

**Assessment of level of popular awareness and attitudes  
towards wilderness.**

**Link Swiss and Romanian expertise**

Report: short version

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## **1 Introduction**

### **1.1 Aims of the study**

The main aim of this project is to analyse the attitudes of the Romanian public and especially the public living in or in the vicinity of protected areas towards nature and towards wilderness. In this project wilderness is defined as any kind of nature that has not been or is no longer influenced by humans. The main idea was to use a questionnaire concerning the attitudes towards nature and wilderness that has been developed in Switzerland some years ago and to apply it to the Romanian context. The first survey in Romania took part in 2013-2014, the second survey took place after a series of communication activities in the last 24 months and was finished at the end of March 2016. The survey was administered to a population sample in the project area of the WWF Romania wilderness project (see below) and to a sample of so called authorities. These people are either decision makers or can be seen as important opinion leaders (see below).

The main research questions were

- 1) What attitudes does the Romanian public living in or in the vicinity of protected areas have towards nature and towards wilderness and rewilding? How is wilderness defined and perceived? What rules and regulations would be accepted by the population if new wilderness areas were to be designated?
- 2) What do these results mean for communication? How could the attitudes be influenced?

The aim of this report is a) to answer the above mentioned research questions for the survey 2016 and b) to analyse the changes in the attitudes from 2014 to 2016.

### **1.2 The study area and the local population and authority samples**

Five protected areas from the southwest of Romania were considered in the study, namely Cheile Nerei-Beusnita National Park, Semenic-Cheile Carasului National Park, Retezat National Park, Domogled-Valea Cernei National Park and Portile de Fier Nature Park.

Two main units were considered for the study A) the local population of the five park regions mentioned above and B) authorities that work in these park regions.

Table 1 displays the population size of the localities considered as main unit for the sample of the local population, the sample size of each locality and percentage of the local population that is involved in the study. Small samples are prone to random effects that can influence the data quality. Another important issue is the random selection of respondents. The two field teams used the random route method and random person in household selection procedure.

When discussing the results we reported, if adequate, the standard error of the mean (SEM) and the standard deviation (SD) of the items. Both measures describe the variation of the data. The SD measures the variation of the data from the population average, the bigger the

SD is the more the data are spread out along the range of values. The SEM indicates the accuracy of the estimation of the mean: the smaller the SEM is, the more precise is the mean estimated. By small samples the SEM is usually bigger, indicating that the mean is calculated less accurately.

**Table 1. Population size of the localities considered as main unit, sample size and percentage of the local population involved in the study divided by localities**

Region	Population	Sample	Sample/Population %
<b>Cheile Nerei - Beusnita</b>			
Sasca Montana	1157	35	3.03
Sopotu Nou	1593	35	2.20
<i>Total</i>	<i>2750</i>	<i>70</i>	<i>2.55</i>
<b>Semenic-Cheile Carasului</b>			
Valiug	741	31	4.18
<i>Total</i>	<i>741</i>	<i>31</i>	<i>4.18</i>
<b>Retezat</b>			
Râu de Mori	3153	24	0.76
<i>Total</i>	<i>3153</i>	<i>24</i>	<i>0.76</i>
<b>Domogled-Valea Cernei</b>			
Obarsia Closani	953	36	3.78
Cornevera	3190	27	0.85
<i>Total</i>	<i>953</i>	<i>63</i>	<i>6.61</i>
<b>Portile de Fier</b>			
Berzasca	3123	35	1.12
Svinita	925	35	3.78
<i>Total</i>	<i>22432</i>	<i>70</i>	<i>0.31</i>
<b>Total</b>	<b>30029</b>	<b>258</b>	<b>0.86</b>

Table 2 displays the localities relevant for the authorities sample, that means the locality where the questionnaires were distributed to the authorities. In this case we have no information on the sampling universe of the different groups of authorities /opinion leaders.

**Table 2. Localities where the questionnaires for the authorities were distributed**

Cheile Nerei - Beusnita	Portile de Fier	Domogled-Valea Cernei	Retezat	Semenic
Bozovici	Berzasca	Obarsia Closani	PUI	Teregova
Prigor	Moldova	Pades	Rau de	
Sasca	Svinita	Baia de		
		Baile Herculane		

### 1.3 The questionnaires (see Appendix)

## 2 Local population

### 2.1 Description of the sample

A total of 258 people participated in the survey. 43.8% thereof belongs to the age group of people being between 30 and 49 years old, another 25.2% to the group of the 50-69-year-old. In the youngest age group (18 to 29 years) were 16.3% of the respondents and in the oldest (70 years or above) 14.7%. Females are lightly under represented (46.5%).

Fig. 1 shows the distribution of the answers concerning the education level. This sample still has a high rate of respondents with university degree which indicates a probable educational bias (as in 2014 as well).

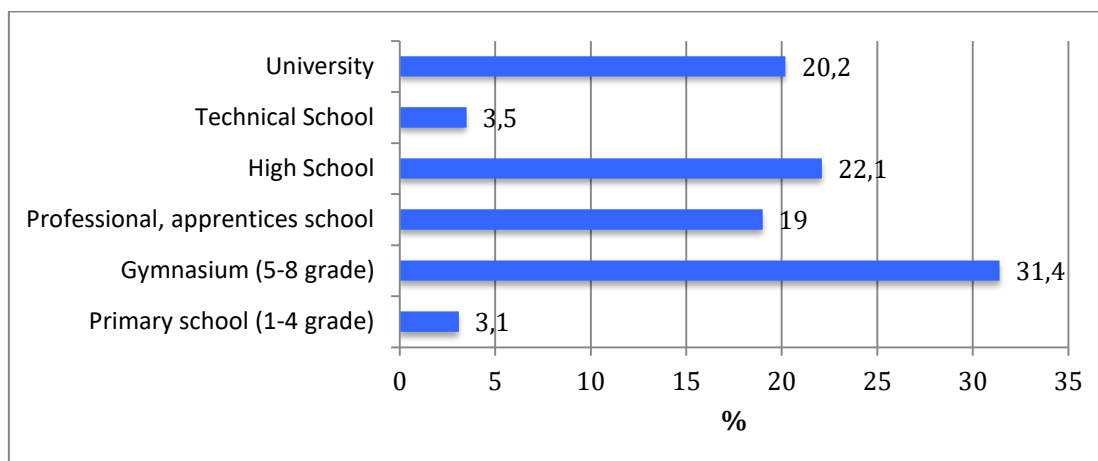


Fig. 1. Education, percentage of the answers (N = 256)

The most important sources of the monetary income in the households of the respondents are salaries (52.3%) and pensions (30.9%) (Fig. 2).

The products that are consumed by the respondents are mostly home produced (61%) and bought from the shops (39%). Compared to 2014 the amount of products bought in shops is slightly higher (about 11%).

60.1% of the respondents own arable land, 55.8% own pastureland and 32.9% own forestland. The average size of arable land is 1.24 ha (range: 0.05 ha to 40 ha), the average size of the pasture is 1.56 ha (range: 0.20 ha to 13.00 ha) and of the forest is 0.64 ha (range: 0.02 ha to 10 ha). One fourth (28.7%) of the respondents don't have any farm animals, if owning any livestock the most common species is poultry (65.1%), followed by pigs (45.7%), cows, bulls or calves (33.3%), sheep and goats (16.3%) and horses or donkeys (8.5%).

In sum we can say that the socio-demographic variables are similar to those in 2014, meaning that the results of the two studies can be compared.

