The forestry organization and its relationship with local people in the Eastern Black Sea Region of Turkey

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Introduction

The Forestry Organization is one of the oldest and most well-established authorities in Turkey. The first forestry organization was founded in 1839 under the Ottoman Empire. It was called Directorate for Forestry and set up within the Ministry of Commerce. This organization lasted until 1869 and was transformed into a department of the Ministry of Finance between 1869 and 1872. In 1870, the Directorate-General for Forestry was created. The Ministry it belonged to was changed several times until 1920, when it became a department of the Ministry of Economy. After the foundation of the Republic of Turkey in 1923, the forestry organization continued to serve as department of the Ministry of Economy, then it was attached to the Ministry of Agriculture and, eventually, until when it acquired the status of independent ministry in 1969 with the creation of the Ministry of Forestry. The Ministry in question was merged with the Ministry of Agriculture in 1981. The resulting office was renamed Ministry of Agricultural, Forestry and Rural Affairs in 1983, and an independent Ministry of Forestry was reinstituted in 1991. It was reorganized under the name of

Abstract

The Forestry Organization is one of the oldest and most well-established authorities in Turkey. After the Republic of Turkey was founded, laws were passed to prohibit the free exploitation of forests and to only authorize the State exploitation of timber. The law no. 4785 was then issued in 1945 to expropriate all forests. Since the Forestry Organization is in charge of enforcing these laws, its relationship with people deteriorated in time. The relationship between the Forestry Organization and people has not been restored yet, mainly because rural people still suffer from poverty and mainly live in or around forests. The area of study of this article is composed of seven provinces of the Black Sea Region in Turkey, where there are 3,228,904 inhabitants, corresponding to 5% of the total Turkish population. Approximately 51% of this local population live in rural areas, a percentage that is much higher than the national average (34%). Eighty-two forest villages located within twenty-five boroughs and seven cities in the Eastern Black Sea Region have been selected to be studied. Rural poverty is more dominant in these villages than in the rest of the area. A questionnaire containing 111 questions was designed to find out the type of relationship existing between rural people and the Forestry Organization. A poll was held to examine the effects of two variables: the province of origin and the personal thoughts on official forestry policy. The Simple Correspondence Analysis (SCA) technique was employed in this study. On the basis of the results of this study, the authors suggest measures to take.

Key words: Forestry Organisation, rural people, Black Sea Region.

Résumé

L'Organisation pour la Sylviculture est parmi les autorités les plus anciennes et les mieux établies en Turquie. Après la fondation de la République turque, une série de lois furent promulguées afin d'étatiser toutes les forêts du pays et, par conséquent, d'interdire la libre exploitation du bois. Plus tard, la loi n. 4785 fut adoptée en 1945 pour l'expropriation formelle de toutes les forêts. Comme l'Organisation pour la Sylviculture était chargée de faire respecter la loi, ses relations avec les communautés locales se détériorèrent au fil du temps. Ces relations n'ont pas encore été rétablies car les populations locales souffrent toujours de pauvreté et vivent dans les forets ou tout près des forets. Sept provinces de la Région de la Mer Noire font l'objet de cette étude. Elles présentent une population de 3.228.904 personnes, soit 5% de la population totale de la Turquie. Environ 51% de cette population vivent dans les zones rurales, un pourcentage qui est beaucoup plus élevé que la moyenne nationale (34%). Quatre-vingt-deux villages forestiers, localisés dans vingt-cinq municipalités, et sept villes dans la Région de la Mer Noire ont été sélectionnés pour l'étude. La pauvreté rurale est plus forte dans ces villages que dans le reste de la zone enquêtée. Un questionnaire contentant 111 questions a été mis ou point pour comprendre le type de relation existant entre les ruraux et l'Organisation pour la Sylviculture. Un sondage a été organisé pour examiner les effets de deux facteurs variables: la province d'origine et les points de vue personnels sur la politique forestière officielle. L'Analyse des Correspondances Simples est la technique employée dans cette étude. Sur la base des résultats obtenus, les auteurs suggèrent des mesures à prendre.

