestry (RDF) operate throughout Turkey (OGM, 2016). Within the concept of FSC Forest Management Certification, total of 32 SFMs and 1 GMC from 6 different RDF have been certificated since 2015. 9 of these units take place in Mugla, 4 of them take place in Bolu, 3 of them take place in Bursa, 2 of them take place in Zonguldak, 3 of them take place in Istanbul, 11 of them take place in Kastamonu RDF and 1 GMC takes place in Bolu RDF. The total certified area has become 2530976.33 ha in these mentioned units. In Turkey, there are units with FSC forest

certificate in 6 RDF under GDF. In total, there are 32 SFM and 1 GMC which have FSC Forest Management Certificate (FSC, 2015).

Method

The survey used for the study was prepared according to 5 likert scale and it was applied to management director, management assistant principle and workers in a chieftaincy position who work activel. In these surveys, 18 statements were used in general, 12 of them were difficulties likely to be encountered and 6 of them were about solution suggestions. The surveys were conducted through face to face interaction.

Within the scope of the research, the survey was conducted on total 147 personnel in 71 SFMs throughout Turkey. The reliability of the surveys was calculated as 0.852 by using Cronbach Alfa method. This value indicates that the scale is highly reliable. The validity of the data was calculated as 0.794 by using Kaiser-Meyer-Olkin (KMO) test method. The measured KMO value points out to a high data validity in the surveys.

This work aims to determine views and solution suggestions regarding the already existing and difficulties likely to be encountered in FSC, which was put into practice by GDF country organisation units and the study also includes the ideas of SFM technical workers. IBM SPSS (20.0) package program was used in analysing the gained data. According to the One-Sample Kolmogorov-Smirnov Test results, it was seen that the data did not show normal distribution. Based on that non-parametric tests were used in order to analyse whether there is a difference between the ideas of technical workers at the level of different variations. In this context for the analyses with 3 or more independent statements Kruskal-Wallis tests were used and for the analyses with 2 independent statements, Mann-Whitney U tests were used (Tavşancıl, 2014). In addition, data frequency, the ratio and arithmetic means were calculated by the use of Microsoft Office Excel 2007 program.

RESULTS and DISCUSSION

The distribution of the participants of the survey under the scope of this study according to the SFM they work in and some of their demographic features are given in Table 1. In this study, while the highest level of participation occurs in the Black Sea Region, the lowest level of participation comes from the Southeastern Anatolia region. While the participation level from SFMs that don't have FSC certificates is 77%, the participation level from SFMs with the certificate is 23%. Considering the demographic features of participants, it is concluded that they mostly participate in 5 to 10 year working periods, undergraduate studies and the chief position of management groups.

Table 1. Distribution of the participants according to the SFMs and demographic features.

Variables		Frequency	Rate (%)
SFMs Certificate Status	Uncertified	113	77
	Certified	34	23
	Total	147	100
Educational Status of Participants	Undergraduate	121	82
	Graduate	26	18
	Total	147	100
Task Status of Participants	Managing Director	21	14
	Assistant Manager	22	15
	Chief Operating Officer	91	62
	Other	13	9
	Total	147	100
Participants' Working Time	1-5 Year	37	25
	5-10 Year	47	32
	10-15 Year	28	19
	15-20 Year	11	8
	> 20Year	23	16
	Total	147	100

Difficulties that are formed or foreseen by the factors inside the management

Participants' views about the difficulties that are created/can be created by internal factors of FSC Forest Management Certification are presented in Table 2. According to this, it is understood that participants consider certification causing to the staff recruitment necessity inside the management as the most important issue. It is seen that the participants strongly agree with the theories which say that the number of bureaucratic procedures would increase and there might be malfunctions in the current system. On the other hand, the inspection of management activities by independent institutions is understood to be seen as an insignificant problem by the participants. The opinion that the certification is believed to have strict organisation constructions and high level bureaucratic properties (Türker *et al*, 2009) and to cause an increase in workload (Genç, 2014) can be evaluated as there would be problems during the adaptation of the certification.

Table 2. Difficulties that are anticipated and formed by the factors inside the management.