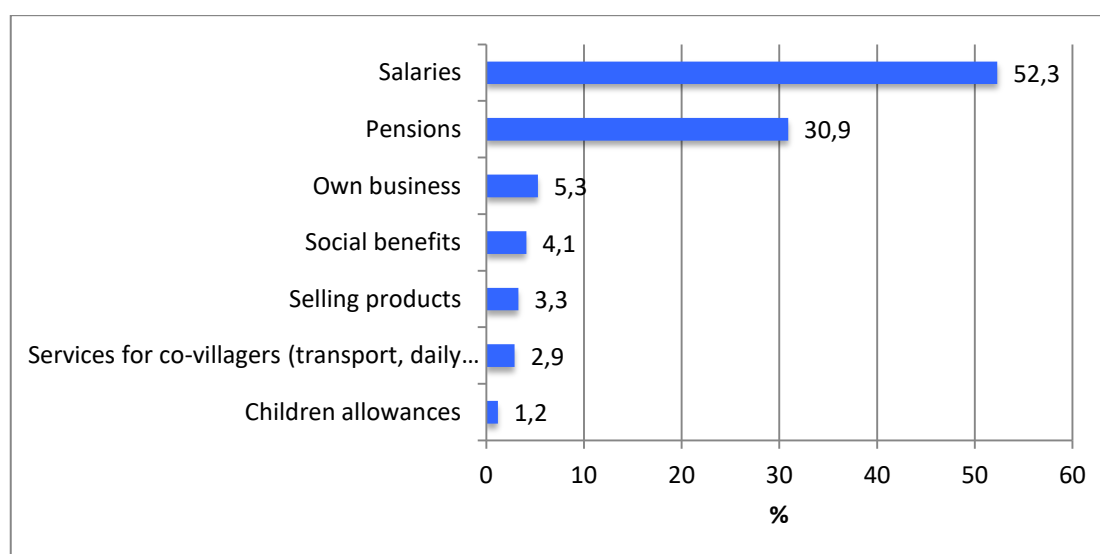


Fig. 2. Source of monetary income of the households, percentage of the answers (N = 243)

## 2.2 Knowledge of the Panda logo

People were asked whether they recognize the Logo from WWF and in which field the organization is working. 20.31% could answer WWF is an organization for environmental and nature protection. The organization seems to be best known in Retezat and Portile de Fier.

Table 3: Percentage of respondents knowing Panda Logo

Cheile Nerei - Beusnita (N=70)	8.57%
Domogled - Valea Cernei (N=62)	12.90%
Portile de Fier (N=70)	30%
Retezat (N=24)	45.83%
Semenic (N=30)	20%
Total (N=256)	20.31%

## 2.3 Evaluation of the communication activities in the project areas

If the person living in a protection area did notice information or activities of any kind concerning wilderness in the past 24 months they mostly perceived it in a TV documentary (56.6%) or an interview on TV, radio or online media (26.7%), followed by information in their community (19.8%). 12.8% noticed information in the newspaper, TV episodes (12.4%) or in meetings on various issues concerning nature conservation (12.4%) or through wilderness camps for children or schools (8.5%) and less often by Flyers or brochures (6.6%), the WWF website or wilderness links (3.9%) and through training courses (2.3%).

From these data it gets clear that in order to reach the public audiovisual media are most appropriate.

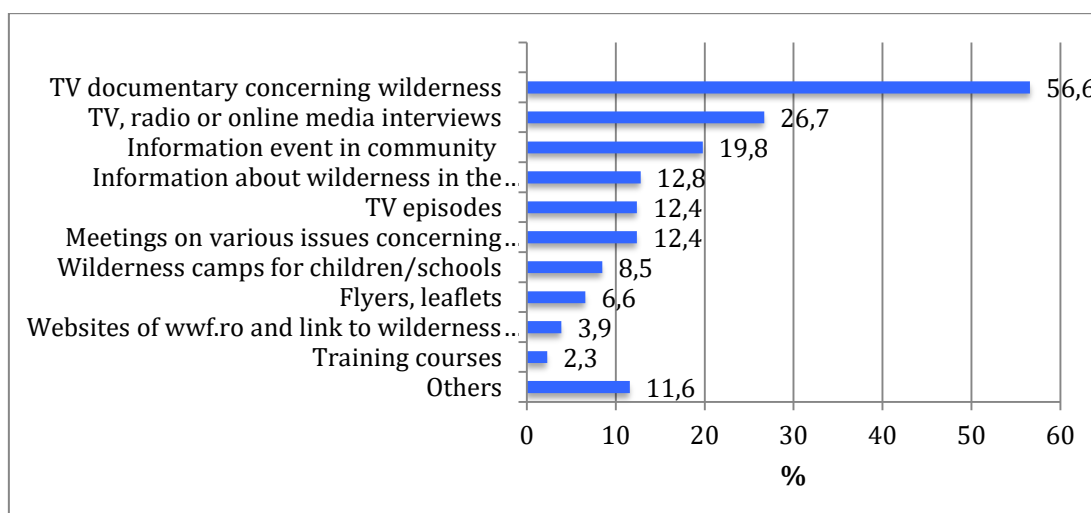


Fig. 3 Percentage of respondents having noticed the listed activities during the last 24 month

## 2.4 General attitude towards the protected areas

The respondents were asked to describe what protected areas in general mean to them. This was an open question and the answers were classified by the interviewers to one of 10 possible categories. The association that was mentioned most often was that protected areas are seen as an area with logging prohibitions (33.7 %), as an area with extraordinary natural beauty (19.8%), as an area with wild animals and rare plants (14.0%) or an area with construction prohibitions (13.6%). Fig. 4 displays the percentage of the answers related to meanings of protected areas. Compared to 2014 the logging prohibitions were much more present in the 2016 survey. This can probably be attributed to the anti-deforestation media campaign in the last year.

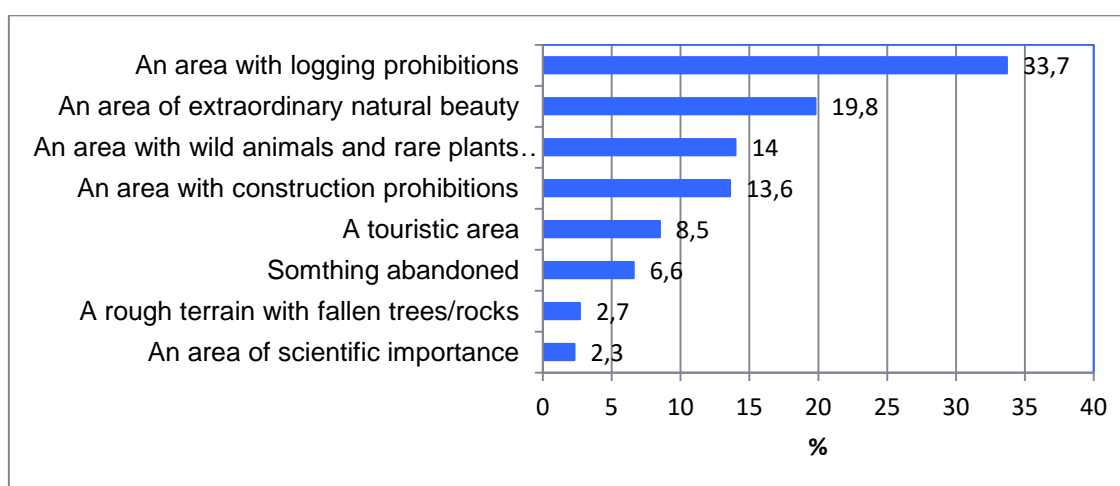


Fig. 4. Meanings of protected areas, percentage of the answers (N=404, several answers allowed)

More than three-quarters (79.1 %) of the respondents report to live in a protected area or in a national (natural) park. Only half of these (53.9%) could name the protected area correctly.



From those who live in protected areas the majority (52.2%) believes that the area is (very) good. There are significant differences between the regions concerning the assessment of protected areas (\*\*  $p < .001$ ). Especially Retezat has been rated much more positive than the other protected areas. A results that was found in 2014 as well.

