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Opinions on Mitigating Measures Intended to Reduce Human Carnivore Conflicts

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Master in General Ecology

Preface

This thesis is the final part of the General Ecology MSc degree at the Norwegian University of Life Sciences. The supervisors of this project are Stein Ragnar Moe and Ketil Skogen, the dataset is provided by The Norwegian Institute for Nature Research (NINA).

I would like to thank Stein Ragnar Moe and Ketil Skogen for guiding me through this process of writing and analyzing the data. Your guidance, knowledge, and patience have been excellent, and I appreciate that you wanted to be supervisors for this project. I´m thankful to NINA for letting me use their data material. Further, I want to thank my family and friends for all the patience and help in this long period of writing and hours spent in Rstudio. A special thanks to Cassandra Ugland and Sarah Johns for helping me with my English and writing, and to Jakob who has supported me in this process. This process has been full of learning, frustration and excitement, and I am very grateful for everyone that has contributed to this experience.

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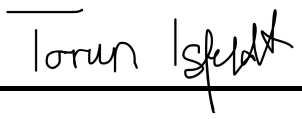

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Abstract

Large carnivore conflicts in Norway is a result of carnivores returning after years of extinction, and this reestablishment results in more frequent encounters with large carnivores and livestock, and humans. There are several measures intended to mitigate large carnivore conflicts today, but people's opinions towards these measures have had a minimal focus in previous research. As conflict mitigating measures are intended to reduce livestock loss, they also intend to mitigate conflicts with people. The controversy and dissatisfaction among parts of the Norwegian population show that taking people's perceptions on large carnivore-related issues is necessary to reduce the conflict. By investigating opinions towards mitigating measures, it may show which measures that are less controversial to people, and which measures people in different groups of the population prefer. The focus of this study is to investigate people's opinions on measures intended to mitigate large carnivore conflicts using survey data. The survey was sent out in 2018 to people living over a wide geographical area, and a sample of people living inside the wolf zone. Ordinal logistic regression was performed to analyze the data. Age, gender, educational level, population size at residents' home place, and living in relation to the wolf zone (inside vs. outside) were used as explanatory variables. The findings in this study suggests that people in general is most positive towards the use of electric fences, and positive information work. The majority were negative towards the use of GPS collars, moving large carnivores, funding for farmers to change husbandry practice, and carnivore zones. These results can be useful management authorities when prioritizing the use of mitigating measure.

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Introduction

The human population in Europe has increased rapidly since the 19th century (Kumar, Britannica, 2020) and has led to increased pressure on natural systems (Boitani & Linnell, 2015). In particular, large carnivore populations have been negatively affected by intensive hunting and habitat loss (Wolf & Ripple, 2016). The global loss of iconic species and biodiversity has led to an increased focus on species and habitat conservation, resulting in the creation of international conventions such as The Bern convention (1979) and The Paris agreement (2015). Political commitment to international goals puts pressure on individual countries to prioritize wildlife conservation (Trouwborst, Boitani, & Linnell, 2017), and large carnivore populations throughout Europe have benefited from these efforts (Boitani & Linnell, 2015). Large carnivores occupy large and continuous territories where they control mammal populations through predation (Ripple et al. 2014). Predation by large carnivores is a source of conflict in human society, as large carnivores have returned in parts where they have been extinct for decades (Woodroofe, 2000, Wilkinson et al. 2020). Large carnivore exploitation of new areas results in more frequent encounters between carnivores and domesticated animals because livestock grazing areas overlap with carnivore habitat. (König et al. 2020). Large carnivore management is controversial as management decisions have to balance different stakeholder interests, and people often have distrust towards management authorities and politicians (Skogen et al., 2010, Mbaiwa & Hambira, 2021). Local culture and government policy are factors that influence the opinions of the public regarding large carnivore presence (Dickman, 2010, Skogen, Krange & Figari, 2013, Storaas & Brainerd, 2019). Given that governments and international conventions commit to protect large carnivores, mitigation strategies are necessary to reduce conflict (Miller et al. 2016). The efficacy of conflict mitigating measures between livestock and carnivores has been evaluated multiple times (Linnell et al, 1996, Hansen et al. 2020). Physical measures such as electric fences, change of husbandry practices, or culling problem individuals are some of the measures known to be efficient in preventing livestock loss (Hansen, Bjøru & Mokstad, 2004, Hind & Hansen, 2014). Although measures such as electric fences or the use of guard dogs can prevent livestock loss, it is not obvious that people see these measures as appropriate for mitigating conflict. In addition to doubts about the actual potential for preventing livestock loss, people may be skeptical of the use of these measures for other reasons, including animal welfare, ethics, or personal emotions. There is limited knowledge about how people perceive conflict mitigation measures,

and people's perceptions of these measures may affect the efficiency of conflict-reducing strategies.

Many people in Norway are positive to large carnivores in both urban and rural areas, although people in rural areas are slightly less positive (Tangeland et al. 2010, Krange & Skogen, 2018). People living in areas with higher potential for large carnivores presence have more negative opinions than those living in ares with no carnivore presence (Krange & Skogen, 2018, Skogen & Krange, 2020). Knowledge about large carnivores has shown to have a positive influence on opinions towards them (Mkonyi, Estes, Mshua, Lichtenfeld & Durant, 2017). Younger people are more positive towards carnivores in rural areas, as well as people with more education (Røskaft, Händel, Bjerke & Kaltenborn, 2007), this latter group also has a higher trust in scientists (Barmoen et al. 2021). Not only scientists, but large carnivore management may lack legitimacy in parts of the population, which should not be trivialized (Skogen, Figari & Krange, 2010). There are some trends that women have more confidence in authorities (Krange, Tangeland & Skogen, 2011) and that men are more positive to large carnivores in general (Bjerke, Skogen & Kaltenborn, 2002).

Currently, Norwegian management authorities must compromise between having wild populations of large carnivores and livestock grazing in rangelands. The twofold goal of large carnivore management, where the aim is to have sustainable populations of carnivores and at the same time mitigate conflicts with human interests, has its origins in Parliamentary White Paper nr.15 (2003-2004). In an attempt to meet these goals, government designed a management model where carnivores are prioritized in some geographical areas. These carnivore zones are supposed to have viable carnivore populations as well as a higher tolerance for carnivore presence. Two systems of carnivore zones are established. The first is a wolf zone where specific goals are set for wolves, the other system consists of eight zones covering a larger geographical area in Norway. There are eight carnivore management zones where the population goals for each species differs, and where regional management plans are drawn up by the so-called Carnivore Management Boards, which are politically appointed (Rovviltforskriften, 2005, §5). National population goals are also set for each species. At the national level, population goals are set for wolves (*Canis lupus*, 4-6 litters), wolverines (*Gulo gulo*, 39 litters), lynx (*Lynx lynx*, 65 females with offspring), and bears (*Ursus arctos*, 13 litters) (Rovviltforskriften, 2005, §3).

Some interventions are more intrusive than others, like lethal control, electric fences, translocating carnivores, or moving livestock outside carnivore prioritized areas. These are all measures that physically separate livestock and carnivores to prevent

depredation. Measures like carnivore tourism and neutral information work where information is based on science are non-invasive interventions. These non-invasive measures may affect the level of conflict by providing people with the knowledge to understand both the conflict itself and basic biology of carnivores. Incentives to sheep farmers to change husbandry practices, establishing prioritized carnivore zones, and strengthening police efforts towards wildlife crimes are examples of more structural measures that aim to both secure sustainable populations of large carnivores and mitigate conflicts with livestock and animal owners.

However, it may be impossible to achieve a management model that satisfies all stakeholders. The level of conflict between large carnivores and local people has led to political disagreement regarding the management model (Krange et al. 2016). The confidence in politicians at the national level is generally low when it comes to large carnivore issues (Krange, Tangeland & Skogen, 2011). There is a high level of dissatisfaction among some groups of people towards political decisions and with the current practice of large carnivore management (Tangeland, Krange & Skogen, 2010). In addition to politicians and management, scientists working with large carnivores experience a high level of distrust from local people compared to other scientists (Barmoen et al. 2021). If local residents' views are not included in decision making the conflict mitigating measures can work against their purpose (Mbaiwa & Hambira, 2021). The social aspect of large carnivore conflict should play a role in conflict mitigation management (Dickman, Hazzah, Carbone & Durant, 2014). Fear of large carnivores in districts within carnivore zones is real for some people, and this fear should be taken seriously (Skogen, Johansson, Figari, Flykt & Krange, 2018). One approach of recognizing the fear is to provide fact-based information to establish a foundation of understanding of different aspects of the large carnivores and the conflict (Linnell et al. 1996).

Individual interests, such as hunting or sheep farming, can influence opinions towards measures to mitigate conflicts with large carnivores (Eklund, 2019). Attitudes are complex, and patterns of interests and experiences influence opinions (Huseby, 2009). Eklund (2019) investigated the potential for conflicts between different groups of animal owners (hunters, reindeer owners, sheep farmers, pet dog owners) and a group referred to as "the public" which is represented by people without animals. There is considerable discrepancy between predominant views in the general public and views held by hunters and reindeer herders regarding selective culling and carnivore zones (Eklund, 2019). While selective hunting is more controversial to the public, hunters and reindeer owners are more positive to selective hunting. Carnivore zones on the other hand are more controversial for hunters and reindeer owners compared to the public. By taking social conflicts into account in large carnivore management

the trust in management could potentially be improved and might result in a more positive attitude to selected mitigation measures (Eklund, 2019).

The objective of this study is to investigate differences in public opinions towards conflict mitigating measures (i.e. electric fences, moving carnivores, radio monitoring, shooting carnivores, carnivore zones, moving sheep, funding to farmers to change the industry, carnivore tourism, positive information work and strengthen police effort to wildlife crimes) used in Norwegian large carnivore management today. I will explore how opinions change in relation to wolf zone (inside vs. outside), level of education, gender, age and on the urban-rural axis.

2.0 Methods and Materials

2.1 Questionnaire

The dataset was conducted in 2018 by Ipsos, a company that specializes in surveys. NINA (Norwegian Institute for Nature Science) is the project owner and has a series of publications with large carnivore-related issues (Krange, Tangeland & Skogen, 2011, Krange & Skogen, 2018, Krange & Skogen, 2019). Respondents were contacted by phone and received the questionnaire by mail. The recruitment was conducted with a goal to include both a national sample of the population (ca. 2500), and a sample of people living inside the designated wolf zone (ca. 900). Municipalities with established or regular presence of wolves were included in the sample of people living inside wolf zone (Skogen, Figari, Flykt & Krange, 2018). These municipalities were; Aremark, Aurskog-Høland, Asker, Eidskog, Elverum, Enebakk, Halden, Hobøl, Rakkestad, Rælingen, Rømskog, Spydeberg, Ski, Rælingen, Rømskog, Trysil, Vestby, Våler and the two districts of Oslo Alna and Østensjø. The total number of respondents participating was 2201 out of 3396 contacted people, giving a response rate of 64.8%, which is high in such contexts (Baruch, 1999). The sample consists of respondents from a wide geographic range in Norway including 302 of 422 municipalities and all counties (=18). The survey has a predominance of wolf-related questions as the wolf is the most controversial carnivore in Norway (Tangeland et al. 2010, Skogen & Krange, 2020).