Factors		I do not agree at all	I slightly agree	I neither agree nor disagree	I agree	I strongly agree	Total
It causes the documentation procedures to increase inside the management	Frequency	3	15	44	54	31	147
	Ratio	2%	10%	30%	37%	21%	100%
The need of additional personnel employment for certification works occurs	Frequency	2	13	41	65	26	147
	Ratio	1%	9%	28%	44%	18%	100%
There may be some trouble with the operation in the education process of the workers about the matter	Frequency	6	20	50	54	17	147
	Ratio	4%	14%	34%	37%	12%	100%
In terms of management privacy, it is not fair for the management to be inspected by an independent foundation	Frequency	14	44	39	30	20	147
	Ratio	10%	30%	27%	20%	14%	100%

Difficulties that are formed and foreseen by the factors outside the management

The views of the participants about the difficulties resulting from external factors of FSC Forest Management Certification are presented in Table 3. By looking at this, it is understood that the certification awareness level of forest products organisation is not sufficient enough, there is the lack in terms of cooperation which is required by certification, the issue with cadastral has not been solved yet and the problems that are probable with country people pose a crucial matter. On the other hand, it seems that the participants, in general, are uncertain about the adaptation between forestry regulations and certification standards, infrastructures of workers' health and work security, and providing shareholder participation.

Table 3. Difficulties that are anticipated and formed by the factors outside the management.

Factors		I do not agree at all	I slightly agree	I neither agree nor	I agree	I strongly agree	Total
The certification awareness level of the forest products industry sector is not enough	Frequency	4	18	43	53	29	147
	Ratio	3%	12%	29%	36%	20%	100%
The rise in the estimated prices depending on certification costs ends up with customer loss	Frequency	11	42	52	31	11	147
	Ratio	7%	29%	35%	21%	7%	100%
Matching forestry regulations with international certification standards is hard.	Frequency	10	29	49	46	13	147
	Ratio	7%	20%	33%	31%	9%	100%
Substructure of health, work safety, social security and education in our country is not suitable for the certification	Frequency	15	33	30	39	30	147
	Ratio	10%	22%	20%	27%	20%	100%
The cooperation of forestry and forest products industry sector in our country is not as developed as the certification program needs	Frequency	7	24	45	51	20	147
	Ratio	5%	16%	31%	35%	14%	100%
It is not possible to enable the participation of all shareholders during all the deciding processes of the forestry organization	Frequency	4	28	56	43	16	147
	Ratio	3%	19%	38%	29%	11%	100%
The fact that the Operations of forest cadaster are not completed makes the application of the certification difficult	Frequency	9	30	41	42	25	147
	Ratio	6%	20%	28%	29%	17%	100%
Deficiencies in the area of applying the legal legislations to country people make the application of the certification difficult	Frequency	6	27	41	46	27	147
	Ratio	4%	18%	28%	31%	18%	100%

The opinion differences on certification difficulties

The fact that there is not any significant difference between the executives and technical workers of SFMs that have the FSC certificate about difficulties resulting from external factors of managements the SFMs that do not have this certificate ($p>0.05$) can be seen in Table 4.

Table 4. The results of Mann-Whitney U Test about the opinion differences of internal factors for having the certificate.

Difficulties	Certification State	Number (N)	Mean Rank	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
It causes the documentation procedures to increase inside the management	Certificated	112	74.67	1885.0	2515.0	-0.357	0.721
	Uncertificated	35	71.86				
	Total	147					
The need of additional personnel employment for certification works occurs	Certificated	112	75.72	1767.5	2397.5	-0.930	0.352
	Uncertificated	35	68.50				
	Total	147					
There may be some trouble with the operation in the education process of the workers about the matter	Certificated	112	76.00	1736.0	2366.0	-1.070	0.285
	Uncertificated	35	67.60				
	Total	147					
In terms of management privacy, it is not fair for the management to be inspected by an independent foundation	Certificated	112	73.94	1953.0	8281.0	-0.033	0.974
	Uncertificated	35	74.20				
	Total	147					

In Table 5, there are the opinions differences of the executives and technical workers of SFMs, which have the FSC certificate, about difficulties resulted from external factors of managements the SFMs that do not have this certificate. According to this, it is seen that there is a difference between the workers of SFMs with certificates and the workers of SFMs without certificates in terms of the fact that the infrastructure of health, education and social security in Turkey forms an obstacle ($p<0.05$). Although this issue is a fundamental obstacle for the workers of SFMs with certificates, it is regarded as an insignificant topic for the workers of SFMs without certificates. Similarly, lack of cooperation between the forestry and the industry of forest products is seen as a big problem by the workers of SFMs with certificates while it is not considered as an important issue for the workers of SFMs without certificates.

In researches conducted in the literature (Owari *et al*, 2006), it is indicated that there are significant opinions differences between the workers of managements with certificates and the workers of managements without certificates. But this research showed that the workers of SFMs with certificates think that the certification program would face more problems compared with the workers of non-certified SFMs. It could be understood as the workers of certificated SFMs observe the difficulties encountered better by working actively in certificated managements.

In addition to that, the fact that the certification increases the burden of the workers especially who work as engineers can be said to strengthen the negative opinions of the workers of managements with certificates (Genç, 2014).

Table 5. The results of Mann-Whitney U Test about the opinion differences of external factors for having the certificate.