**Table 4: Evaluation of protected area by population; split by regions: mean, SEM and SD**

	Cheile Nerei - Beusnita (N=70)	Semenic Cheile Carasului (N=31)	Retezat (N=24)	Domogled - Valea Cernei (N=61)	Portile de Fier (N=70)
Mean	3.07	3.32	4.79	3.13	3.37
SEM	0.160	0.280	0.104	0.146	0.167
SD	1.332	1.558	0.509	1.152	1.395

(Answer scale: 1= very bad, 5= very good)

Accordingly, we find differences in the assessment of the advantages/disadvantages of the protected protected areas. In general, 22.7% of the respondents think that the protected area respectively the national park represents an important advantage for their daily activities, 27% that activities, 27% that it is an advantage, 22.5% that it has no impact on their daily activities, 24.6% that it is a disadvantage, and only few (10.5%) that it is an important disadvantage. Comparing the five regions it appears that respondents of Retezat, Semenik and Portile de Fier believe that Fier believe that natural areas have rather positive effects on their daily life, while the respondents of the respondents of the other two regions rather expect neutral or no effects on their daily life (

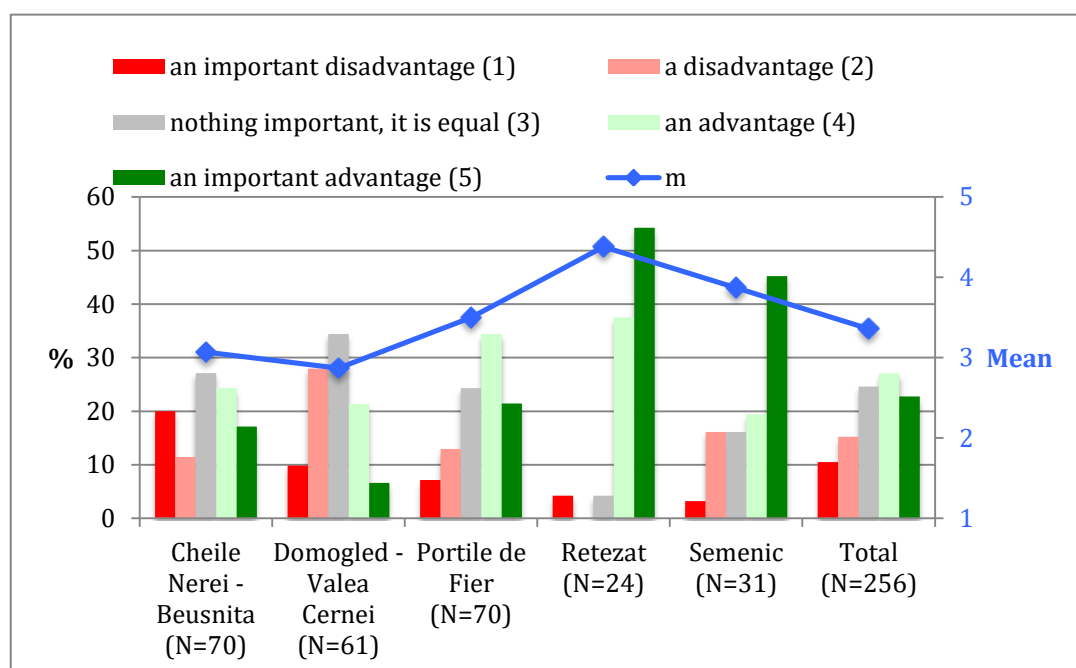
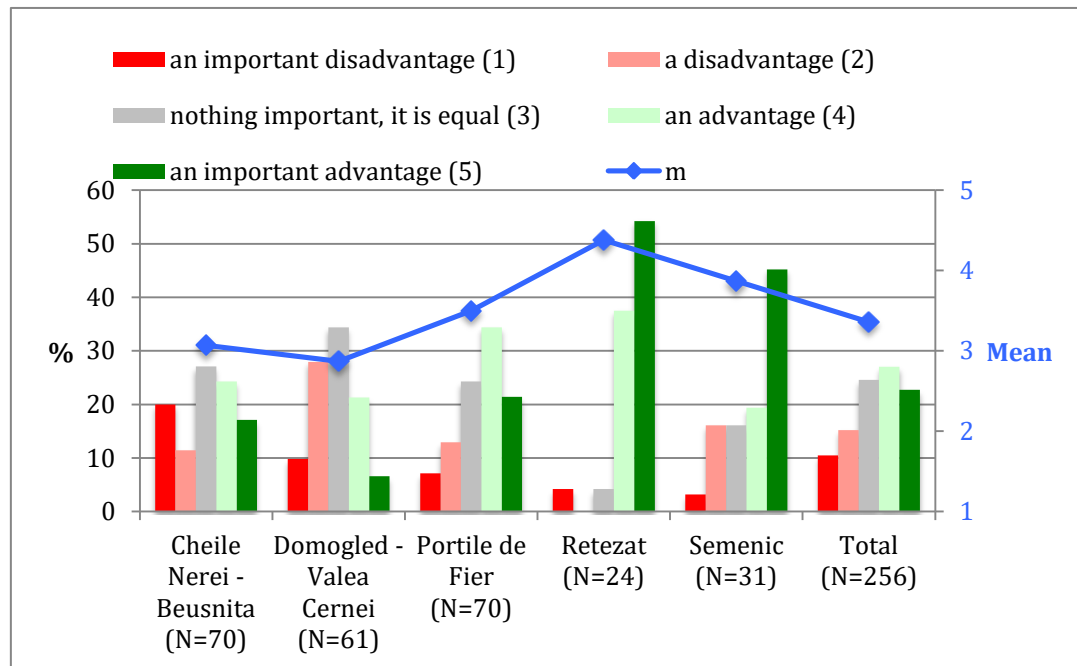


Fig. 5 and Table 5). Compared to 2014 we can say that the PA are assessed more positively than in 2014.

**Table 5: Perceived effect of the protected area on the respondent's daily activities. split by regions: mean, SEM and SD**

	Cheile Nerei - Beusnita (N=70)	Semenic Cheile Carasului (N=31)	Retezat (N=24)	Domogled - Valea Cernei (N=61)	Portile de Fier (N=70)
Mean	3.07	3.87	4.38	2.87	3.5
SEM	0.163	0.226	0.189	0.137	0.141
SD	1.365	1.258	0.924	1.072	1.176

Answer scale: 1= important disadvantage, 5= important advantage



**Fig. 5. Perceived effect of the protected area on the respondent's daily activities, distribution of responses and means split by regions (error bars = 2 SEM)**

## 2.5 Feelings associated with nature that is scarcely influenced by human activities

**Table 6: Feelings experienced in areas where nature is scarcely influenced. Mean, SEM and SD**

	Fear/worry	Wonder/curiosity	Tranquility	fascination
Mean	2.20	3.57	4.13	3.85
SEM	0.086	0.078	0.057	0.064
SD	1.351	1.229	0.902	1.005

	joy	freedom	loneliness
Mean	4.00	4.13	2.30
SEM	0.057	0.054	0.084
SD	0.887	0.847	1.322

N=245-250, answer scale 1=not at all to 5=very strong

In general, we can say that the feelings towards wilderness are mainly positive. There are some significant differences between the protected areas concerning the feelings. The respondents of Cheile Nerei experience significantly less fear/worry when thinking of wild areas than the respondents from Retezat and Portile de Fier (\*  $p < .05$ ). Furthermore, in Retezat the feeling of wonder and curiosity is much more pronounced than in Cheile Nerei and Domogled (\*  $p < .05$ ). The feeling of fascination is much more pronounced in Portile de Fier than in Domogled (\*  $p < .05$ ).

In 2014 we found no statistically significant differences between the regions concerning the feeling towards wild areas. The mean values for the overall sample were about the same. The differences between the areas in 2016 should not be over-interpreted but should nevertheless lead to a search for possible reasons, e.g. have there been accidents with wild animals in Retezat and Portile de Fier? Have there been differences in the activities between the protected areas?

## 2.6 Rules and regulations in areas where nature is scarcely influenced by human activities

Respondents believe that in areas where nature is not influenced by human activities grazing and the placement of windmills should be allowed. Concerning large constructions there are different opinions, the same can be said for the placement of hydropower plants and hunting or fishing. It is quite evident that logging should rather be reduced (Fig. and Table ).