Mots clés: *Organisation de la Sylviculture, population rural, Région de la Mer Noire.*

Ministry of Environment and Forestry in the process of harmonization with the European Union in 2003.

Although the rural population living in or around forests is gradually decreasing, it still accounts for an important share of the total Turkish population. Rural people were free to exploit forests until the late 1800s, when the Forestry Regulations were promulgated (1870) to impose certain restrictions. After the Republic of Turkey was founded, a number of laws were passed to prohibit the free exploitation of forests and to only authorize the State exploitation of timber. Then, the law no. 4785 was issued in 1945 to expropriate all forests. Since the Forestry Organization was in charge of enforcing these laws, its relationship with people deteriorated. The relationship between the Forestry Organization and people has not been restored yet, mainly because rural people still suffer from poverty and mainly live in or around forests.

The history of the relationship between the forest and society is as old as the history of mankind. Humans have always found the forests interesting because of their various potential bene-

fits for their society. Over the last few years, a series of international events have modified relationship between the forest and society in a sustainable manner. The local communities, which were specifically emphasized in the Forest Principles set by the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, and which were included in the agendas of many subsequent international forestry meetings, are an important dimension which should be reviewed as part of the relationship existing between the forest and society (Toksoy *et al.*, 2005). It is well-known that forestry becomes more efficient with a well-balanced involvement of all relevant stakeholders (Lise, 2006; Poteete and Ostrom, 2002).

Turkey is working towards including sustainable forestry into its forestry policies. However, Turkey has often tried to implement «Western» ideas like «participation» without questioning them. Consequently, it often fails to implement these ideas in accordance with local conditions, since they are merely introduced in the administrative system, without the involvement of public opinion (Lise *et al.,* 2007)

Materials and Methods

The area of study of this paper is composed of seven provinces (Ordu, Giresun, Trabzon, Rize, Artvin, Gümüşhane, and Bayburt) in the Eastern Black Sea Region of Turkey (See Figure 1).

Figure 1 – *Eastern Black Sea Region in Turkey.*

The surface area of the studied region is 3,879,996 hectares, corresponding to 5% of the total Turkish area. Approximately 34% of this region is forested. Considering that forests cover 26.6% of the entire country, it is obvious that the local forest stock of this region is higher than the national average. In terms of physical magnitude, 7% (1,338,408 hectares) of the total forest stock of Turkey is located in this region.

The population of the region under study is 3,228,904 corresponding to 5% of the total population. Approximately 51% of the local population lives in rural areas, much higher ratio than the average one (34%) in Turkey.

In the rural areas of this region, the population is dispersed for various reasons including geological conditions, traditional lifestyle and abundant water resources. These scattered settlements caused the merging of agricultural fields, dwelling areas, meadows and forests. Local people damage forests to exploit timber, or to use the land for other purposes, and claim their land property rights, by causing serious problems in terms of property ownership records and land registry.

People of the Eastern Black Sea region started moving to big cities in an extensive manner, since the local topography is not suitable for farming, husbandry is carried out on a small-scale livelihood level, and industrialization is still underdeveloped. The migration of the local population started in the 1950s and its course over the last few years is shown in the following table.

Table 1 – *Order of provinces according to the rate of net migration from 1975 to 2000.*

Province	1975-1980		1980-1985		1985-1990		1995-2000	
	Net migration	Rate of net migration (‰)	Net migration	Rate of net migration (‰)	Net migration	Rate of net migration (‰)	Net migration	Rate of net migration (‰)
Trabzon	- 17,143	-26.2	- 25,496	-35.6	- 51,495	-67.9	- 9,977	-11.1
Giresun	- 17,523	-40.6	- 19,955	-43.4	- 34,828	-73.9	- 5,849	-12.1
Artvin	- 12,687	-61.2	- 10,855	-51.1	- 20,372	-98.6	- 11,560	-63.6
Bayburt (1)	-	-	-	-	- 13,808	-133.2	- 5,360	-59.5
Samsun	- 11,144	-12.6	- 13,709	-13.8	- 31,222	-29.1	- 51,644	-45.5
Ordu	- 20,668	-32.3	- 24,230	-34.5	- 42,910	-54.6	- 36,958	-44.7
Gümüşhane	- 21,762	-86.2	- 14,075	-54.1	- 22,305	-135.3	- 4,003	-23.5
Rize	- 8,624	-26.1	- 11,257	-32.6	- 28,726	-84.0	- 7,473	-21.9
(1) The information on the previous periods before the creation of the province could not be given.								