The data from the questionnaire is ordinal were the respondents ranged their opinions on how sufficient measures to mitigate conflicts with large carnivores was on a scale from 1 = Highly agree, to 4 = Highly disagree and 5 = I do not know. Respondents stated the number of residents where they lived on a scale; 1 = Small hamlets <200 residents, 2 = 200-2000 residents, 3 = 2000–10 000 residents, 4 = 10 000–40 000 residents, 5 = 40 000–100 000 residents, 6 = 100 000–300 000 residents, 7 = Live in Oslo municipality (about 700 000 residents; SSB, 2022), 8 = I don't know. Oslo was given its own option as it's the most populated city in Norway with more than twice as many residents as the second most populated city (SSB, 2021). Respondents were given six options for the highest level of education finished, where we have divided it into four sections; 1 = Primary school, 2 = High school, 3 = Higher education $\leq$ 4 years, 4 = Higher education $\geq$4 years. Two options were given for gender; man or woman. Two options were also given for living inside or outside the wolf zone. The age (years) of the respondents was a continuous variable.

2.2 Statistical Analysis

All the statistical analysis was undertaken in R version R 4.1.0, using RStudio version 1.4.1103 for IOS (R Core Team, 2021). MASS package was used for ordinal logistic regression (Venables & Ripley, 2002), Lmtest-package was used for model selection (Zeileis & Hothorn, 2002), Likert-package (Bryer & Spreerschneider, 2016) and Effects-package (Fox & Hong, 2009) for visualizing the results. Ordinal logistic regression was conducted to test people´s opinions towards measures to mitigate conflicts with large carnivores (electric fences, moving carnivores, radio monitoring, shooting carnivores, carnivore zones,moving sheep, incentives to farmers to change the industry, carnivore tourism, positive information work and strengthen police efforts to wildlife crimes). Predictor variables used in the ordinal logistic regression were age, gender, wolf zone (living inside vs. outside), level of education, and urban-rural. Ordinal logistic regression was used in analyzing the data because it takes account for ordered response variables (Parry, 2020).

Model selection was conducted using stepwise selection with likelihood ratio tests. The most complex model included all the predictor variables (age, gender, living inside/outside wolf zone, population size, and level of education). Significance was considered when p-values were ≤ 0.05.

TABLE 1. DESCRIPTION OF PREDICTOR VARIABLES AND DISTRIBUTION OF ANSWERS IN QUESTIONNAIRE. NUMBER OF RESIDENTS IS DIVIDED INTO EIGHT CATEGORIES OVER NUMBER OF RESIDENTS (1 = RURAL AREAS <200, 2 = 200-2000, 3 = 2000–10 000, 4 = 10 000-40 000, 5 = 40 000 – 100 000, 6 = 100 000 – 300 000, 7 = LIVING IN OSLO, 8 = DON`T KNOW).

Gender N 2201	Age	Education (highest graduated level of education)	Wolf zone	Population size (number of respondents)
Men, 1187	Mean (year), 51.76	Primary school 234 (10.6%)	Outside ,1836	1, 242 (11%)
Women, 1014	Range (years), 15-94	High School 761 (34.6%)	Inside, 365	2, 270 (12.3%)
		Higher education ≤4y 762 (34.6%)		3, 343 (15.6%)
		Higher education ≥4y 423 (19.2%)		4, 444 (20.2%)
		Missing values 21 (0.9%)		5, 192 (8.7%)
				6, 187 (8.5%)
				7, 478 (21.7%)
				8, 27 (1.23%)
				Missing values, 18 (0.8%)

3.0 Results

TABLE 2. OPINIONS ON CONFLICT MITIGATING MEASURES ON A FIVE-POINT SCALE BY RESPONDENTS (THE RESPONSE "DON'T KNOW" WAS EXCLUDED FROM THE ANALYSIS).

	Highly agree	Agree	Disagree	Highly disagree	Dont know
Electric fences to prevent					
carnivore attacks on	311	746	560	463	91
livestock	14.1%	33.9%	25.4%	21.0%	4.13%
	113	323	731	862	110
Move carnivores	5.13%	14.7%	33.2%	39.2%	5.0%
Monitor carnivores by using	163	666	702	526	97
radio monitoring	7.41%	30.3%	31.9%	23.9%	4.41%
Shoot carnivores	427	394	354	917	70
	19.4%	17.9%	16.1%	41.7%	3.18%
Have own designated	326	775	524	436	97
carnivore zones	14.8%	35.2%	23.8%	19.8%	4.41%
Move sheep outside	464	656	484	477	86
carnivore areas	21.1%	29.8%	22.0%	21.7%	3.91%
Funding to farmers to	148	300	581	984	179
change industry	6.72%	13.6%	26.4%	43.1%	8.13%
Strengthen police´s effort	281	491	534	569	272
against wildlife crime	12.8%	22.3%	24.3%	25.9%	12.4%
Carnivore tourism	136	294	582	952	186
	6.18%	13.4%	26.4%	43.3%	8.45%
Inform about the positive	476	675	428	515	57
effects of carnivores	21.6%	30.7%	19.4%	23.4%	2.59%
Remove hunters rights to					
put down carnivores that	193	200	485	1076	198
attacks dogs	8.77%	9.09%	22.0%	48.9%	9.0%

TABLE 3. THE EFFECT OF AGE, GENDER, EDUCATION, POPULATION SIZE AND WOLF ZONE ON PEOPLES VIEW ON DIFFERENT CONFLICT MITIGATING MEASURES (THE MOST PARSIMONIOUS MODELS. ORDINAL LOGISTIC REGRESSIONS). CONTROL GROUP FOR; POPULATION SIZE IS "SMALL HAMLETS <200 RESIDENTS", "MEN" IS CONTROL GROUP FOR GENDER, CONTROL GROUP FOR EDUCATION IS "PRIMARY SCHOOL" AND CONTROL GROUP FOR WOLF ZONE IS "OUTSIDE". A LOWER "VALUE" INDICATES A HIGHER LIKELIHOOD OF BEING MORE POSITIVE TO A MEASURE.

	Value	SE	t	P
Electric fences				
Wolf zone (Inside)	-0.459	0.137	-3.346	<0.0001
Gender (Women)	-0.583	0.105	-5.537	<0.0001
Population size 200-2000	-0.136	0.199	-0.684	0.496
Population size 2000-10000	-0.506	0.193	-2.613	0.009
Population size 10000-40000	-0.624	0.184	-3.396	0.001
Population size 40000-100000	-1.075	0.225	-4.768	<0.0001
Population size 100000-300000	-0.847	0.228	-3.717	<0.0001
Oslo (population size)	-0.945	0.188	-5.025	<0.0001
Highly_agree|Agree	-2.886	0.176	-16.440	<0.0001
Agree|Disagree	-0.965	0.158	-6.100	<0.0001
Disagree|Highly_disagree	-0.357	0.155	-2.951	0.022
Move carnivores				
Age	-0.014	0.003	-4.529	<0.0001
Gender (female)	-0.273	0.106	-2.579	0.010
Population size 200-2000	0.133	0.213	0.624	0.533
Population size 2000-10000	-0.309	0.199	-1.554	0.120
Population size 10000-40000	-0.157	0.188	-0.833	0.405
Population size 40000-100000	-0.532	0.225	-2.362	0.018
Population size 100000-300000	-0.828	0.226	-3.660	<0.0001
Oslo (population size)	-0.269	0.188	-1.428	0.153
Highly_agree|Agree	-4.071	0.268	-15.176	<0.0001
Agree|Disagree	-2.383	0.243	-9.804	<0.0001
Disagree|Highly_disagree	-0.766	0.234	-3.270	0.001
Radio monitoring				
Population size 200-2000	-0.135	0.199	-0.678	0.497
Population size 2000-10000	-0.313	0.189	-1.653	0.098
Population size 10000-40000	-0.663	0.179	-3.704	<0.0001
Population size 40000-100000	-0.846	0.226	-3.743	<0.0001
Population size 100000-300000	-0.657	0.225	-2.927	0.003
Oslo (population size)	-0.359	0.181	-1.984	0.047
Gender (female)	-0.250	0.104	-2.400	0.016
Highly_agree|Agree	-3.175	0.180	-17.605	<0.0001
Agree|Disagree	-1.021	0.150	-6.787	<0.0001
Disagree|Highly_disagree	0.561	0.148	3.788	<0.0001
Shoot carnivores				
Gender (female)	0.480	0.107	4.493	<0.0001
Population size 200-2000	0.261	0.199	1.309	0.190
Population size 2000-10000	0.483	0.190	2.538	0.011
Population size 10000-40000	0.952	0.184	5.186	<0.0001
Population size 40000-100000	1.246	0.223	5.581	<0.0001
Population size 100000-300000	1.093	0.229	4.764	<0.0001
Oslo (population size)	1.727	0.192	9.012	<0.0001
Age	-0.015	0.003	-4.764	<0.0001
Highly_agree|Agree	-1.086	0.234	-4.635	<0.0001
Agree|Disagree	-0.077	0.233	-0.331	0.740
Disagree|Highly_disagree	0.657	0.233	2.822	0.005
Carnivore zones				
Wolf zone (inside)	0.537	0.140	3.824	<0.0001
Age	-0.010	0.003	-3.141	0.002
Population size 200-2000	-0.081	0.199	-0.406	0.685
Population size 2000-10000	-0.425	0.194	-2.191	0.028
Population size 10000-40000	-0.385	0.184	-2.093	0.036
Population size 40000-100000	-0.581	0.227	-2.563	0.010

Population size 100000-300000	-0.877	0.234	-3.751	<0.0001
Oslo (population size)	-0.553	0.188	-2.935	0.003
Education (high school)	-0.096	0.213	-0.449	0.653
Education (higher education ≤4y)	-0.452	0.211	-2.139	0.032
Education (higher education ≥4y)	-0.456	0.224	-2.036	0.042
Highly_agree|Agree	-3.050	0.320	-9.541	<0.0001
Agree|Disagree	-1.030	0.309	-3.337	0.001
Disagree|Highly_disagree	0.259	0.308	0.840	0.401
Move livestock				
Population size 200-2000	0.027	0.197	0.135	0.893
Population size 2000-10000	-0.337	0.192	-1.753	0.080
Population size 10000-40000	-0.660	0.181	-3.637	<0.0001
Population size 40000-100000	-1.136	0.220	-5.153	<0.0001
Population size 100000-300000	-0.967	0.223	-4.342	<0.0001
Oslo (population size)	-0.822	0.182	-4.513	<0.0001
Age	0.013	0.003	4.291	<0.0001
Highly_agree|Agree	-1.267	0.227	-5.580	<0.0001
Agree|Disagree	0.163	0.225	0.728	0.467
Disagree|Highly_disagree	1.367	0.227	6.017	<0.0001
Give incentives to farmers				
Gender (females)	0.366	0.107	3.420	0.001
Population size 200-2000	0.046	0.207	0.223	0.823
Population size 2000-10000	-0.028	0.200	-0.139	0.890
Population size 10000-40000	-0.283	0.188	-1.504	0.132
Population size 40000-100000	-0.243	0.227	-1.070	0.285
Population size 100000-300000	-0.435	0.230	-1.896	0.058
Oslo (population size)	-0.602	0.187	-3.221	0.001
Highly_agree|Agree	-2.681	0.180	-14.910	<0.0001
Agree|Disagree	-1.327	0.159	-8.330	<0.0001
Disagree|Highly_disagree	0.068	0.154	0.438	0.661
Strengthen police´s efforts to wildlife crimes				
Population size 200-2000	-0.010	0.201	-0.050	0.960
Population size 2000-10000	-0.244	0.191	-1.273	0.203
Population size 10000-40000	-0.684	0.184	-3.724	<0.0001
Population size 40000-100000	-0.824	0.219	-3.767	<0.0001
Population size 100000-300000	-0.943	0.222	-4.253	<0.0001
Oslo (population size)	-0.911	0.182	-4.990	<0.0001
Highly_agree|Agree	-2.439	0.163	-14.950	<0.0001
Agree|Disagree	-1.015	0.150	-6.751	<0.0001
Disagree|Highly_disagree	0.285	0.147	1.940	0.052
Carnivore tourism				
Gender (females)	0.218	0.109	1.996	0.046
Age	0.013	0.003	3.971	<0.0001
Population size 200-2000	0.094	0.216	0.434	0.664
Population size 2000-10000	-0.165	0.205	-0.801	0.423
Population size 10000-40000	-0.536	0.195	-2.754	0.006
Population size 40000-100000	-0.581	0.236	-2.456	0.014
Population size 100000-300000	-0.590	0.235	-2.509	0.012
Oslo (population size)	-0.759	0.197	-3.857	<0.0001
Education (high school)	0.061	0.221	0.277	0.782
Education (higher education ≤4y)	-0.216	0.219	-0.985	0.324
Education (higher education ≥4y)	-0.353	0.231	-1.528	0.127
Highly_agree|Agree	-2.479	0.329	-7.539	<0.0001
Agree|Disagree	-1.135	0.318	-3.569	<0.0001
Disagree|Highly_disagree	0.336	0.316	1.061	0.289
Positive information work				
Gender (females)	-0.346	0.104	-3.329	0.001
Population size 200-2000	0.0675	0.203	0.332	0.740
Population size 2000-10000	-0.528	0.193	-2.735	0.006
Population size 10000-40000	-0.954	0.185	-5.145	<0.0001
Population size 40000-100000	-1.280	0.225	-5.693	<0.0001
Population size 100000-300000	-1.015	0.229	-4.432	<0.0001