**Table 7. Prohibitions vs. permission of human activities in the wild nature: mean, 2 SEM and SD (N = 249-257)**

	Logging	Grazing	Large constructions	Hunting/fishing	Placement of windmills	Placement of hydropower plants
<b>Mean</b>	2.49	4.1	3.04	3.19	3.88	3.29
<b>SEM</b>	0.096	0.087	0.109	0.105	0.099	0.108
<b>SD</b>	1.539	1.369	1.729	1.654	1.575	1.711

Answer scale: 1: prohibit totally to 5 = totally allow

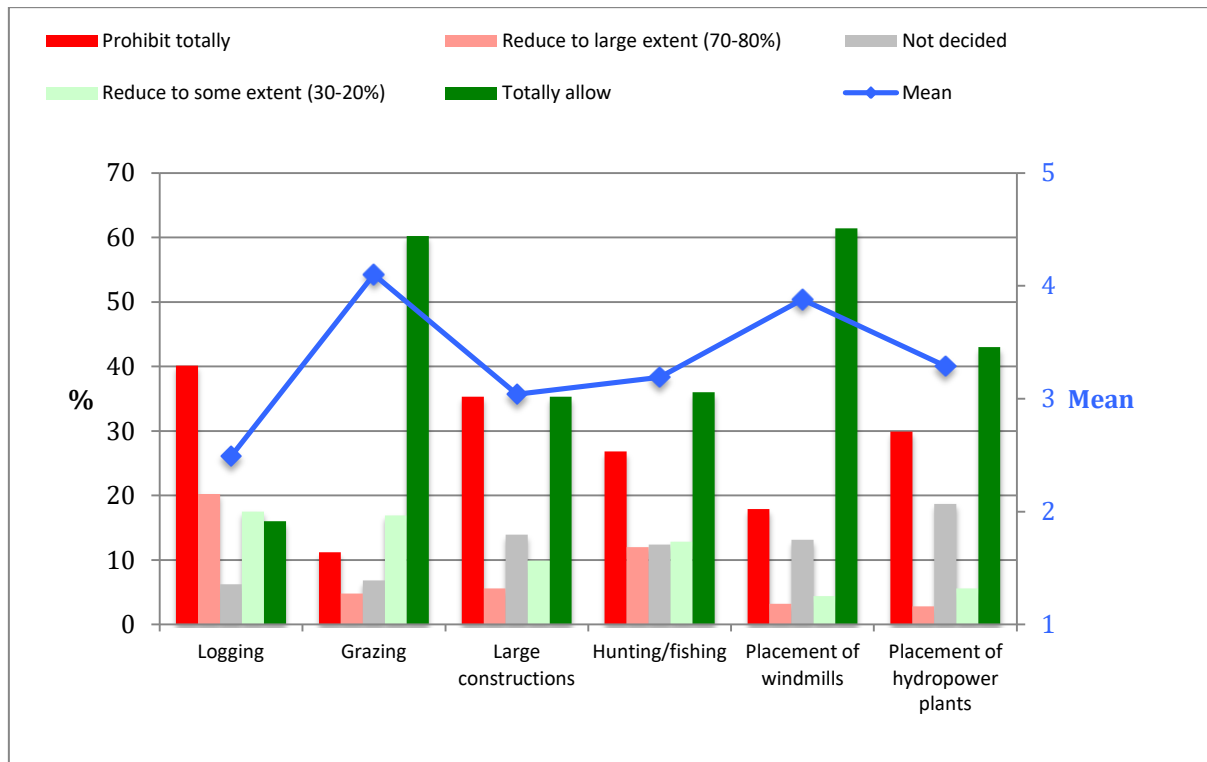


Fig. 6. Prohibitions vs. permission of human activities in the wild nature, distribution of the answers and means (error bars = 2 SEM) (N = 249-257)

Worth to mention is that the regions Domogled and Portile de Fier support the permission of hydropower plants whereas Cheile Nerei and Semenic predominantly would prohibit hydropower plants. By contrast the opinion about the placement of windmills is clearly approved in all regions. The acceptance for building large constructions is differing between the regions: Domogled and Portile de Fier are more in favour than Retezat.

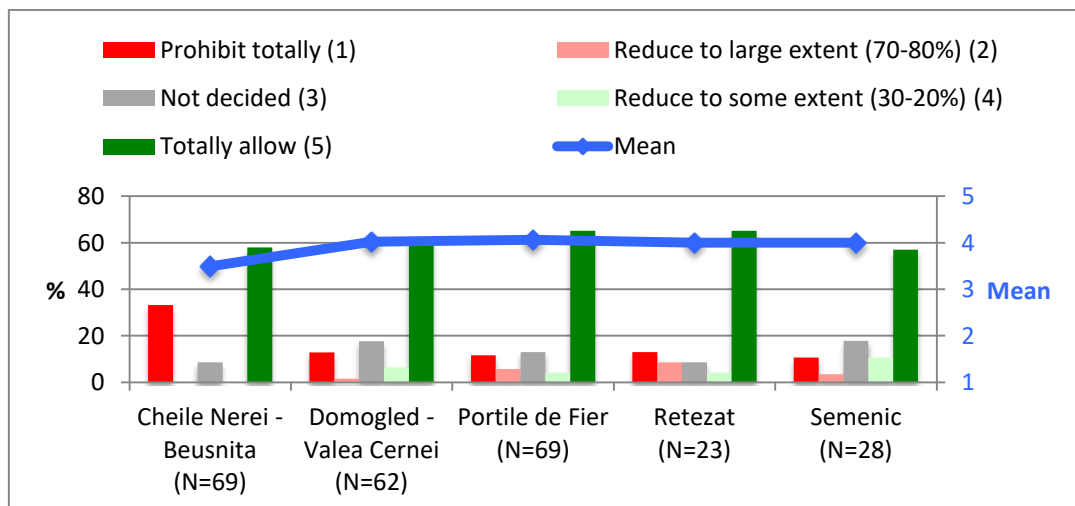
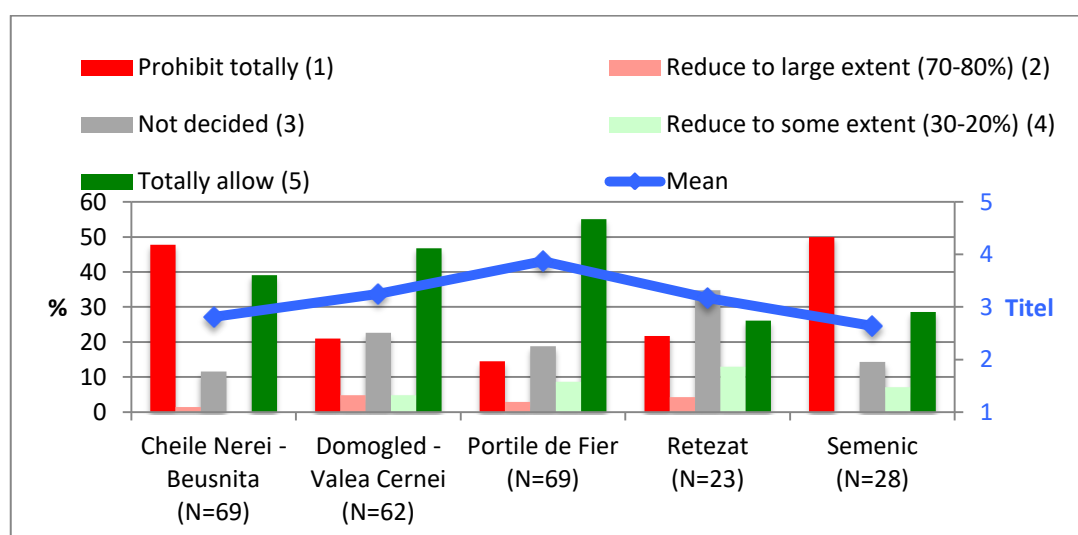


Fig. 7. Placement of windmills prohibition vs. permission: distribution of answers and means split by regions (error bars = 2 SEM)

**Table 8. Placement of hydropower plants prohibition vs. permission: mean, 2 SEM and SD split by regions**

	Cheile Nerei - Beusnita (N=69)	Domogled - Valea Cernei (N=62)	Portile de Fier (N=69)	Retezat (N=23)	Semenic (N=28)
<b>Mean</b>	2.81	3.25	3.87	3.17	2.64
<b>SEM</b>	0.225	0.204	0.177	0.306	0.338
<b>SD</b>	1.87	1.61	1.47	1.47	1.79

Answer scale: 1: prohibit totally to 5 = totally allow


**Fig. 8 Placement of hydropower plants prohibition vs. permission: distribution of answers and means split by regions (error bars = 2 SEM)**

## 2.7 Definition of wilderness

This was an open question where the respondents had to answer spontaneously without knowing possible answer categories and the interviewers were asked to categorize the answers to one of the categories based on the results from 2014. In general, we can say that the population has many positive or neutral associations if they hear the word “wilderness”. This is as well an indicator for a positive attitude towards wilderness. For the “wild animals” (35.2%) it is difficult to tell if this is a neutral association or it is negative for the people. Clearly positive is the answer: something beautiful (24.6%). Quite few associations very clearly negative: something scary (5%) something abandoned (5.5%), violence (1.3%) and (possibly) dark forest (5.9%).