As shown in Table 1, all provinces of the Eastern Black Sea region are interested by migratory flows of their population moving to big cities. The top three provinces losing the highest number of their inhabitants were Gümüşhane, Artvin and Giresun in the period 1975-1985; Gümüşhane, Bayburt and Artvin in 1985-1990; Artvin, Bayburt and Ordu in 1995-2000. Bayburt was a borough of Gümüşhane until 1989 when it became a province apart. Therefore, no data are available for it prior to 1985. A common thread for Gümüşhane, Bayburt and Artvin is that their inlands are more and more characterized by a continental climate.

In mountainous areas, rainfall and clouding are abundant and relative moisture is high. The local communities earn their living as fishermen and farmers in general. In the region, there also the biggest hazelnut-growing area and the only one tea-growing area of the country. Since local roads are rough and the ground is undulated, local people tend to move to urban centres and industrial areas. Farming can be carried out on a narrow strip along the coast. Undulating ground also makes it difficult to make use of farming machines and equipment. Trabzon and Rize are the most advanced cities of this region, but Artvin outranks them in terms of gross domestic product per capita (See Table 2) because a huge dam project started there in 1990. Some of the most beautiful Alpine meadows in Turkey, where highland culture is dominant, are located in the Eastern Black Sea region, especially around the city of Rize. The annual rainfall can reach 2,500 mm.

Table 2 – *Gross domestic product per capita by province; 1987-2001 (US $).*														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Turkey	1,629	1,685	1,933	2,655	2,603	2,682	2,981	2,173	2,727	2,888	3,021	3,176	2,847	2,941	2,146
Artvin	1,356	1,511	1,544	2,151	2,148	2,336	2,653	1,988	2,560	2,835	2,727	3,096	3,003	2,815	2,137
Giresun	783	820	989	1,244	1,212	1,370	1,297	1,076	1,425	1,218	2,355	2,799	2,410	1,874	1,443
Gümüşhane	574	560	627	1,150	1,136	1,188	1,330	909	1,178	1,257	1,324	1,622	1,624	1,491	1,075
Ordu	642	742	808	1,093	989	1,081	1,237	933	1,128	1,340	1.543	1,656	1,470	1,375	1,064
Rize	1,384	1,356	1,410	1,902	2,209	2,214	2,373	1,800	2,085	2,598	2,296	2,477	2,661	2,441	1,897
Trabzon	1,137	1,197	1,323	1,830	1,822	2,004	2,312	1,756	2,050	2,137	2,149	2,272	2,231	1,927	1,506
Bayburt				708	889	986	1.107	781	1,034	1,019	1,081	1,275	1,306	1,308	1,017

Eighty-two forest villages located in the twenty-five boroughs and seven cities in the Eastern Black Sea Region of Turkey were selected as subjects of this study. In terms of living standards, forest villages are the most underdeveloped in Turkey according to the State Planning Organization (1990). Furthermore, rural poverty is more dominant in these villages than in the rest of the area. Local people extensively rear plants and animals on unproductive fields. Forestry works cannot be practiced throughout the year, so they are not a significant source of income for this area

Eighty-two out of 1580 villages located in this area were included in this study. In these villages there are in total 570,000 inhabitants. A questionnaire containing 111 questions was designed to find out the relationship existing between the rural population and the forestry organization. All questions were closed and designed to find out the peasants' socio-economic level and views on migration. In total, 582 peasants were interviewed in the area; all of them were male and married. Only males were chosen because all peasants' communities are patriarchal and, therefore, all decisions are traditionally made by the man of the house. 473 (81.3%) of the interviewees are aged between 18 and 65 years, 109 (18.7%) are over 65. Of the 582 interviewees, 254 are farmers (43.6%), 36 are workers (6.2%), 60 are breeders (10.3%), and 232 work in other sectors (39.9%). The education level of 463 interviewees (79.6%) is primary school or less. 6.4% of the interviewees are illiterate, 15.8% are literate, 63.8% are attended the primary school, 10% attended the high school and 6.4% hold a university degree.