Oslo (population size)	-1.405	0.187	-7.516	<0.0001
Age	0.0148	0.003	4.697	<0.0001
Highly_agree|Agree	-1.568	0.234	-6.700	<0.0001
Agree|Disagree	-0.085	0.231	-0.369	0.712
Disagree|Highly_disagree	0.920	0.231	3.974	<0.0001
No hunt on carnivores 'that have attacked dogs				
Age	0.027	0.003	3.829	<0.0001
Population size 200-2000	-0.074	0.238	-0.311	0.756
Population size 2000-10000	-0.388	0.223	-1.739	0.082
Population size 10000-40000	-0.782	0.210	-3.713	<0.0001
Population size 40000-100000	-0.980	0.245	-3.992	<0.0001
Population size 100000-300000	-1.087	0.245	-4.442	<0.0001
Oslo (population size)	-1.303	0.207	-6.303	<0.0001
Highly_agree|Agree	-2.397	0.261	-9.191	<0.0001
Agree|Disagree	-1.517	0.253	-5.988	<0.0001
Disagree|Highly_disagree	-0.243	0.250	-0.975	0.330

Regarding the use of using electric fences as a conflict mitigating measure, people living inside the wolf zone were more positive than people living outside the wolf zone (Figure 1). People living in more densely populated areas were more positive than those living in more rural areas (Figure 2), and women were more positive than men (Figure 3; Table 3).

With respect to moving large carnivores as a conflict mitigating measure, people living in more densely populated areas were more positive than people living in more rural areas (Figure 2), women were more positive than men (Figure 3), and older people were more positive than younger people (Figure 5; Table 3).

Regarding the use of GPS collars for monitoring purposes as a conflict mitigating measure, people living in more densely populated areas were more positive than people living in rural areas (Figure 2), and women were more positive than men (Figure 3; Table 3).

With respect to shooting large carnivores as a conflict mitigating measure, people living in rural areas were more positive compared to people living in more densely populated areas (Figure 2), men were more positive than women (Figure 3), and older people were more positive than younger people (Figure 5; Table 3).

As for carnivore zones as a conflict mitigating measure, people living outside the wolf zone were more positive than those living inside (Figure 1), people living in densely populated areas were more positive than people living in less densely populated areas (Figure 2), people with a higher level of education were more positive than people with less education (Figure 4), and older people were more positive than younger people (Figure 5; Table 3).

Regarding translocating of large carnivores, people living in more densely populated

areas were more positive than people living in rural areas (Figure 2), women were more positive than men (Figure 3), and younger people were more positive than older people (Figure 5; Table 3).

As for providing incentives to farmers to change husbandry practices, people living in more densely populated areas were more positive than people living in more rural areas (Figure 2), and men were more positive than women (Figure 3; Table 3).

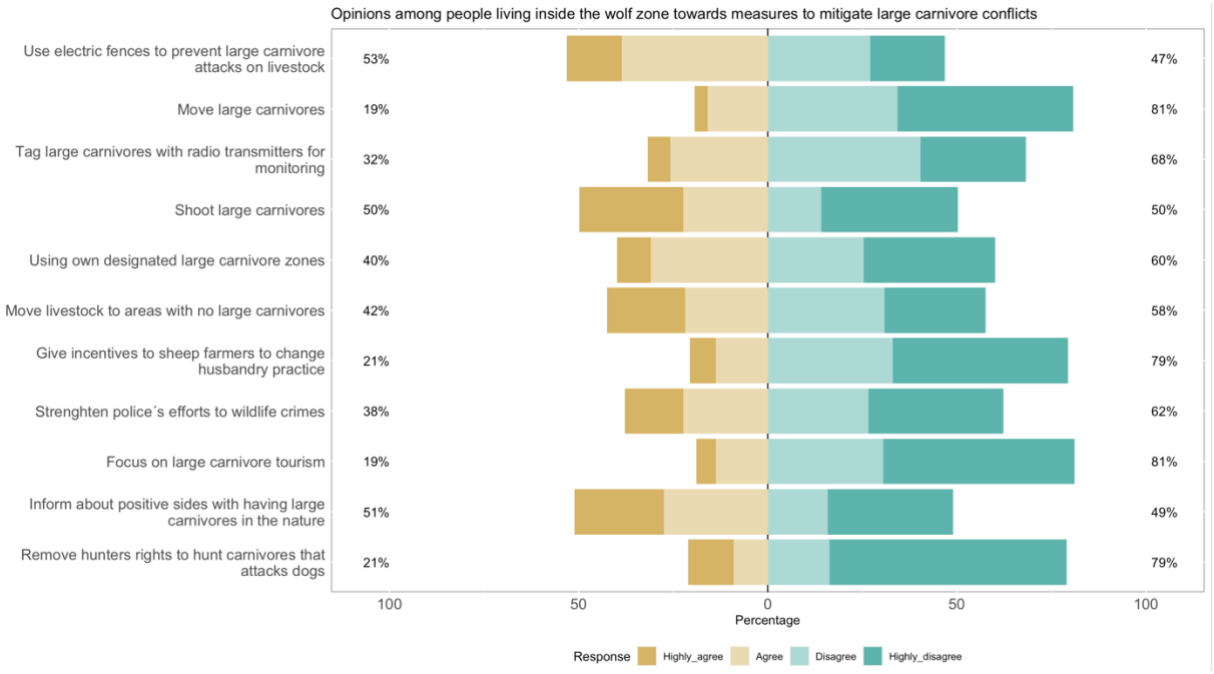
When it comes to strengthening police efforts to curb wildlife crime, people living in more densely populated areas were more positive than people living in rural areas (Figure 2; Table 3).

As for large carnivore tourism as a conflict mitigating measure, people living in more densely populated areas were more positive than people living in more rural areas (Figure 2), men were more positive than women (Figure 3), people with a higher level of education were more positive than people with less education (Figure 4), and younger people were more positive than older people (Figure 5; Table 3).

With respect to neutral information work as a measure to mitigate conflicts with large carnivores, people living in more densely populated areas were more positive than people living in more rural areas (Figure 2), women were more positive than men (Figure 3), and younger people were more positive than older people (Figure 5; Table 3).

With regard to removing hunters right to shoot a large carnivore when attacking a dog, people living in more densely populated areas were more positive than people living in more rural areas (Figure 2), and younger people were more positive than older people (Figure 5; Table 3).