When you hear the word wilderness, what comes first to mind?	
Dark forest	5.9%
High mountains and steep slopes	13.6%
Wild animals	35.2%
Violence	1.3%
Something abandoned	5.5%
Beginning of life on earth	2.5%

Something exotic/tribes from other cultures	2.1%
Something beautiful	24.6%
Something primitive	3.4%
Something scary	5.1%
Others: Freedom	0.8%

## 2.8 The future of wilderness areas

The majority of the respondents think that areas that are still wild should be entirely left as they are (49.9%), be managed to conserve (32.9%) or on the contrary be domesticated (17.6%). There are some interesting differences between the regions:

Interestingly especially the respondents in Cheile Nerei and in Retezat are more in favour of leaving the areas as they are, while in Portile de Fier respondents show a preference for conservation issues. About 25 to 28 % in Domgled and Semenic are in favour of domesticating the areas. There are significant differences between the areas concerning the future management of wild areas. Interestingly in 2014 there was a much more pronounced tendency to intervene for conservation. This could mean that the wilderness concept is better known to the respondents than in 2014.

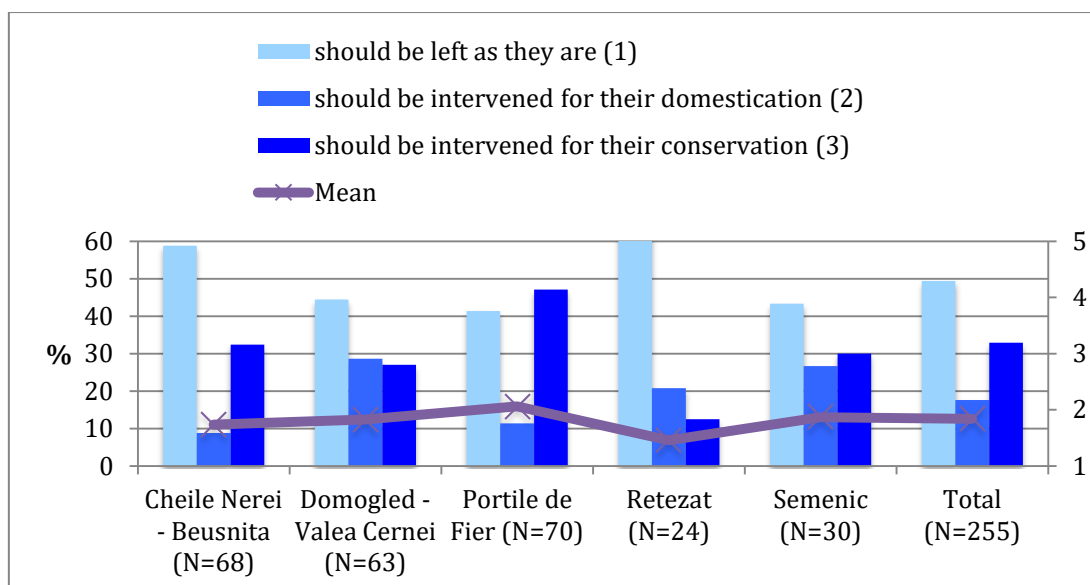


Fig.9. Management of wild areas, distribution of responses and means split by regions (error bars = 2 SEM)

Respondents would like to spend time in a wild area where nature is left on its own and without too much human presence as much time as possible (36.8%) or occasionally (32.2%), considerably less people said that they would do it only if they have to (22.1%) or never (8.9%). There are some significant differences between the protected areas, while in

Retezat people would like to spend more time in wilderness areas they opt for less time in wilderness areas in Cheile Nerei and in Domogled.

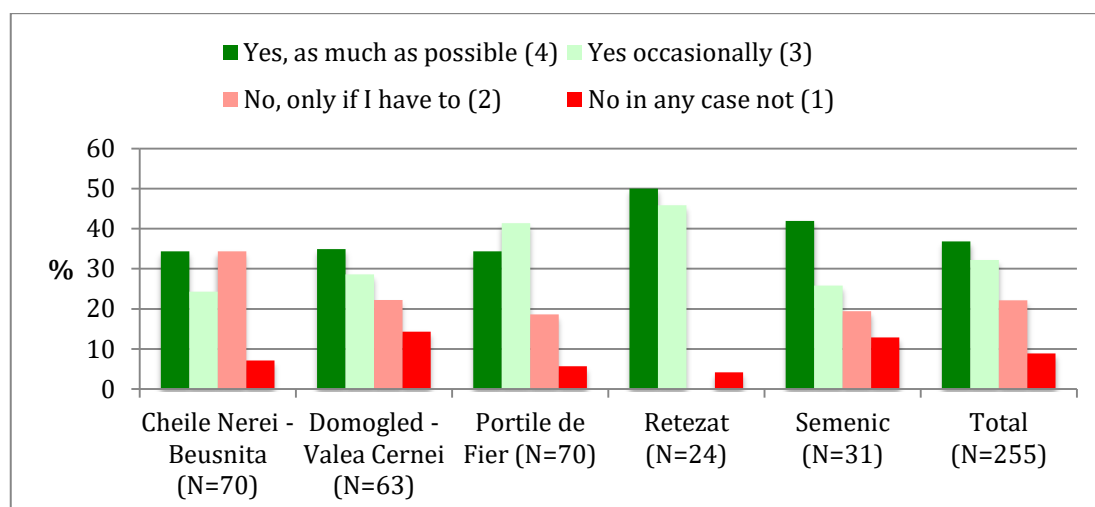


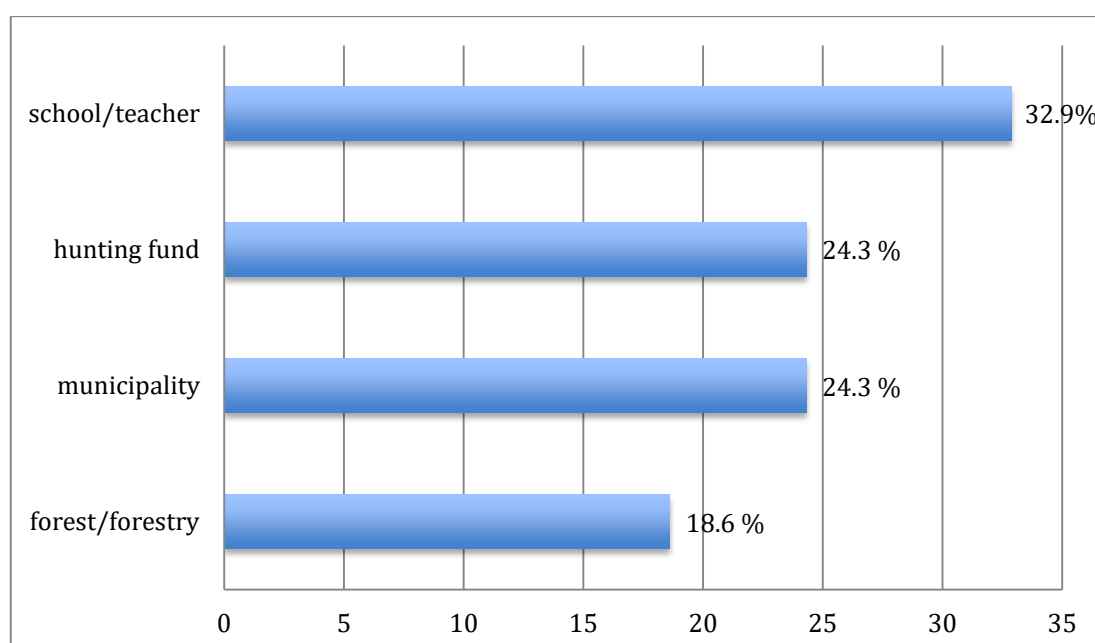
Fig. 10 Time respondents would like to spend in wild area where nature is left on its own and without much human presence

### 3 Authorities

#### 3.1 Description of the sample

A total of 70 authorities participated in the survey. Females are clearly under-represented (34.3%) in the sample. Most of the respondents are in the age group 30 to 49 years old (55.7%) and still many of them in the group of the 50 to 69 years old (27.1%).