The basis of this study is a poll held to examine the effects of two variables like the province of origin (Ordu, Giresun, Trabzon, Rize, Artvin, Gümüşhane and Bayburt) and personal thoughts on the official forestry policy (1: agree, 2: disagree, 3: no idea).

The Simple Correspondence Analysis (SCA) is a multivariate technique designed to discover both inter-relations and intra-relations existing between two different categorical variables by reviewing the closeness and remoteness between them (Anderson, 1990; Devillers and Karcher, 1991; Chou, 1994; Greenacre, 1998; Baspinar and Mendes, 2002; Mendes, 2002). This multivariate analysis method aims to show the group changes with respect to rows and columns of categorical data arranged in a contingency table in a less-

dimensioned space, Ozdamar (2002). This technique is very advantageous because it is easier to apply than other alternatives like Chi-square analysis, G-test, Z test, Fisher Exact test or Log-linear models, because it provides more detailed information to researchers, and because it is able to present the results in a visual form (Gifi, 1990; Kaciak and Louviere, 1990; Greenacre, 1998). Each of the variable levels reviewed by means of SCA is represented with a dot in a two-dimensional space. Dots being close to each other are commented to be similar or related to each other depending on the areas they fall into. Similarly, dots being far from each other are commented to be unrelated (Dunteman, 1989).

In 2-dimension spaces, SCA is a developed geometric method for show row and column of a 2-dimensional contingency table with its consistent values in table like dots. In the circumstances, problem can be found 2-dimensional space which is more cohesive dots (Lee, 2006). Analytic process of compatibility analysis consists of 3 stage (Clausen, 1998).

For running SCA of X and Y variables lower categories which acquired N monad and showed as $k1*k_2$ dimensional cross section table (see table 3); firstly calculate profiles of row and column, secondly draw profiles of row and column one by one in 2-dimensional space and thirdly; show this profiles of row and column on a mutual 2-dimensional map. For understanding of SCA, it is benignant to describe fundamental notions such as profile, mass, chi-square distance and total interia (total vevariability) respectively.

Table 3 – k_1*k_2 *dimensional cross selection table.*					
	Y (c_i)				
X (r_i)	y_1	y_2	…	y_i	Toplam (f_{+i})
x_1	f_{11}	f_{12}	…	f_{1i}	f_{1+}
x_2	f_{21}	f_{22}	…	f_{2j}	f_{2+}
:	:	:		:	
i	f_{31}	f_{32}	…	f_{ii}	f_{i+}
Toplam (f_{i+})	f_{-1}	f_{-2}		f_{-i}	f
f_{ii} : Frequence value of column i. and row j. f : Total number of observation					

Profiles: During representing, a contingency table, it is not convenient to represent frequencies in each cell. Since, each rows and columns contain different amount response. Hence, relative frequency has calculated as totally 1 value for each rows and columns (Greenacre, 1994). Obtained

rows and columns, relative frequency values can be assented as row and column profiles.

$$\text{Row profiles}: r_{ij}= f_{ij} / f_{i+}$$
$$\text{Column profiles}: c_{ij}= f_{ij} / f_{+j}$$

Mass is defined by dividing marginal frequencies to general addition for columns and rows. It is used for analyses to massing each one of the rows and columns. The aim of this massing system is to provide equal contribution of every answer to every profile point. In analysis, masses are can be said measurement of specific profiles importance (Uzgoren, 2007).

$$\text{Row Mass}: RM= f_{i+} / f$$
$$\text{Column Mass}: CM= f_{+j} / f$$

Chi-square distances: In SCA, the distances of every categories to other one is defined as chi-square distances. Firstly, expected (theoretic) values (t_{ij}) of frequencies (f_{ij}) in cells are calculated.