A



B

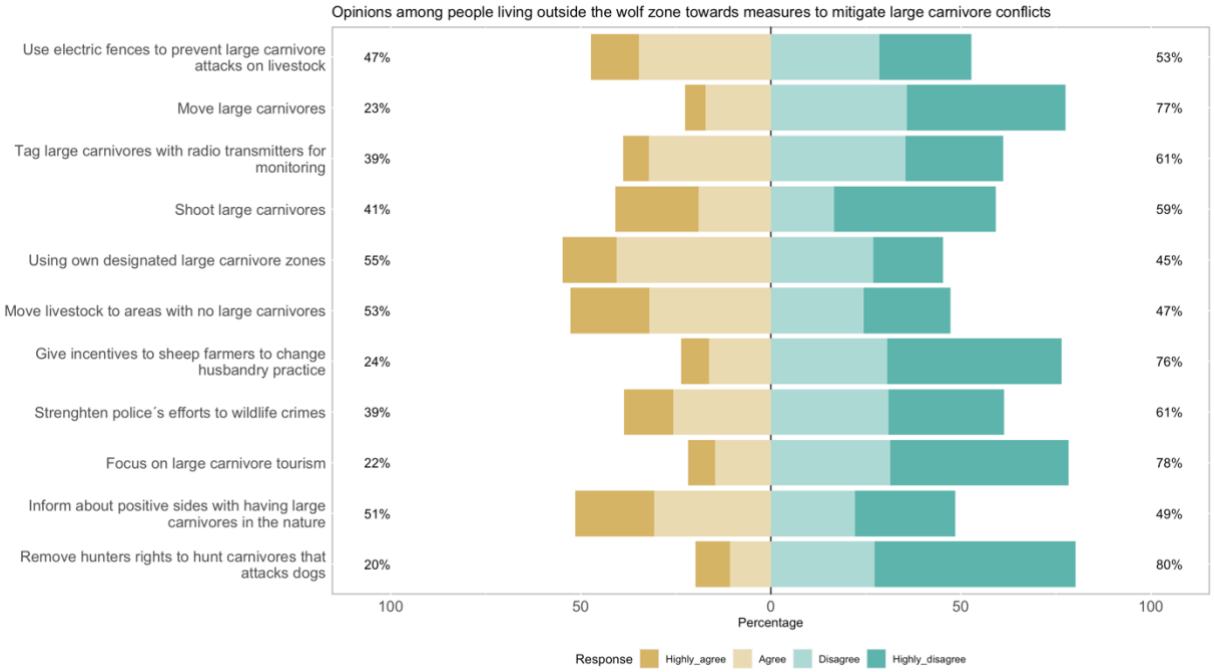
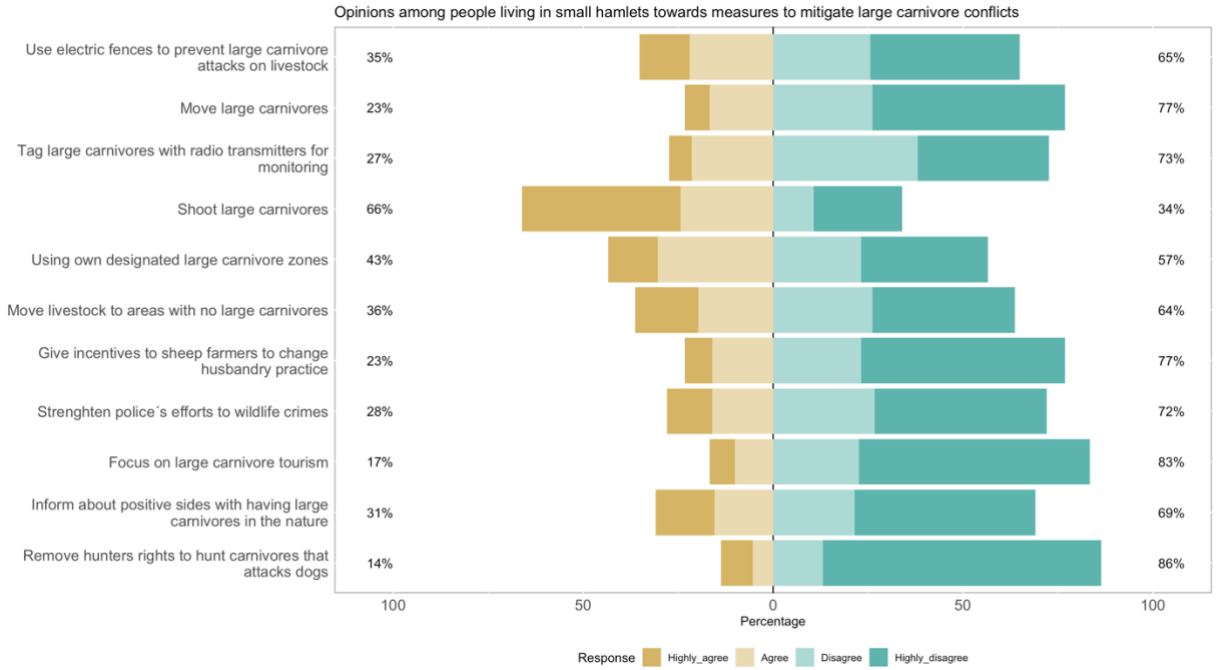
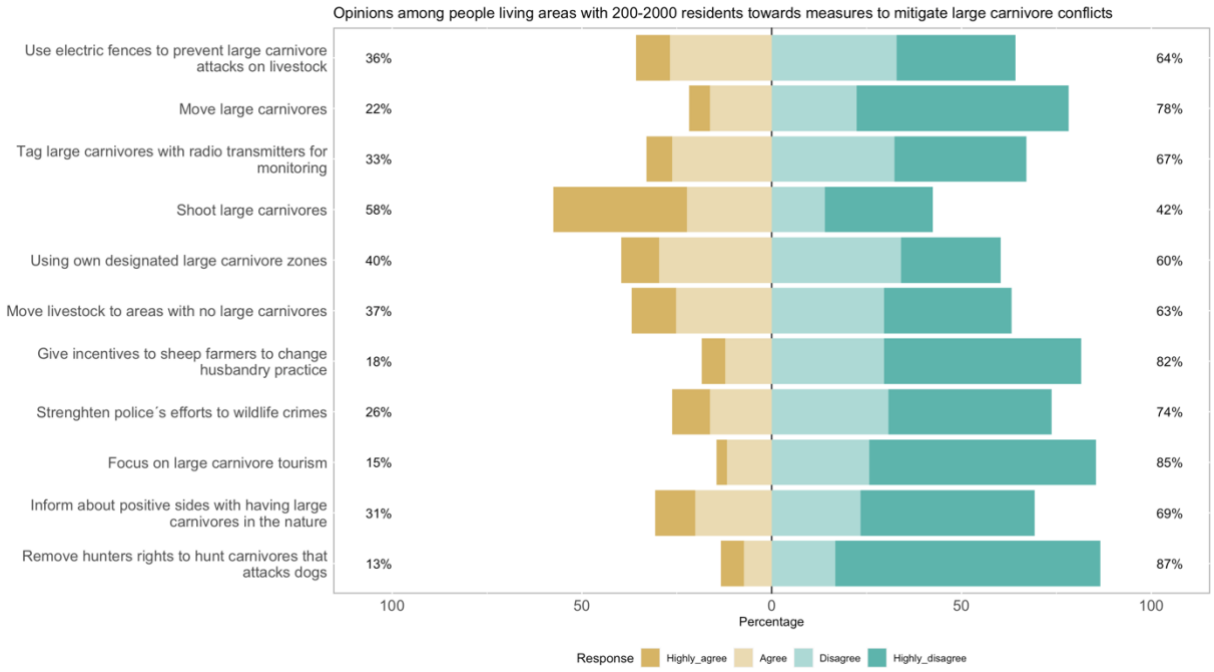


FIGURE 1. OPINIONS TOWARDS MEASURES TO MITIGATE CONFLICTS WITH LARGE CARNIVORES AMONG PEOPLE LIVING INSIDE (A) AND OUTSIDE (B) THE NORWEGIAN WOLF ZONE. THE YELLOW COLOR SHOWS POSITIVE RESPONSES (AGREE AND HIGHLY AGREE) TOWARDS THE MEASURES AND THE GREEN COLOR SHOWS NEGATIVE RESPONSES (DISAGREE AND HIGHLY DISAGREE).

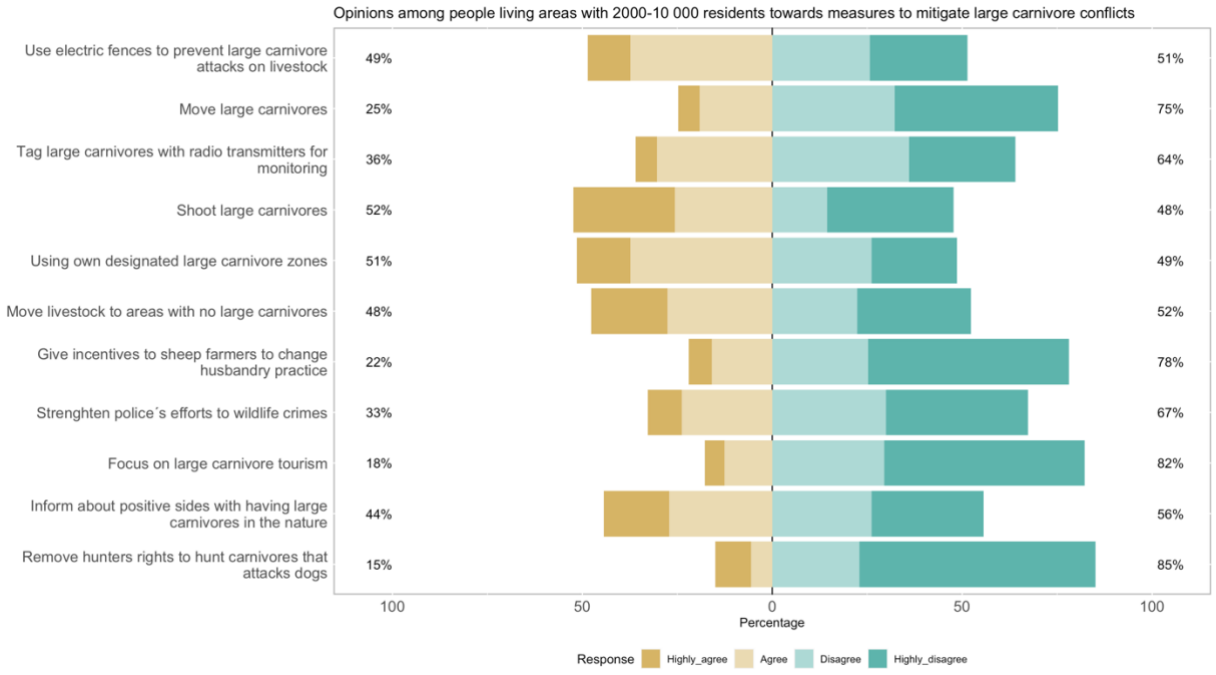
A


Opinions among people living in small hamlets towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
35%
65%
Move large carnivores
23%
77%
Tag large carnivores with radio transmitters for monitoring
27%
73%
Shoot large carnivores
66%
34%
Using own designated large carnivore zones
43%
57%
Move livestock to areas with no large carnivores
36%
64%
Give incentives to sheep farmers to change husbandry practice
23%
77%
Strenghten police´s efforts to wildlife crimes
28%
72%
Focus on large carnivore tourism
17%
83%
Inform about positive sides with having large carnivores in the nature
31%
69%
Remove hunters rights to hunt carnivores that attacks dogs
14%
86%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

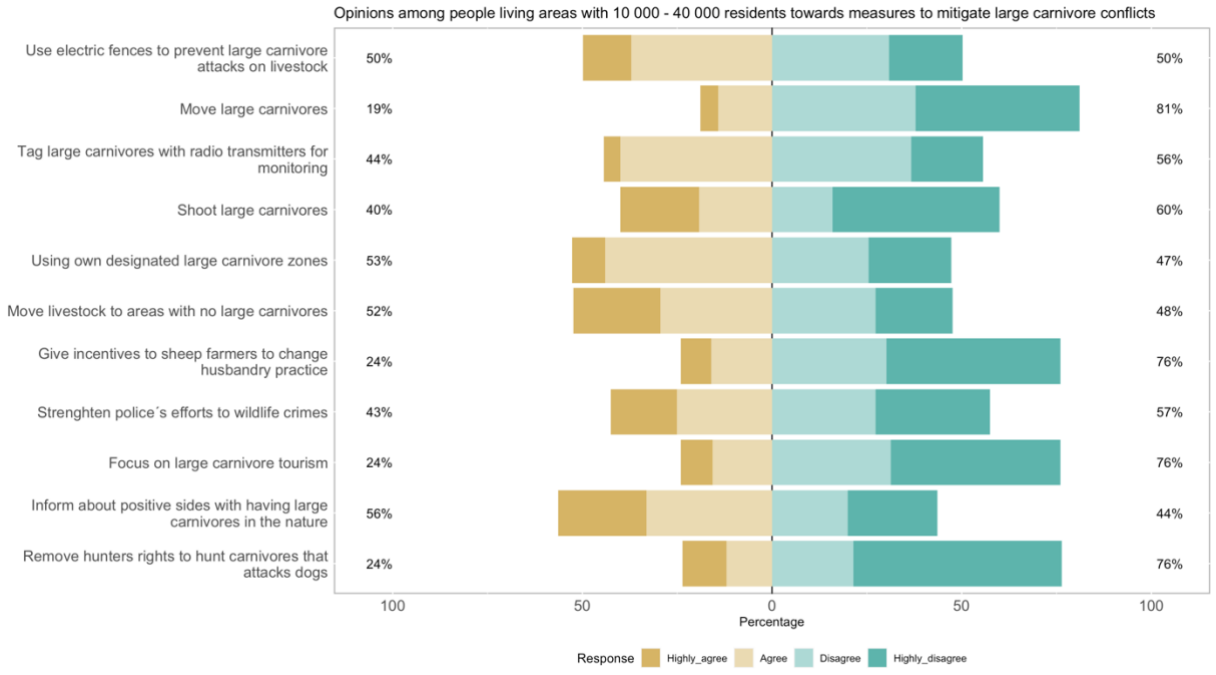
B


Opinions among people living areas with 200-2000 residents towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
36%
64%
Move large carnivores
22%
78%
Tag large carnivores with radio transmitters for monitoring
33%
67%
Shoot large carnivores
58%
42%
Using own designated large carnivore zones
40%
60%
Move livestock to areas with no large carnivores
37%
63%
Give incentives to sheep farmers to change husbandry practice
18%
82%
Strenghten police´s efforts to wildlife crimes
26%
74%
Focus on large carnivore tourism
15%
85%
Inform about positive sides with having large carnivores in the nature
31%
69%
Remove hunters rights to hunt carnivores that attacks dogs
13%
87%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