A third of the respondents (32.9%, n=23) work for schools, 24.3% (n=17) for a hunting fund, 24.3% (n=17) for a municipality and 18.6% (n=13) for a forest district.



**Fig. 11: Percentage of authorities in the different groups.**

The 70 authorities are living/working in the area of the five different protected areas.

According to the interviewers it was especially difficult to motivate the group of foresters/people working for forest district to answer the questionnaire.

**Table 9: Number of respondents for the different protected areas and the different groups of authorities.**

	Forest district	Municipality	Hunting fund	School	Total
<b>Cheile Nerei</b>	4	5	3	4	<b>16</b>
<b>Domogled</b>	2	2	7	7	<b>18</b>
<b>Portile de Fier</b>	5	4	0	4	<b>13</b>
<b>Retezat</b>	1	5	5	7	<b>18</b>
<b>Semenic</b>	1	1	2	1	<b>5</b>
Sum	<b>13</b>	<b>17</b>	<b>17</b>	<b>23</b>	<b>70</b>

### 3.1.1 Knowledge of the Panda logo

Of the authorities 71.4% answer that they know the Panda logo. If we consider the different groups of authorities, 69.2% of the respondents working for the forest district, 64.7 % of the municipalities, 76.5% of the respondents from the hunting fund and 73.9% from the schools indicate that they know the logo. If asked what the Panda logo stands for and to choose from the three answer options (a) charity for children, (b) nature protection agency and (c) animal welfare, we noticed that 81.8% from the forestry district, 76.9% from the municipality, 76.9% from the hunting fund and 73.7% from the schools gave the right answer. This means that a substantial proportion of the authorities are familiar with the logo but did not know exactly what the Panda logo stands for.

### 3.1.2 Evaluation of the communication activities in the project areas

If we consider the specific communication activities that took place during the 24 month prior to the second survey, we notice that the TV documentary is the communication activity that is best known by the authorities. 70% of them report having knowledge of this documentary. 82.6% of the teachers know about it, 64.7% of the respondents working for hunting funds, 52.9% of those from the municipalities and 76.9% of respondents from the forestry district that have taken part in the survey.

The information in the newspapers has been noticed by 25.7%, the information events in the communities by 21.4% of the respondents. The meetings on various issues have been remembered by 17.1%, the media interviews by 15.7% of the authorities. The TV episodes and the wilderness camps for children as well as flyers and leaflets have been noticed by



14.3% of the authorities, while only 10% are aware of the WWF web page and only 1.4% have heard/read about special training courses for different stakeholders.

**Table 10: Perception of the different communication activities by the sample of the authorities**

	Proportion of "yes"- answers
TV documentary	70%
Information in newspapers	25.7%
Wilderness camps for children	14.3%
Information event in community	21.4%
Flyers, leaflets	14.3%
Training courses	1.4%
Meetings on various issues	17.1%
Media interviews	15.7%
TV episodes	14.3%
Website	10%

### 3.1.3 The general attitude towards the protected area

Although we can see some differences for the evaluation of the protected area between the four groups of authorities, the differences are not statistically significant (Kruskal-Wallis-Test). Nevertheless, there is a tendency for the respondents from the municipalities to assess the protected area more negatively than the teachers and the people working for the forest district. The respondents from the municipalities are most critical and 35.5% from them assess the PA negatively or very negatively.

### 3.1.4 Perceived influence of the PA

Concerning the assessment of the impact of the protected area on the daily activities there are significant differences between the four groups of authorities (Kruskal Wallis;  $p=.023$ ). While in general the presence of the protected area is assessed quite positively for the overall sample, especially the answers from the hunting fund and the municipalities are not as homogenously positive as for the other groups. The teachers assess the protected area in an especially positive way.

**Table 11: Assessment of the impact of the PA on the daily activities of the respondents.**

Assessment of PA	Forest district	municipality	Hunting fund	school	all
Mean	3.46	3.60	3.41	4.32	3.76
SD	1.05	1.40	1.004	.646	1.074
SEM	.291	.363	.243	.138	.131
Sign.					.023*

Answer scale: 1=important disadvantage, 5= important advantage; N=70.

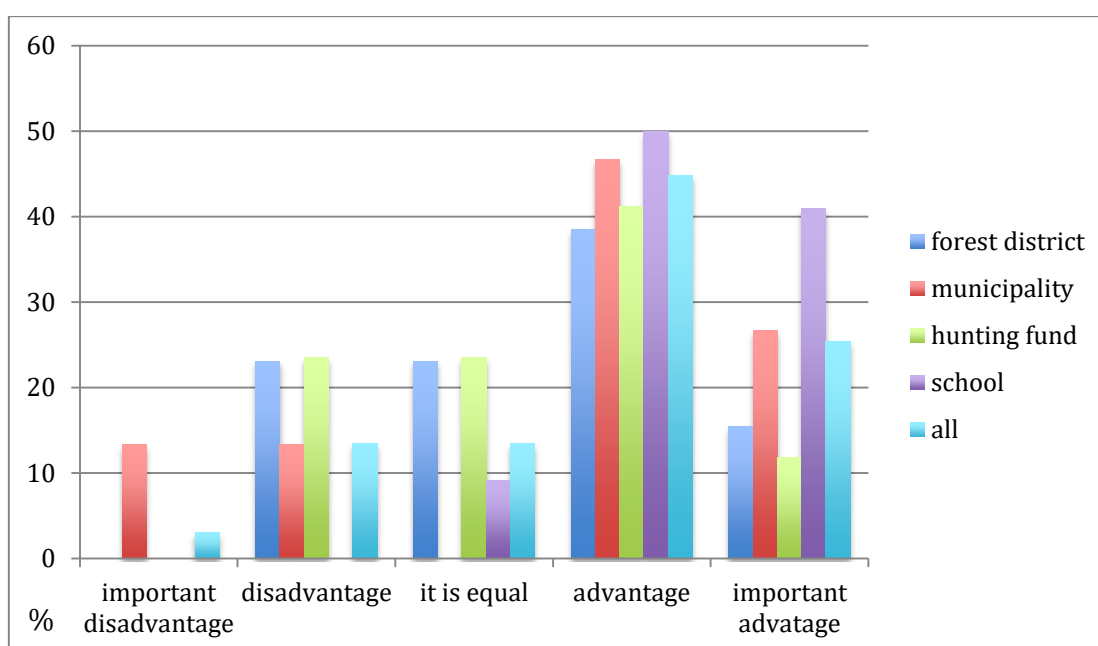


Figure 12. Assessment of the effect of the PA on the daily activities of the respondents. Percent of answers per group. N=70. Answer scale: 1=important disadvantage, 5= important advantage. (Question 4)

### 3.1.5 Meaning of the term protected area

The authorities were asked in an open question what a protected area means for them and the respondents were meant to answer spontaneously and could give more than one answer. The answers were categorized in a system of categories based on the survey from 2014.