$$t_{ij}: \text{mass}_i \times \text{mass}_j \times N = (f_{i+} + f_{+j}) / N$$

Then, chi-square values of every cells are calculated as shown formula: $x^2_{ij}= (f_{ij} - t_{ij})^2 / t_{ij}$

Total interia (Λ^2): In SCA, variance notion is associated with chi-square distances. For this, generally interia notion is accepted and interia is used as synonym with variance notion. Total interia is that a distance measurement about distribution of profile points around the centre, calculated by the formula below (Ozdamar, 2002).

$$\text{Interia}_i: x^2_i / x^2_{i+}$$
$$\text{Interia}_j: x^2 / x^2_{+j}$$

SCA also can be defined as a technique for decomposing of chi-square (or Phi-square $\varphi^2 = (x^2 / f) = \Lambda^2 = $ total interia) value of a frequencies table (Clausen, 1998). Total interia decomposes by an eigenvalue cluster. For a bidirectional table, the number of eigenvalues and also number of dimensions are equal to minimum of (i-1) and (j-1) (http://www.statsoft.com/textbook/stcoran.html, 2004). These eigenvalues imply the comparative importance of dimensions or explaining that how much percentage of total interia for every dimension. When eigenvalue of data matrix is computed, explanation seems that total interia is maximum at first dimension, than at second dimension and decreasing amounts at the other dimensions (Clausen, 1998).

The results of the SCA analysis conducted to research the interrelations of the relevant variables have been given in Tables 4 to 7 and Figure 2 respectively. The analysis in question was conducted by using the SPSS (ver. 11.5) statistical software package.

The face-to-face interview method was employed for the survey in order to collect data and information. Variables included in the survey questionnaire were coded to be ready for the analysis, and a database was created.

According to ORKOY data, there are 1,580 villages and 570,000 peasants located in or around the forests. The following formula was used for determining the sample size (Orhunbilge, 1997).

$$n = \frac{Z^2 N.P.Q}{\left[(N.E^2)+(Z^2.P.Q)\right]}$$

Where:
n: Sample size;
Z^2: Confidence level 90% $\rightarrow$ 1.64;
N: Population (1,580);
P: Probability of the presence of the aspect aimed to be measured within the main group (taken 50% due to the multi-purpose nature of this study);
Q: 1-P;
E: Sampling error considered (0.1).
Thus:

$$n = \frac{1.64^2 \, x1580x0.5x0.5}{(1580x0.1^2) + 1.64 \, x0.5x0.5} = 64.5 = 65 \text{ villages}$$

The same formula was also used for determining the number of subjects to be interviewed during the survey. Confidence coefficient (Z^2) was taken to be 0.95%. Sampling error (E) was taken to be 5%. Main mass (i.e. population of the forest villages) is 570,000. Thus it was calculated that:

n= 384 forest paesants.

In order to increase the survey reliability level, 582 peasants instead of 384 were interviewed in 82 villages instead of 65.

Eventually, the answers given by the subjects to 11 of the questions, included in the survey questionnaire to determine their relationships with the forest, were reviewed per province, so that an attempt was made to find out the existing relationships and their differences according to the province by conducting a simple harmony analysis.

Findings

Demographic Characteristics

The survey conducted in the Eastern Black Sea region of Turkey gave origin to the findings hereafter described. 81.3% of subjects are aged 18 to 65 years; 18.7% of them are aged 66 to 87 years. 93.6% of subjects are married, 2.6% and 3.8% are single and widower respectively. 6.4% of subjects are illiterate, 15.8% are literate, 63.8% are primary school graduates, 10% high school graduates, and 4% are university graduates. 34.5% of their wives are illiterate, 18.9% are literate, 37.8% are primary school graduates, and 3.8% are junior high school graduates, 2.4% are high school graduates, 0.3% are university graduates. 2.2% the subjects left this question unanswered. The number of