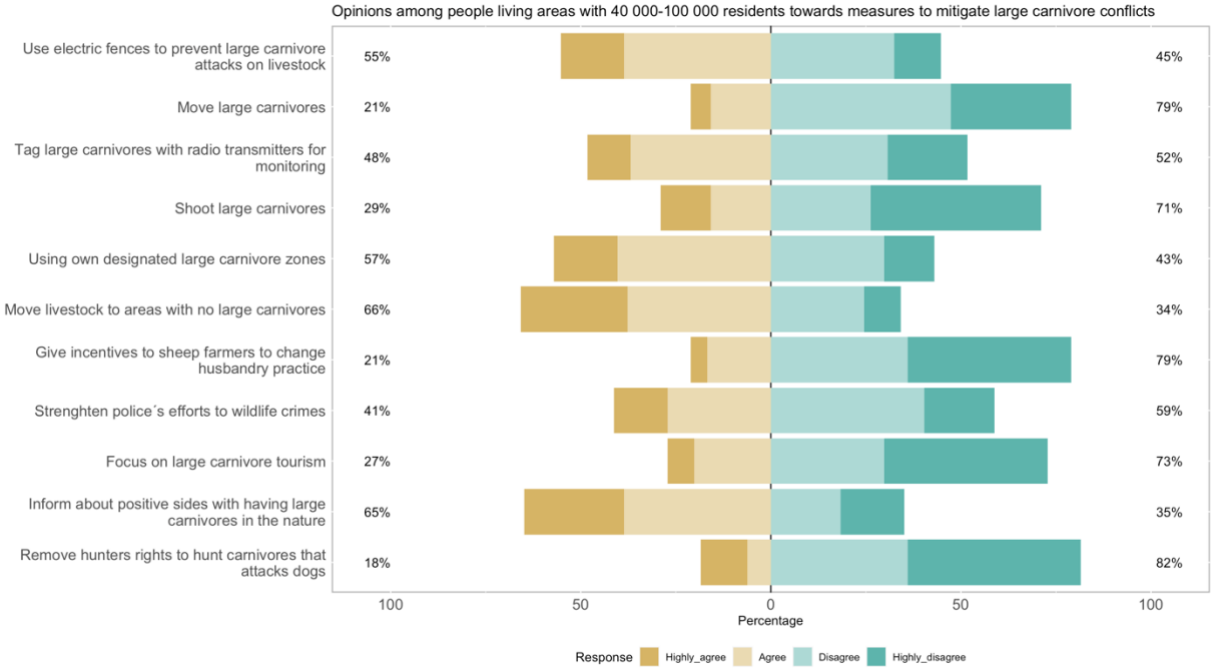
C


Opinions among people living areas with 2000-10 000 residents towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
49%
51%
Move large carnivores
25%
75%
Tag large carnivores with radio transmitters for monitoring
36%
64%
Shoot large carnivores
52%
48%
Using own designated large carnivore zones
51%
49%
Move livestock to areas with no large carnivores
48%
52%
Give incentives to sheep farmers to change husbandry practice
22%
78%
Strenghten police´s efforts to wildlife crimes
33%
67%
Focus on large carnivore tourism
18%
82%
Inform about positive sides with having large carnivores in the nature
44%
56%
Remove hunters rights to hunt carnivores that attacks dogs
15%
85%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

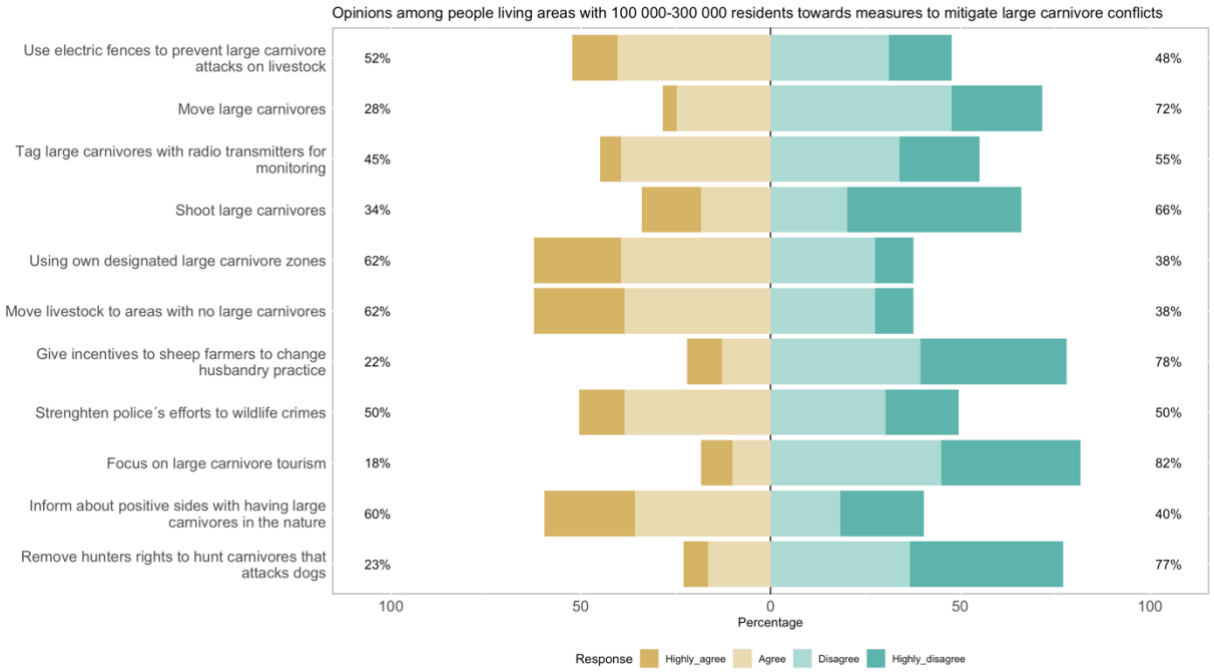
D


Opinions among people living areas with 10 000 - 40 000 residents towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
50%
50%
Move large carnivores
19%
81%
Tag large carnivores with radio transmitters for monitoring
44%
56%
Shoot large carnivores
40%
60%
Using own designated large carnivore zones
53%
47%
Move livestock to areas with no large carnivores
52%
48%
Give incentives to sheep farmers to change husbandry practice
24%
76%
Strenghten police´s efforts to wildlife crimes
43%
57%
Focus on large carnivore tourism
24%
76%
Inform about positive sides with having large carnivores in the nature
56%
44%
Remove hunters rights to hunt carnivores that attacks dogs
24%
76%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

E


Opinions among people living areas with 40 000-100 000 residents towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
55%
45%
Move large carnivores
21%
79%
Tag large carnivores with radio transmitters for monitoring
48%
52%
Shoot large carnivores
29%
71%
Using own designated large carnivore zones
57%
43%
Move livestock to areas with no large carnivores
66%
34%
Give incentives to sheep farmers to change husbandry practice
21%
79%
Strenghten police´s efforts to wildlife crimes
41%
59%
Focus on large carnivore tourism
27%
73%
Inform about positive sides with having large carnivores in the nature
65%
35%
Remove hunters rights to hunt carnivores that attacks dogs
18%
82%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

F


Opinions among people living areas with 100 000-300 000 residents towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
52%
48%
Move large carnivores
28%
72%
Tag large carnivores with radio transmitters for monitoring
45%
55%
Shoot large carnivores
34%
66%
Using own designated large carnivore zones
62%
38%
Move livestock to areas with no large carnivores
62%
38%
Give incentives to sheep farmers to change husbandry practice
22%
78%
Strenghten police´s efforts to wildlife crimes
50%
50%
Focus on large carnivore tourism
18%
82%
Inform about positive sides with having large carnivores in the nature
60%
40%
Remove hunters rights to hunt carnivores that attacks dogs
23%
77%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

G

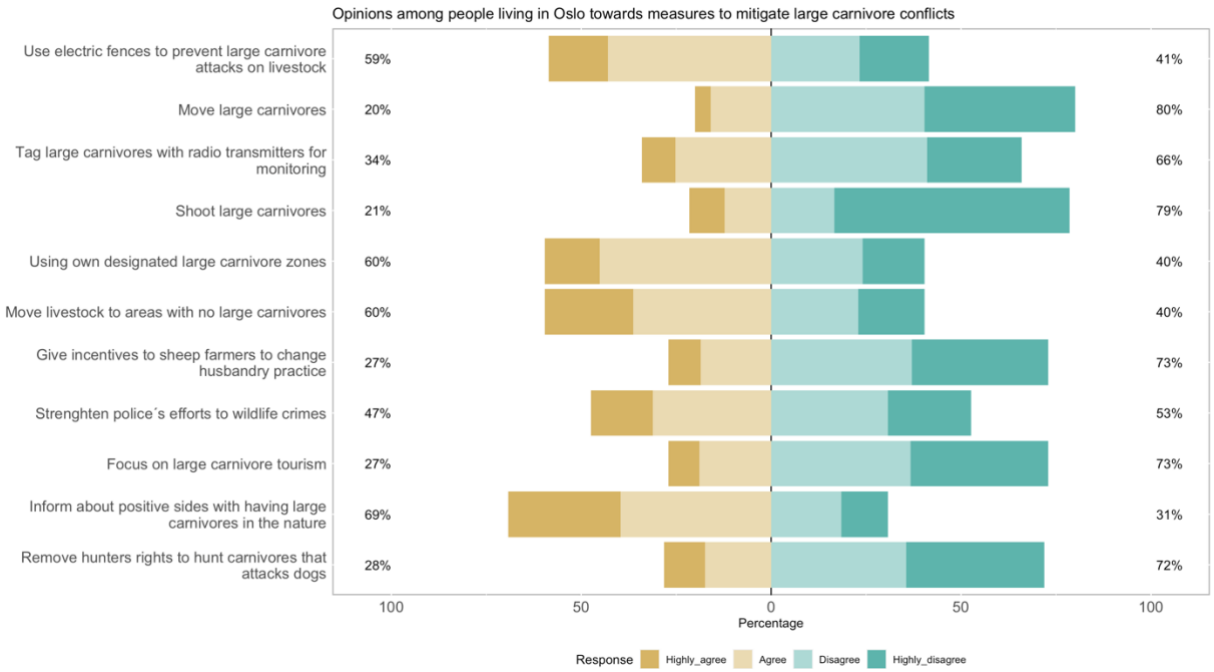
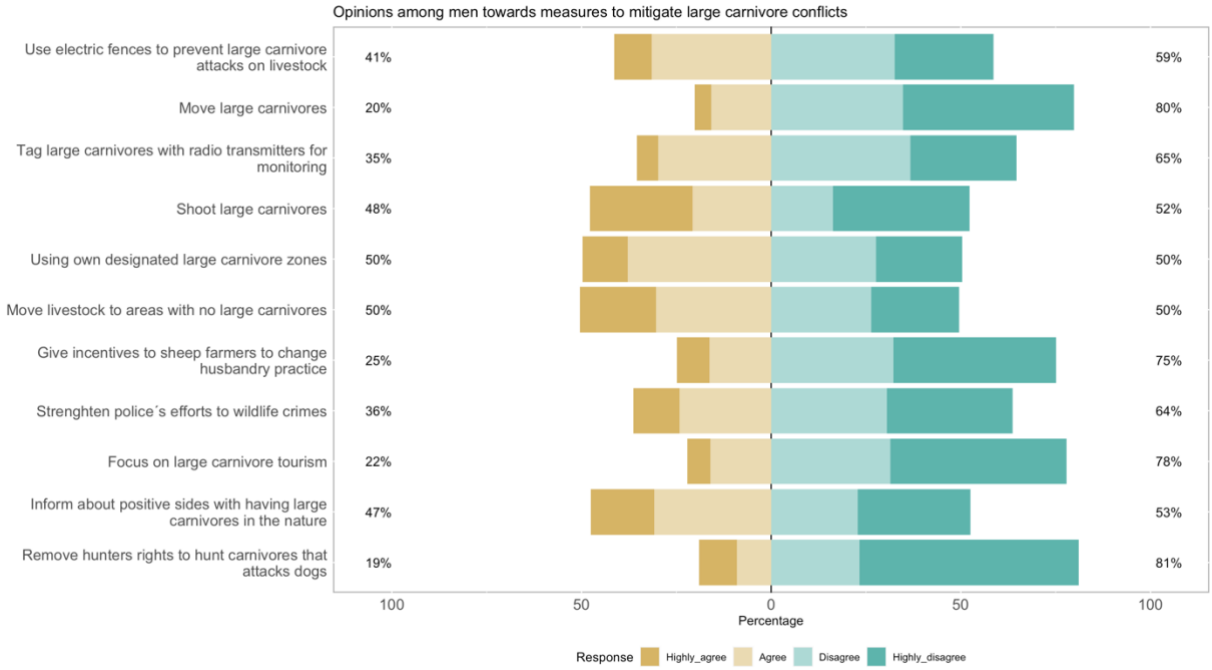