The protected area was associated mainly with an area with meant for biological conservation (25% of the answers), an area with logging prohibitions (16.3%) and with an area with extraordinary natural beauty (15%) and area with wild animal and rare plants in danger of extinction (12.5%). It was less often associated with an area of scientific importance (10%) and a touristic area (8.8%) and with construction prohibitions (7.5%).

Table 12: Meaning of protected area (multiple answers possible)

<b>An area with construction prohibitions</b>	<b>6</b>	<b>7,5%</b>
<b>An area with logging prohibitions</b>	<b>13</b>	<b>16,3%</b>
<b>an area of extraordinary natural beauty</b>	<b>12</b>	<b>15,0%</b>
<b>An area with wild animals and rare plants – in danger of extinction</b>	<b>10</b>	<b>12,5%</b>
<b>somthing abandoned</b>	<b>1</b>	<b>1,3%</b>
<b>rough terrain with fallen trees/rocks</b>	<b>1</b>	<b>1,3%</b>
<b>An area of scientific importance</b>	<b>8</b>	<b>10,0%</b>
<b>a touristic area</b>	<b>7</b>	<b>8,8%</b>
<b>An area dedicated to biological conservation</b>	<b>20</b>	<b>25,0%</b>
<b>Something else. What?.....</b>	<b>2</b>	<b>2,5%</b>
<b>Sum</b>	<b>80</b>	<b>100,0%</b>

From the answers it gets clear that especially for the hunting fund employees, a protected area is seen as an area with logging prohibitions and in general the authorities define PA in a scientific way, mentioning the “biological conservation” far more often than other meanings.

### 3.1.6 Feelings associated with nature that is scarcely influenced by human activities.

**Table 13: Feelings towards nature that is scarcely influenced by human activities**

	Forest district	municipality	Hunting fund	school	all
<b>Fear/worry</b>					
<b>Mean</b>	1.38	1.53	1.62	3.04	2.03
<b>SD</b>	.506	.874	.806	1.397	1.236
<b>SEM</b>	.140	.212	.202	.291	.149

Answer scale: 1=not at all, 5= very strong, N=68-70, Question 10.

Mainly the feeling that were associated with wilderness areas were positive as can be seen in the high mean values for the items wonder/curiosity, tranquillity and fascination and joy (many mean values 4 or above on a scale from 1 to 5). Additionally, wilderness is associated with the feeling of freedom (mean for the four groups: 3.94) but not with feelings of loneliness and isolation (mean: 2.18).

There are only few significant differences between the feelings of the four groups of authorities concerning wild areas. Significant differences were found for the feeling of fear and worry. This feeling of fear and worry was much more pronounced for the teachers (mean: 3.04) than for the other three groups.

### 3.1.7 Rules and regulations in areas that are scarcely influenced by human activities

In general, there is a tendency to forbid or substantially reduce logging in wilderness areas, the teachers are especially opposed to logging in these wild areas.

The respondents were not decided or even in favour of only slightly reducing grazing in wilderness areas. The forest district and municipality are in favour of totally allowing grazing.

For the fishing and hunting there is a strong tendency to reduce it substantially in wilderness areas. If we consider the different groups we notice that especially the forestry district employees are in favour of forbidding hunting and fishing while the answers of the other three groups are not as clear.

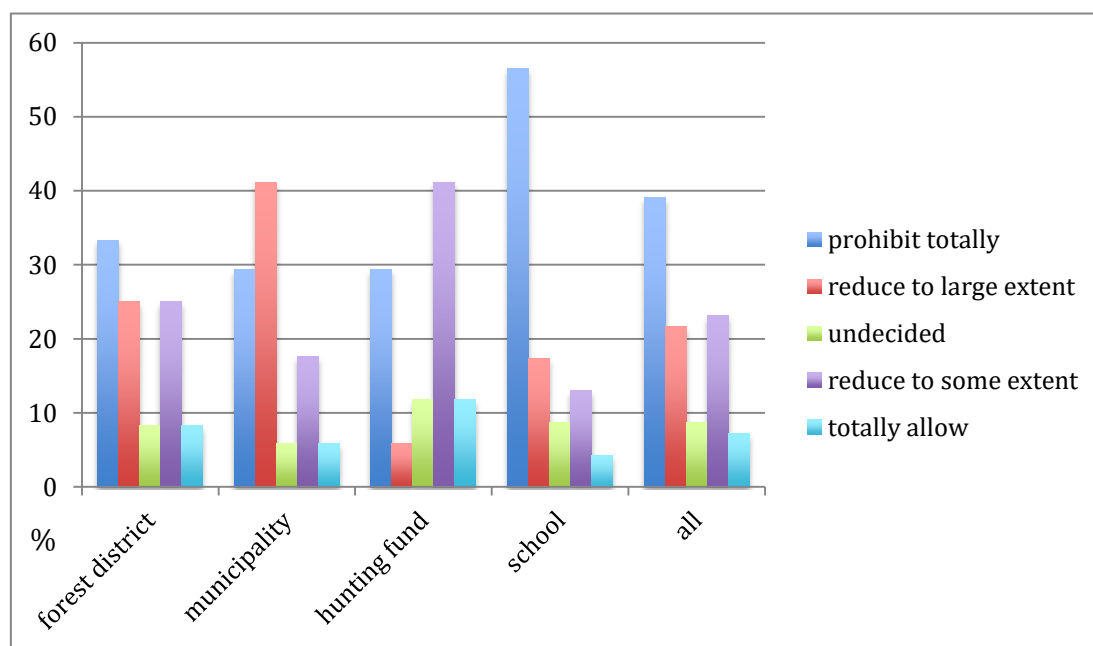


Fig. 13: Rules and regulations: logging. Distribution of answers (percentage) per group of respondents

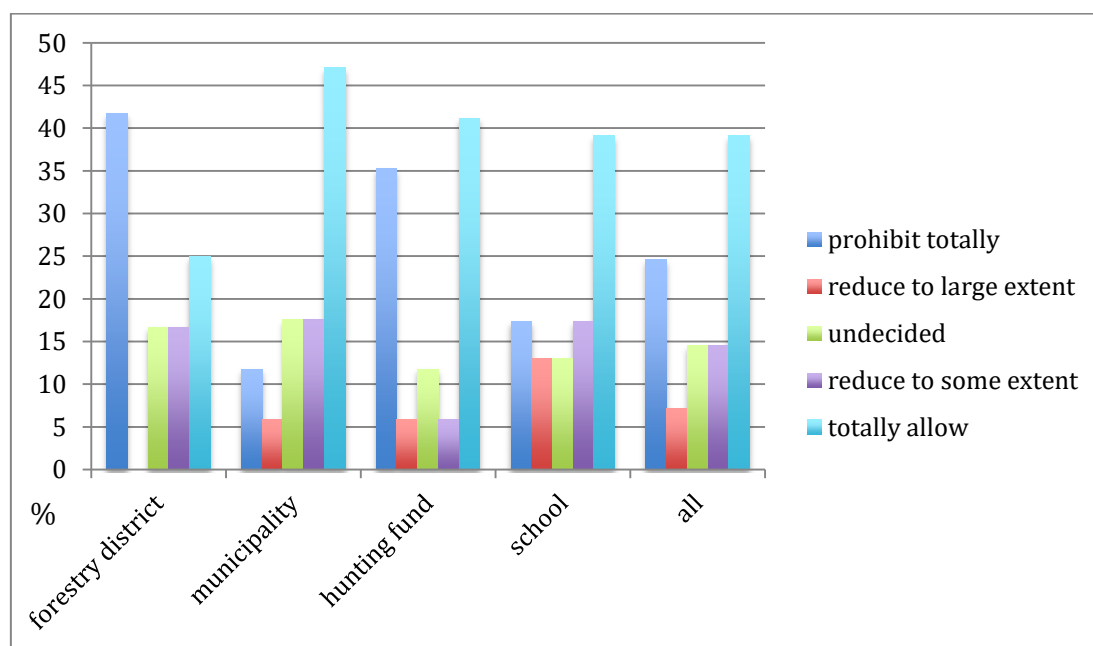


Fig. 14: Rules and regulations: placement of windmills. Distribution of answers (percentage) per group of respondents

What is quite interesting is that the employees of forest districts are in favour of totally prohibiting windmills (41.7%) while the municipality (47.1%) and the teachers (39.1) would totally allow them. The hunting funds are undecided: A part of them (35.3%) are in favour of totally prohibiting while 41.2% are in favour of totally allowing them.