Difficulties	Certification State	Number (N)	Mean Rank	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
The certification awareness level of the forest products industry sector is not enough	Certificated	112	74.13	1946.0	2576.0	-0.066	0.947
	Uncertificated	35	73.60				
	Total	147					
The rise in the estimated prices depending on certification costs ends up with customer loss.	Certificated	112	76.18	1715.5	2345.5	-1.158	0.247
	Uncertificated	35	67.01				
	Total	147					
Matching forestry regulations with international certification standards is hard	Certificated	112	72.65	1808.5	8136.5	-0.717	0.473
	Uncertificated	35	78.33				
	Total	147					
Substructure of health, work safety, social security and education in our country is not suitable for the certification.	Certificated	112	79.72	1319.5	1949.5	-2.986	0.003*
	Uncertificated	35	55.70				
	Total	147					
The cooperation of forestry and forest products industry sector in our country is not as developed as the certification program needs.	Certificated	112	79.00	1400.5	2030.5	-2.649	0.008*
	Uncertificated	35	58.01				
	Total	147					
It is not possible to enable the participation of all shareholders during all the deciding processes of the forestry organization.	Certificated	112	77.23	1598.0	2228.0	-1.724	0.085
	Uncertificated	35	63.66				
	Total	147					
The fact that the Operations of forest cadaster are not completed makes the application of the certification difficult	Certificated	112	74.75	1876.0	2506.0	-0.394	0.694
	Uncertificated	35	71.60				
	Total	147					
Deficiencies in the area of applying the legal legislations to country people make the application of the certification difficult.	Certificated	112	75.47	1795.0	2425.0	-0.776	0.438
	Uncertificated	35	69.29				
	Total	147					

* $p<0.05$

Views on solution suggestions

Solution offers of the participants on the difficulties encountered in the certification of forestry and forest products are given in Table 6. According to this table, the highest average exits on the view that society’s environment awareness should be improved by oral and visual media promotion while the lowest average takes place on the view that green label should be obligatory in purchase contracts in public institutions. It can be said that the ones who are aware of this certificate are sensitive to the environment because of the fact that advertising and informing actions are their priorities (Thompson *et al*, 2010). On the other hand, increasing the awareness in the public and in forestry organizations is regarded as an important stage to overcome the difficulties in the area of certification systems of forestry (Schepers, 2010).

Table 6. The solution offers of the participants.

Suggestion		I do not agree at all	I slightly agree	I neither agree nor disagree	I agree	I strongly agree	Total
The Green label should be obligatory in purchase contracts in public institutions.	Frequency	7	8	54	60	18	147
	Ratio	5%	5%	37%	41%	12%	100%
Discount should be made to certified managements	Frequency	3	8	45	68	23	147
	Ratio	2%	5%	31%	46%	16%	100%
There should be works towards awareness raising of the whole community by education foundations	Frequency	3	5	28	75	36	147
	Ratio	2%	3%	19%	51%	24%	100%
Uncertificated forest products should not be allowed to enter the country by importation	Frequency	6	10	26	66	39	147
	Ratio	4%	7%	18%	45%	27%	100%
Society’s environment awareness should be improved by oral and visual media promotion	Frequency	3	1	28	63	52	147
	Ratio	2%	1%	19%	43%	35%	100%
In order to improve the country men and forestry organizations, there should be a public relations institution in forest management directorship	Frequency	2	4	35	58	48	147
	Ratio	1%	3%	24%	39%	33%	100%

CONCLUSIONS

In this study, the difficulties encountered and difficulties likely to be encountered during the application process of the forestry and forest products certification are evaluated by SFM directors and technical workers. In the survey, it is benefited from surveys conducted on SFM directors and technical workers in GDF field service operating throughout Turkey.

According to the evaluation of the survey, it is stated that during the application of certification there would be problems of the current internal running of the management, the workload would increase and the need of personnel employment would emerge. On the other hand, for participants, it is inevitable that this new situation which comes with the certification would affect country people negatively. Despite emphasizing the necessity of improving forestry and forest products certification, it was seen that the biggest obstacle in that matter was the insufficient certification awareness of the consumers of the forest products sector.

In this work, it is concluded that the infrastructures of workers’ health and work security and education in our country are not enough to extend the certification of forestry and forest products and the cooperation of the shareholders in the sector is needed. The most important factor for the development of the certification is regarded as the increase of social environment consciousness.

In this regard, there is a need for studies among SFM workers and all segments to increase the awareness of certification. Within this scope, advertising activities can be conducted under the cooperation of GDF and nongovernmental organisations and GDF workers can be trained accordingly. Specialisation can be provided by employing additional personnel and by decreasing the workload of the SFM directors and technical workers. With establishing public relations departments in SFMs can improve the cooperation of the shareholders.

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