FIGURE 2. OPINIONS TOWARDS MEASURES TO MITIGATE CONFLICTS WITH LARGE CARNIVORES AMONG PEOPLE GROUPED BY NUMBER OF RESIDENTS WHERE THEY LIVE(A-G). THE YELLOW COLOR SHOWS POSITIVE RESPONSES (AGREE AND HIGHLY AGREE) TOWARDS THE MEASURES AND THE GREEN COLOR SHOWS NEGATIVE RESPONSES (DISAGREE AND HIGHLY DISAGREE).

A



B

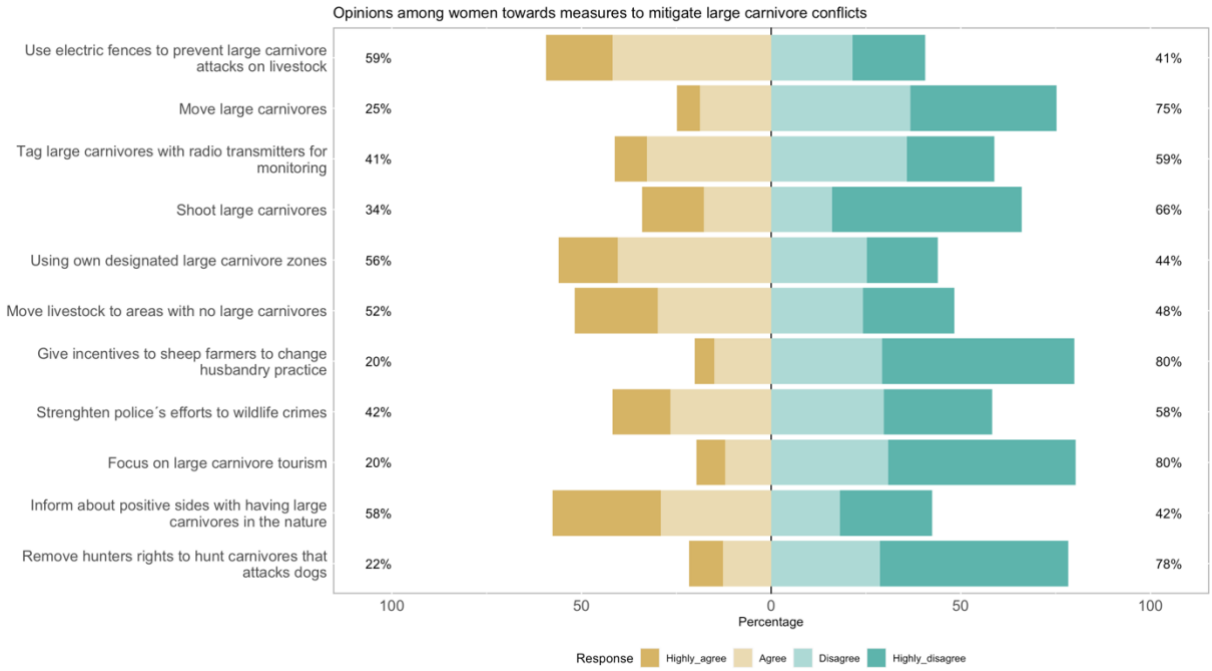
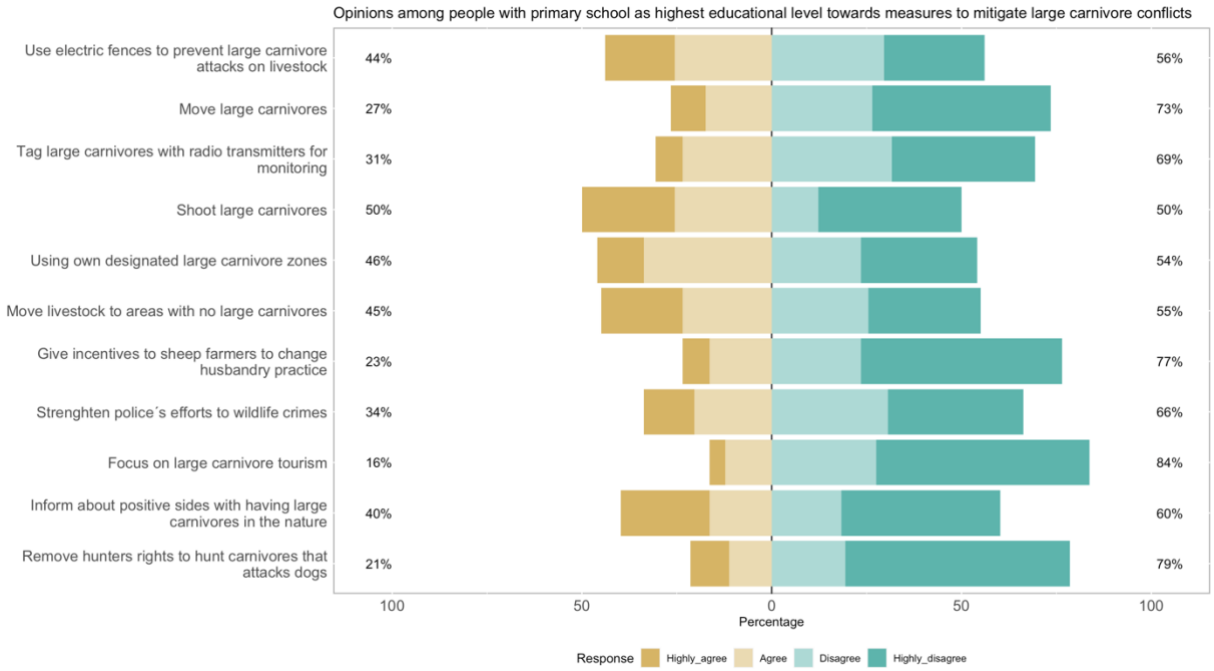
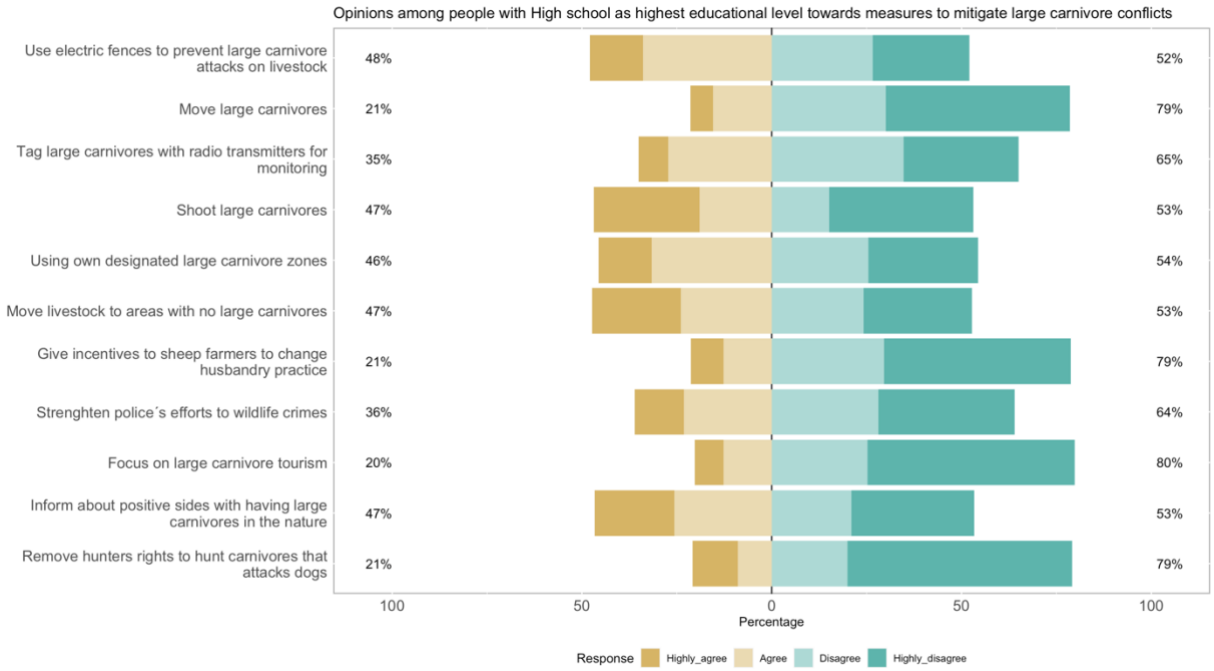


FIGURE 3. OPINIONS TOWARDS MEASURES TO MITIGATE CONFLICTS WITH LARGE CARNIVORES AMONG PEOPLE MEN (A) AND WOMEN (B). THE YELLOW COLOR SHOWS POSITIVE RESPONSES (AGREE AND HIGHLY AGREE) TOWARDS THE MEASURES AND THE GREEN COLOR SHOWS NEGATIVE RESPONSES (DISAGREE AND HIGHLY DISAGREE).