### 3.1.8 Definition of wilderness

This was an open question where the respondents had to answer spontaneously without knowing possible answer categories and the interviewers were asked to categorize the answers to one of the 11 categories. In general, we can say that the authorities associate positive or at least neutral feelings and ideas with the word wilderness. 22.7% think of wild animals, 36.4% something beautiful, 9.1% of high mountains and steep slopes. Concerning the definition of wilderness there were no relevant differences between the four groups.

**Table 14: Definition of / associations with wilderness**

	Frequency	%
<b>dark forest</b>	3	4,5
<b>high mountains and steep slopes</b>	6	9,1
<b>wild animals</b>	15	22,7
<b>something abandoned</b>	2	3,0
<b>rough terrain with fallen trees/rocks</b>	2	3,0
<b>beginning of life on earth</b>	2	3,0
<b>something exotic/tribes from other cultures</b>	1	1,5
<b>something beautiful</b>	24	36,4
<b>something primitive</b>	1	1,5
<b>something scary</b>	4	6,1
<b>Other</b>	6	9,1
<b>Sum</b>	66	100,0

### 3.1.9 The future of wilderness areas

There are no significant differences between the four categories of authorities concerning the opinion what should be done with wilderness areas. 69.2% of the foresters are in favour of leaving wilderness areas as they are, while for the other three groups at least 50% of the respondents (municipality 50% and schools 45.6%) or even more (hunting fund: 64.7%) would like to intervene for the conservation of wilderness areas. Only a very small proportion of respondents (teachers) 13.6% were in favour of domestication. Here we see the classical conflict between the classical nature protection (conservation) and the more process oriented conservation.

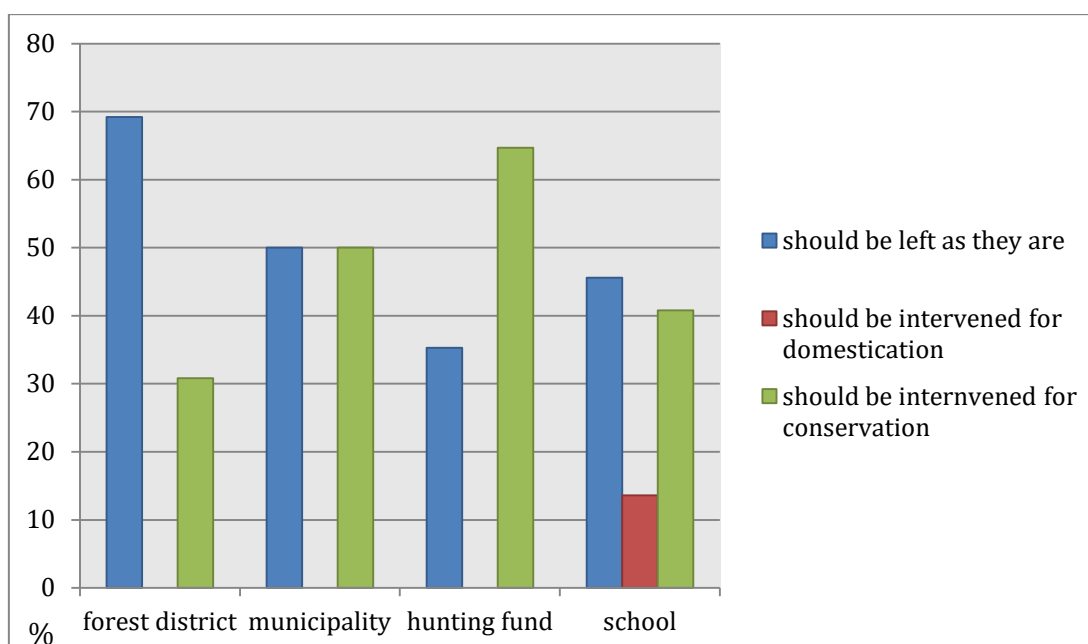


Fig. 15 Future of wilderness areas. Percent of answers per group.

### 3.1.10 Time in wilderness areas

Most of the authorities would like to spend time in wilderness areas, at least occasionally.

For the foresters only 15.4% would not like to spend time in wilderness areas, for the municipalities there are 11.8%, and 17.4% of the teachers. However, 29.4% of the hunters would not like to spend time there. These differences between the groups are not statistically significant (Kruskall Wallis).

### 3.1.11 Preferred way of practising tourism

For the question about the preferred way of practising tourism in the region we gave (based on the results from the study in 2014) four different answer categories: a) ski/sport hotel with many rooms, b) cultural circuit with traditional accommodation and food, c) nature-based tourism, hiking, accommodation and food and c) other forms (with the possibility to clarify). The nature based tourism was preferred by 50.7% and the cultural circuit by 41.7% of the respondents (67 authorities) and there were no significant differences between the four groups of authorities.

## 3.2 Specific questions for the different groups of authorities

### 3.2.1 The mayors

The mayors have been asked if they would be willing to foster ecotourism in their community. The sample consisted of 17 mayors /people working for the municipality, two did not answer the question (or the interviewers did not ask the question). Of those giving an

answer 80% answered that they would foster ecotourism as much as possible and 20% at least to a certain degree.

### **3.2.2 The teachers**

From the 23 teachers in the sample 13% are willing to promote wilderness education in their schools to a certain degree and 87% would like to promote it as much as possible.

### **3.2.3 The hunting fund**

The first specific question for the people working for the hunting fund was focussing on the perception of overlap between protected areas and hunting areas.

From the sample of 17 persons, 4 of them did unfortunately not answer this question (or were not asked this question). From the remaining 13 respondents, 23.1% don't see this as a problem, 7.7% are undecided but 46.2% see it as a problem and 23.1% even as a serious problem.

Those seeing it as problematic have been asked what could be done to solve the problem. The majority of those 11 people answering this question is in favour of raising the awareness of the hunters 63.6%, 18.2% are in favour of eliminating hunting areas and forbidding hunting in protected areas; 9.1% are in favour of just applying the law in force (that forbids hunting in these areas) and 9.1% say that there is no solution. Nobody chose the answer that eliminating the PA would be a solution to the problem.

### **3.2.4 The foresters/forest district**

The people working for the forest district in general perceive the protected areas as an added value. From the 13 foresters, 30.4% are undecided, 38.5% perceive them to a certain degree as an added value and 30.8% perceive them absolutely as an added value. The reasons for this have mainly been seen in the protection of fauna and flora (57.1%) and to a certain degree in the income source (28.6%) and the use of nature for the population (14.3%). Those foresters (n=4) that are not decided about the fact that the PA is an added value, explain it mainly with the argument that PA come with restrictions (n=2) and that land owners didn't get compensations for non-intervention and for the restrictions imposed by the statute of PA (n=1) as well as other reasons that have not explicitly been mentioned (n=1). etc.

**Table 15: Reasons for perceiving protected areas as added value**

Item	frequency	Percentage
People can enjoy outdoor activities in forest	1	14.3%
Nature is a potential income source	2	28.6%
Flora and fauna species are protected	4	57.1%
Beautiful landscapes and important forests are protected	0	0
Nature is preserved intact for the next generations"	0	0
<b>Total</b>	<b>7</b>	<b>100%</b>

Multiple answers possible

Another questions asked if they felt up to date about natural resource management strategies and practices. The reasons for this question was to see if the workshops that aimed to instruct this group of people were successful. 15.4% felt very well informed, 46.2% well informed, 15.4% answered "soso" and only 23.1% felt unsufficiently informed. We could not ask if they took part in one of the workshops and cannot evaluate the effect of the workshops directly, however in general we can say that this group of authorities feels well informed.



## **4 Appendix**

### **4.1 Questionnaire for the general population**

### **4.2 Questionnaire for the authorities**