members per household varies between 1 and 15. 57.4% of households are made up of 1 to 5 members, 60.6% are 6 to 10 members, and 2% are 11 to 15 members. 25.6% of the total population are aged 0 to 15 years, 64.8% are aged 16 to 64 years (active-working age group), and 9.6% are over 65. 47.4% of children are primary school students, 23.2% are high school students, and 6.5% are university students. 16.5% of subjects believe their daughters should not be allowed to get education after finishing the primary school; 1.9% of them believe daughters should not get education at all. 0.5% of subjects believe it will be sufficient for sons to finish primary school; 3.3% believe sons should finish high school, 95.9% believe sons should graduate at the university. 0.3% of subjects believe sons should not get education at all. Fathers of 8.3% of subjects are single children, 11.5% have fathers having two siblings, 18.5% have 3 to 9 siblings, and 1.7% have 10 to 20 siblings.

0.5% of subjects are single child, 4.6% have two siblings, 89.3% have 3 to 9 siblings, and 5.6% have 10 to 14 siblings. 13.5% of the subjects' children died when babies. The mortality rate for babies is high in this region. 94.5% of subjects married once, 5.3% twice, 0.3% thrice. 16.7% of subjects married when aged 13 to 17, 8.21% when aged 18 to 30, 1.2% when aged 31 to 35. 29.7% of subjects got married without dating before, 36.9% after dating, 2.9% upon a recommendation from their friends or relatives, 17% by abduction, and 13.4% upon decision made by their elders. 1.7% of subjects believe a family should have maximum one child, 35.9% two children, 38.8% three children, 22.5% four to nine children, 1.1% ten to sixteen children. 28.7% of subjects have blood ties with their wives.

6.4% of subjects use or make their wives use birth control devices. One or more members of 43.6% of the subjects' families left their villages, 15.3% of them intend to leave. They left or want to leave for reasons such as unemployment, difficult living conditions in villages, and hope to find better jobs, in this order. They want to settle down in big cities, abroad, and in the main city of their origin provinces, in this order.

14.9% of subjects have one or more family members living abroad. 63.7% of subjects state they are happy with their present lives, the remaining 36.3% say they are not happy.

17.7% of subjects think both their villages and themselves will get better in the future, 58.2% think both will get worse, and 24.1% think both will remain unchanged.

Economic Results

43.6% of subjects work as farmers to earn their living, 10.3% are breeders, 6.2% are workers, 2.2% are foresters, 6.9% are tradesmen, 19.6% are retired, 11.2% do other jobs.

97.1% of subjects are land owners. 87.2% of their fields cover 1 to 45 dönüm (1 dönüm = 940 m²), 12.8% cover 50 to 250 dönüm. 11.3% of land owners employ irrigation systems, 81.8% perform dry farming, and 4% do not cultivate their land. 2.9% of subjects are not land owners. 54.8% of

subjects state their fields are insufficient to support them. 7.6% of subjects sell less than half of their produce, 15.5% sell more than half of their produce, 20.4% sell all of their produce, 29% do not sell produce at all, 27.5% left this question unanswered. 49% of subjects sell their produce to wholesalers, 10.7% to brokers, 0.4% to green grocers, 7.9% personally sell their produce in markets, 2.4% sell by other means, 29.6% left this question unanswered. 2.7% of subjects own an agricultural tractor. Subjects also use spade, bucksaw, hoe, shears, insecticide atomizer, plough, pickaxe, shovel, power saw, sickle, rake and scythe. It is understood that the use of an agricultural tractor is not widespread. In general, local farmers employ primitive farming methods based on traditional tools. The main reason of this preference is the presence of undulating and sloped ground. 89.2% of subjects use fertilizers to increase the productivity of their fields, as follows: 20.6% use natural fertilizers, 15% artificial fertilizers, 64.4% both types of fertilizers. 50.7% of subjects are involved in livestock rearing activities. 20.7% of them sell less than half of their livestock, 14.6% more than half, 50.2% do not sell their livestock at all, and 14.5% left this question unanswered. 20.4% of subjects use indoor stables for husbandry, 9.3% grow 1 to 100 heads of small livestock (sheep, goat, etc.), and 25.9% of them exploit their livestock for commercial purposes. 52.7% of subjects grow 1 to 60 heads of cattle, 24.1% of them exploit their cattle for commercial purposes. 28.2% of them are involved in husbandry for meat production, 16% of them sell their cattle to a slaughterhouse, 78.7% of them sell living cattle, 1.1% personally slaughter it, and 4.2% use it in other ways. 9.3% of subjects work as foresters for a living, 1.2% make income off forest by-products. 35.6% of subjects draw their pension from various social security institutions. 44.2% of subjects are indebted to various creditors.