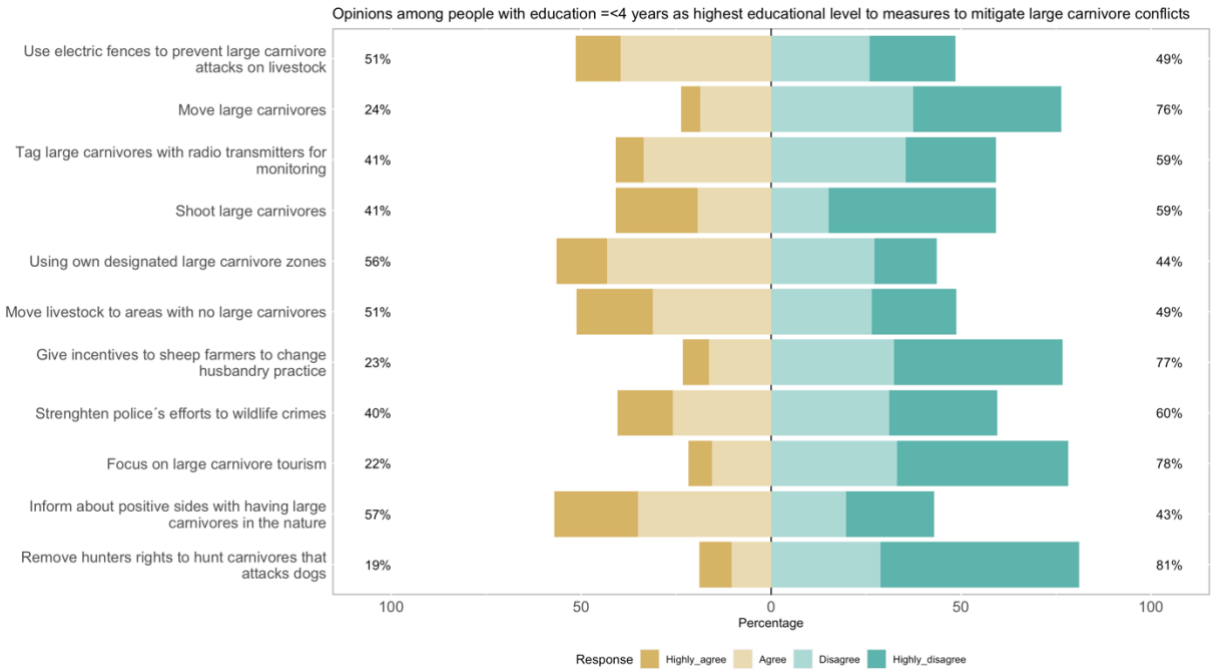
A


Opinions among people with primary school as highest educational level towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
44%
56%
Move large carnivores
27%
73%
Tag large carnivores with radio transmitters for monitoring
31%
69%
Shoot large carnivores
50%
50%
Using own designated large carnivore zones
46%
54%
Move livestock to areas with no large carnivores
45%
55%
Give incentives to sheep farmers to change husbandry practice
23%
77%
Strenghten police´s efforts to wildlife crimes
34%
66%
Focus on large carnivore tourism
16%
84%
Inform about positive sides with having large carnivores in the nature
40%
60%
Remove hunters rights to hunt carnivores that attacks dogs
21%
79%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

B


Opinions among people with High school as highest educational level towards measures to mitigate large carnivore conflicts
Use electric fences to prevent large carnivore attacks on livestock
48%
52%
Move large carnivores
21%
79%
Tag large carnivores with radio transmitters for monitoring
35%
65%
Shoot large carnivores
47%
53%
Using own designated large carnivore zones
46%
54%
Move livestock to areas with no large carnivores
47%
53%
Give incentives to sheep farmers to change husbandry practice
21%
79%
Strenghten police´s efforts to wildlife crimes
36%
64%
Focus on large carnivore tourism
20%
80%
Inform about positive sides with having large carnivores in the nature
47%
53%
Remove hunters rights to hunt carnivores that attacks dogs
21%
79%
100
50
0
50
100
Percentage
Response
Highly_agree
Agree
Disagree
Highly_disagree

C



D

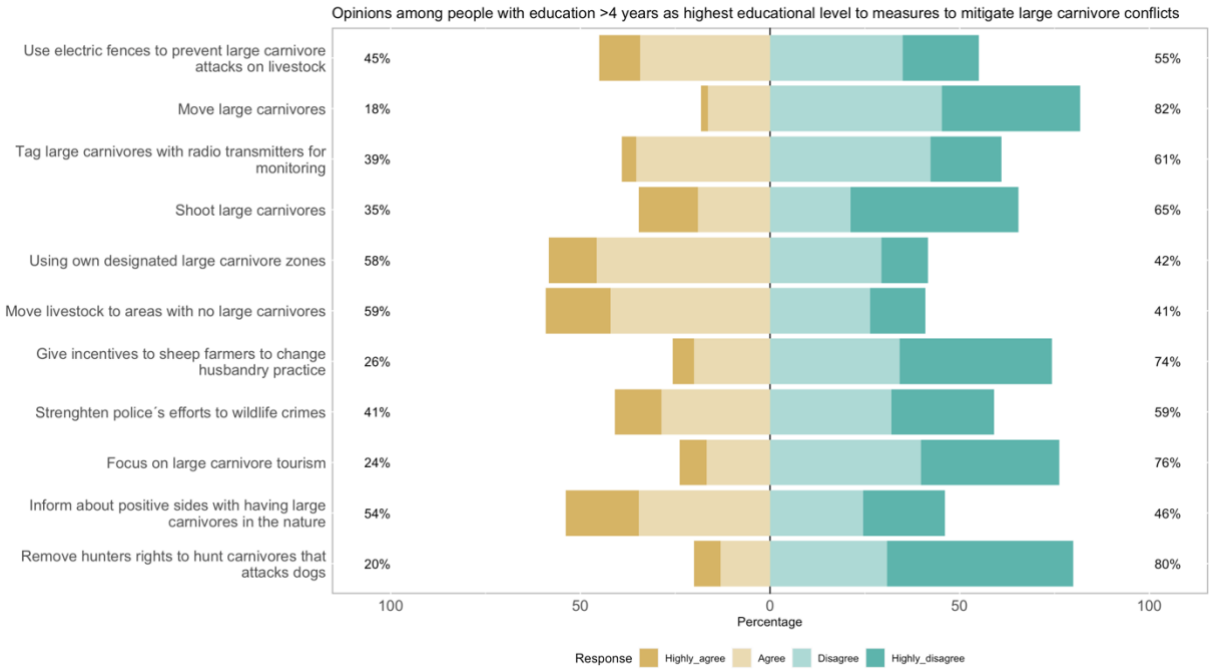
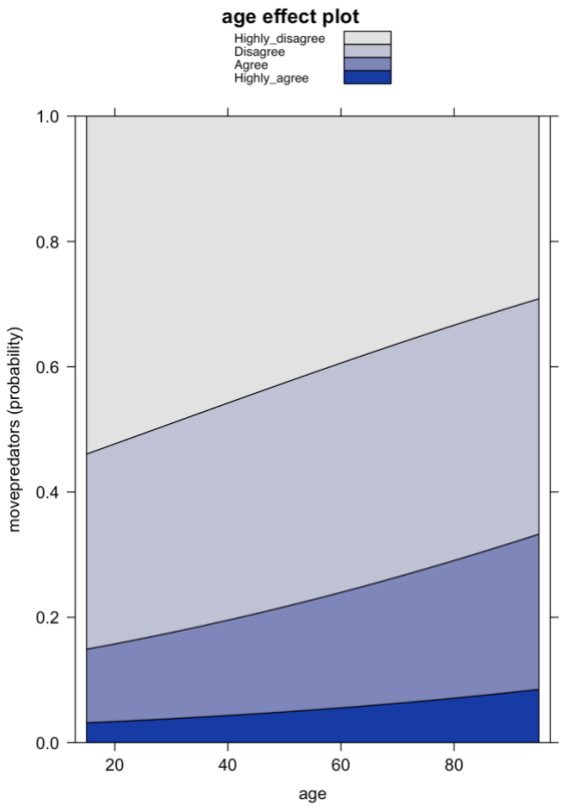
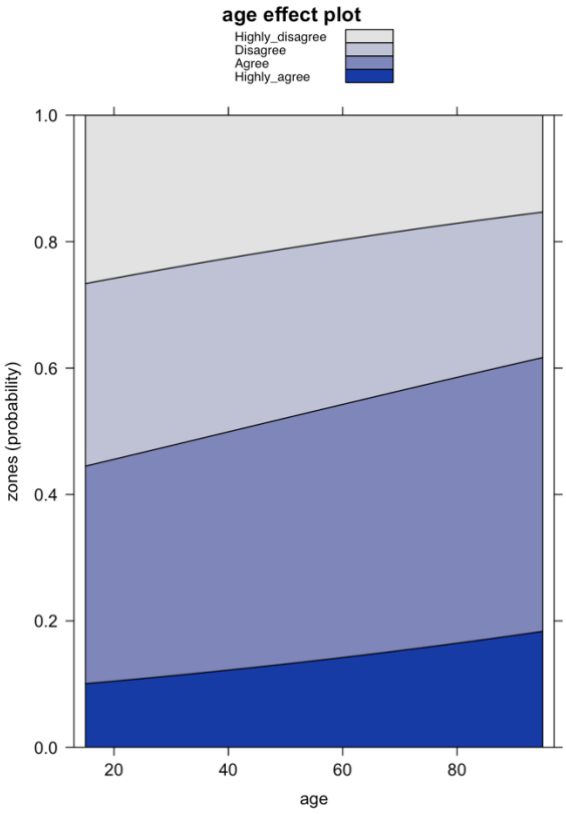


FIGURE 4. OPINIONS TOWARDS MEASURES TO MITIGATE CONFLICTS WITH LARGE CARNIVORES AMONG PEOPLE WITH DIFFERENT LEVELS OF EDUCATION OF (A-D). THE YELLOW COLOR SHOWS POSITIVE RESPONSES (AGREE AND HIGHLY AGREE) TOWARDS THE MEASURES AND THE GREEN COLOR SHOWS NEGATIVE RESPONSES (DISAGREE AND HIGHLY DISAGREE).

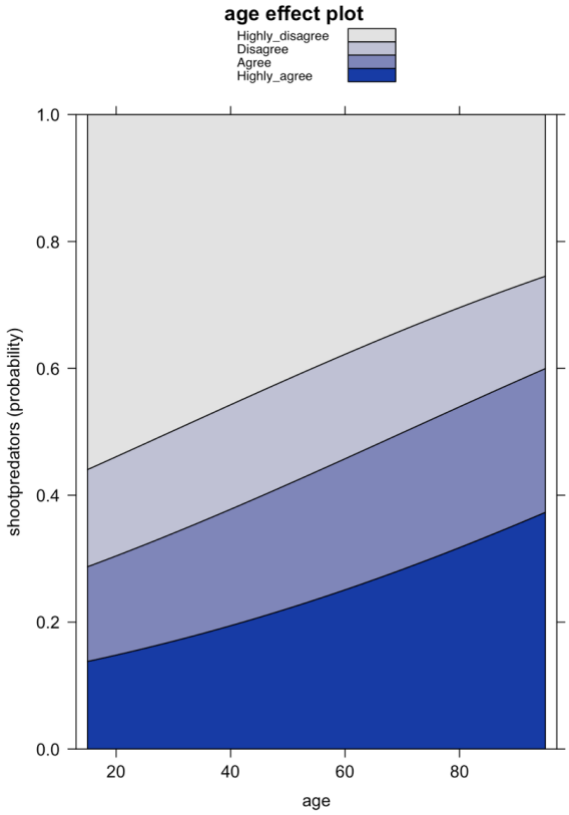
A


age effect plot
Highly_disagree
Disagree
Agree
Highly_agree
movepredators (probability)
0.0
0.2
0.4
0.6
0.8
1.0
20
40
60
80
age