Forest-related aspects

In answering the question whether or not the surface area of their local forest has changed, 18% of subjects reported no change, 38.7% reported an increase, 40% reported a decrease, 3.3% made no comment. In answering the question about the most useful forest-related aspects, 44.6% of subjects consider the forest as a source of firewood, 29.8% as a means to prevent erosion, 8.4% as a source of timber for building purposes, 7.2% as a moderator of climate, 3.8% as a place to work as foresters, 6.2% as a beautiful landscape, a picnic area, a means to prevent avalanche, a place where to breathe fresh air, as a excellent grazing land, etc. 41.6% of subjects commented that the governmental authorities are not interested in solving the problems of their villages at all, 40.7% commented they are insufficiently interested, 5.8% commented they are minimally interested, 5.5% commented they are sufficiently interested, 6.1% made no comment. 59.6% of subjects declared not to be satisfied with the government's forestry policy, 12.7% declared to be satisfied with it, 27.7% made no comment. 42.4% of subjects are not sat-

isfied with services provided by the local forest organization, 22.3% are satisfied with them, 35.2% made no comment. 12.5% of subjects were prosecuted or are being prosecuted for committing an offence against the forest. 46.6% of these offences were committed for cutting a tree without permission, 28.8% for clearing part of the forest, 6.8% for smuggling forest products, 2.7% for allowing their livestock to graze, 1.4% for starting or causing a fire, 13.7% for committing other offences. 76.1% of subjects believe damage made to forests will have negative impacts on both their villages and their lives, 3.3% believe it will not, and 20.6% made no comment. 56.4% of subjects think poverty is related to damage made to forests, 23.4% think there is not such relation, 20.2% made no comment. In answering the question on the most promising job for the future, 39.9% of subjects point out farming, 30.9% husbandry, 3.4% forestry, but 25.8 think neither farming, nor husbandry, nor forestry will have a bright future.

The Simple Correspondence Analysis conducted as part of this study to understand the local community's point of view on forestry and forestry policies per province gave the following results.

Table 4 – Correspondence Table: frequences of people's respones about the questionary.

SEHIRLER	S4			Active Margin
	1	2	3	
Artvin	2.000	22.000	7.000	31.000
Bayburt	2.000	17.000	25.000	44.000
Giresun	8.000	40.000	20.000	68.000
Gümüşhane	9.000	28.000	8.000	45.000
Rize	1.000	10.000	.100	11.100
Ordu	7.000	8.000	31.000	46.000
Trabzon	52.000	187.000	57.000	296.000
Active Margin	81.000	312.000	148.100	541.100

Table 5 – Row Profiles:

City	Opinion (S4)			Active Margin
	1	2	3	
Artvin	.065	.710	.226	1.000
Bayburt	.045	.386	.568	1.000
Giresun	.118	.588	.294	1.000
Gümüşhane	.200	.622	.178	1.000
Rize	.090	.901	.009	1.000
Ordu	.152	.174	.674	1.000
Trabzon	.176	.632	.193	1.000
Mass	.150	.577	.274	

These values show comparative frequences. The values in the last row are row mass values.

Table 6 – Column Profiles.

City	Opinion (S4)			
	1	2	3	Mass
Artvin	.025	.071	.047	.057
Bayburt	.025	.054	.169	.081
Giresun	.099	.128	.135	.126
Gümüşhane	.111	.090	.054	.083
Rize	.012	.032	.001	.021
Ordu	.086	.026	.209	.085
Trabzon	.642	.599	.385	.547
Active Margin	1.000	1.000	1.000	

These values show comparative frequences. The values in the last row are row mass values.

Table 7 – Summary.

Dimension	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia		Confidence Singular Value		Singular
					Accounted for	Cumulative	Standard Deviation	Correlation 2	
1	.368	.135			.909	.909	.044	-.099	
2	.116	.014			.091	1.000	.034		
Total		.149	80.635	.000(a)	1.000	1.000			

Figure 2 – Row and Column Points Symmetrical Normalization.
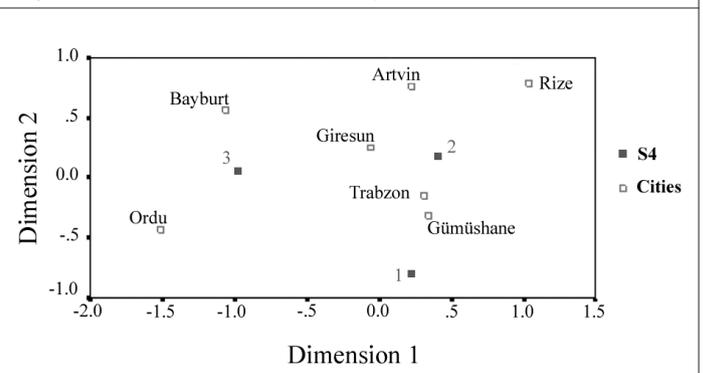
1 Those who are satisfied with the government forestry policy and aplications.
2 Those who are not satisfied with the government forestry policy and aplications.
3 Those who do not make a comment on the government forestry policy and aplications.

There is no certain trend on the local communities' satisfaction or dissatisfaction with the government forestry policy per province. Inhabitants of Trabzon and Giresun have the highest tendency to dislike the government forestry policy. They are followed by the inhabitants of Artvin and Rize. Subjects surveyed in the provinces of Bayburt and Ordu have the tendency not to make any comment. Gümüşhane is the only province where people tend to be satisfied with the government forestry policy.

Conclusion

In the Eastern Black Sea region, in terms of educational level, there is no significant difference between peasants living in or around forests and other communities. Literacy is quite high in villages, but the ratio of university graduates (4%) is below the national average (8%). Although forest

villages located in this region are interested by depopulation because its inhabitants prefer to move to big cities, the ratio of the active working population is quite high (64.8%): indeed, it is higher than the average (50%) of all forest villages in Turkey (Gümüş, 2004; Anonymous, 2004). the trend to abandon the village is low too, because 84.7% of subjects are happy with their village living conditions. Only 15.3% of them intend to migrate. These findings indicate that no lack of manpower will be suffered at least in the near future, and that the intense relationship between the forest resources and peasants will continue. Agriculture and pension are the most important means of livelihood for forest peasants. differently than expected, income they make from husbandry is extremely low. Plant and animal products obtained are generally consumed within the household and sold only in small quantities. Some families earn high incomes by working as foresters, but this sector generally provides a low income. Only 2.2% of subjects consider forestry as their primary source of income, and only 9.3% of them earn an income from forestry in one way or another. Most of forest peasants (96.6%) do not consider the forest as a potential source for the development of their villages.

58.2% of forest peasants are pessimistic about their future. A survey conducted by the State Institute of Statistics (DİE) indicates that 66.9% of Turkish people are hopeful about the future (Anonymous, 2003). Therefore, it may be concluded that the peasants living in or around forests in the Eastern Black Sea region are more pessimistic about the future than the national average.

Neither farming nor husbandry provide a significant income. It is widely believed that the local natural resources will not support the local communities for a living. All these findings indicate that a high number of forest peasants make a living by performing small-scale farming and husbandry activities to meet their own needs and by drawing pension, and that they do not expect any changes to this order.

Peasants believe forests around them are shrinking. They admit that damage to the forest will have negative impacts on them, and they are not satisfied with the services provided by the local forestry organization. As in other Turkish regions, television is the most popular mass-media used by forest peasants to communicate with other segments of the nation. Peasants need to be taught especially through television. Documentaries should be broadcasted to provide peasants with information on the necessity and benefits of preserving forests and to raise their awareness on the forestry products and services. Furthermore, this method can prove to be useful to explain how to earn higher levels of income from forest resources.

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