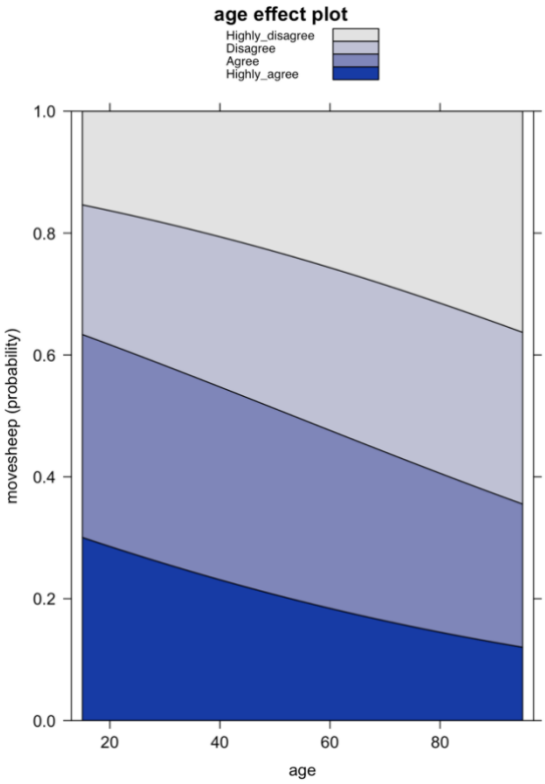
B


age effect plot
Highly_disagree
Disagree
Agree
Highly_agree
zones (probability)
0.0
0.2
0.4
0.6
0.8
1.0
20
40
60
80
age

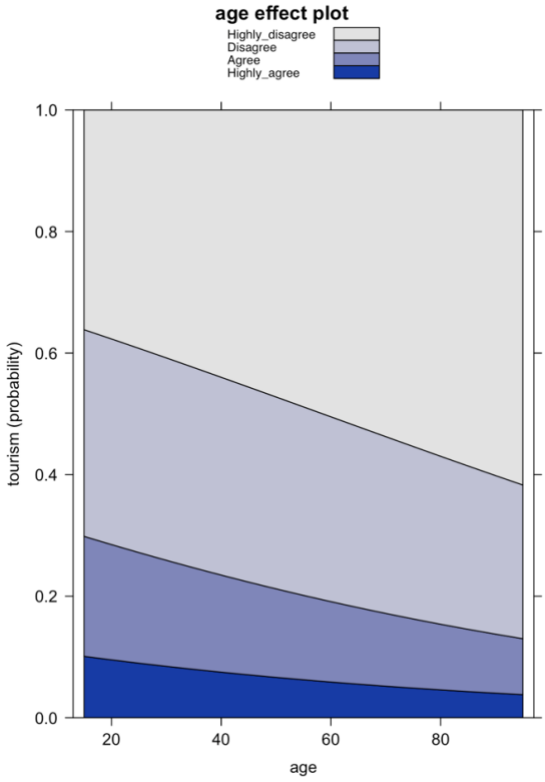
C


age effect plot
Highly_disagree
Disagree
Agree
Highly_agree
shootpredators (probability)
0.0
0.2
0.4
0.6
0.8
1.0
20
40
60
80
age

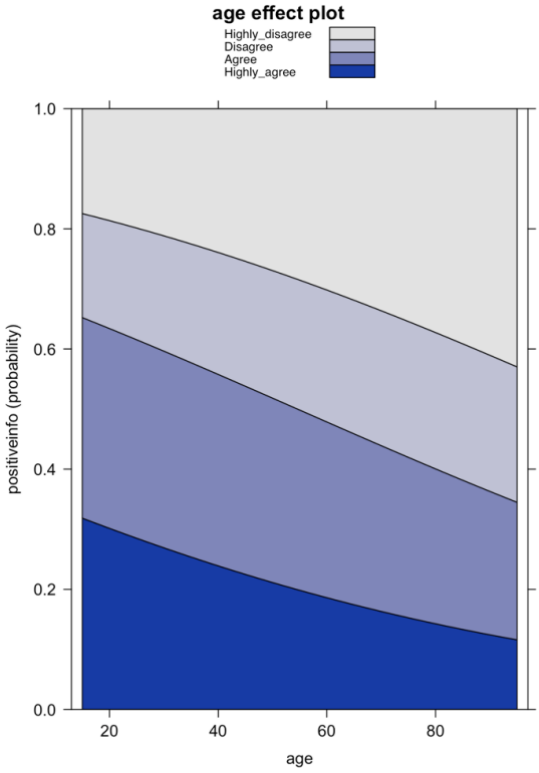
D


age effect plot
Highly_disagree
Disagree
Agree
Highly_agree
movesheep (probability)
0.0
0.2
0.4
0.6
0.8
1.0
20
40
60
80
age

E



F



G

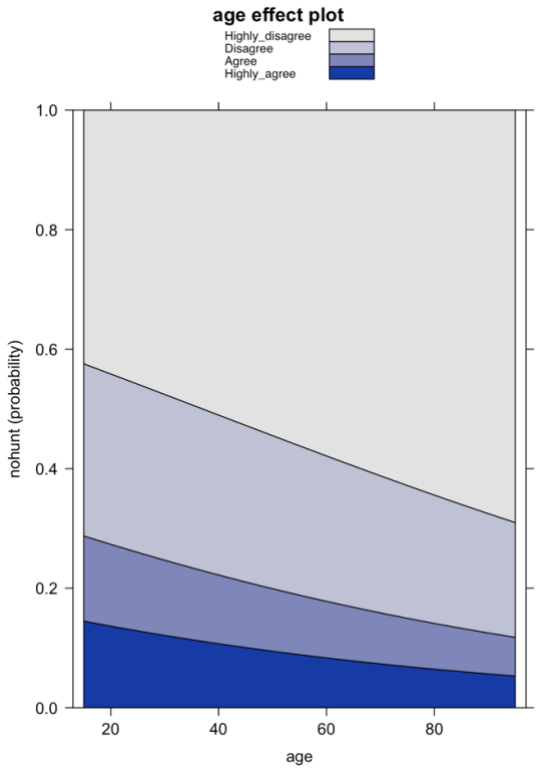


FIGURE 5. OPINIONS TOWARDS USING A. MOVE CARNIVORES, B. CARNIVORE ZONES, C. SHOOT CARNIVORES, D. MOVE LIVESTOCK, E. LARGE CARNIVORE TOURISM, F. POSITIVE INFORMATION WORK, G. REMOVE HUNTERS

RIGHTS TO SHOOT CARNIVORES THAT ATTACK DOG, AS MEASURES TO MITIGATE CONFLICTS WITH LARGE CARNIVORES AMONG PEOPLE BETWEEN 15-95 YEARS OF AGE. DARKER COLOR INDICATES HIGHER LIKELIHOOD OF BEING POSITIVE.

4.0 Discussion

The objective of this study was to investigate people's opinions on conflict mitigation measures, and how these opinions are related to age, gender, educational, if you live in the wolf zone and whether you live in an urban or rural area. This study showed that the majority of the respondents were positive towards electric fences, carnivore zones, moving livestock outside carnivore areas, translocating carnivores, and to positive information work. Many respondents were negative to move large carnivores, GPS-monitoring, funding to farmers to change husbandry practice, strengthening police efforts against wildlife crime, carnivore tourism, and removing hunters' rights to kill carnivores that attack dogs. Age, gender, education, living inside vs. outside wolf zone or on the urban-rural scale did influence opinions towards conflict mitigation measures. The urban-rural dimension was the strongest predictor as it affected attitudes to all the conflict mitigating measures. Educational level and living in the wolf zone showed to have least influence, where only attitudes towards two of the measures was affected.

Gender has previously been shown to affect opinions on issues related to large carnivores (Bjerke, Skogen & Kaltenborn, 2002, Krange et al. 2011). In this study, women were more likely to be positive towards the use of electric fences, moving large carnivores, using GPS collars for monitoring purposes, and neutral information work. Electric fences, moving large carnivores and the use of GPS are all intrusive interventions as they either physically separate carnivores by fences or translocate them, or they require immobilization and extensive resources. Previous studies have shown that people are positive to the use of large carnivore fences and GPS monitoring (Tangeland et al. 2010, Krange et al. 2012). Opinions towards the use of GPS monitoring in our results suggest that people are rather negative. A sensible explanation for the difference between our results and earlier research may be a result of an increased focus on animal welfare in the past years, and more available pictures of carnivores with GPS-collars. Men were more likely to be positive to shooting large carnivores, providing incentives to farmers to change husbandry practices, and large carnivore tourism. In previous research, women have been found to be more positive towards shooting large carnivores that attacks livestock, dogs, or cats (Bjerke et al. 2002), but in this study, men were more likely to be positive towards shooting carnivores as a conflict mitigating measure. The questionnaire did not have any option for wanting to shoot carnivores as a reaction to an attack. Respondents were only asked what they thought about "shooting large carnivores" as a conflict mitigation measure. Condensed questionnaire items give room for different interpretations, and it may be

reasonable to assume that women justify shooting carnivores after an attack rather than as a preventive measure.

Living inside the designated wolf zone had a negative effect on opinions towards the use of carnivore zones, and a positive effect on opinions towards the use of electric fences. A study by Krange et al. (2012) found that people living inside large carnivore zones were more negative to fences compared to people living outside large carnivore areas. The difference between these two studies is that Krange et al. (2012) had a sample with large carnivore-zone rather than wolf-zone as a prerequisite for their group. The discrepancy between these two studies may be due to people having more positive experiences with electric fences in areas with wolves as opposed to areas with other large carnivore species. Electric fences are one of the measures that are considered to be most efficient in preventing depredation on sheep from wolves and bears (Hansen, 2018). Lynx and wolverines have habitat requirements and behavior that makes electric fences both time-consuming and expensive, and not as efficient as for bears and wolves (Hansen, 2018). The density of animals grazing in rangelands varies from county to county. There is a low number of livestock grazing in rangelands inside the national wolf zone as most sheep graze inside fenced pastures (Ministry of climate and environment, 2021). Other carnivore zones have a higher proportion of livestock grazing in rangelands as they comprise larger geographical areas compared to the wolf zone. Traditions and stewardship are important for people (Krange & Skogen, 2011), a general opinion that sheep should be able to graze in rangelands with no fences could be more profound in areas where there is a stronger tradition of such livestock grazing.

Living in densely populated areas had a negative effect on the support for shooting large carnivores as a conflict mitigating measure, and a positive effect on opinions on all other measures. People living in areas with 40 – 100 000 residents had the highest proportion of positivity to move large carnivores. The preferred measure in rural areas was shooting carnivores, which is the measure that people living in urban areas are most negative towards. Shooting carnivores can be considered controversial (Eklund, 2019), and it may be reasonable to question if people living in urban areas have the same relationship to hunting as people living in rural areas. The proportion of hunters in smaller communities is higher compared to bigger cities (SSB, 2021). People living in urban areas with more limited tradition for hunting may have less knowledge about the difference between license-hunt, hunting as damage control, or other types of hunting. There is a stronger tradition and stewardship in rural areas to traditional land use compared to larger communities (Bjerke, Kaltenborn & Vittersø, 1999, Krange & Skogen, 2011). People may be more positive to the culling of some large carnivores if it prevent

livestock losses in areas where many residents who are hunters or have an affinity to a hunting culture. If people in rural areas are more knowledgeable on how the culling of large carnivores is performed, they may interpret "shooting large carnivores" as similar to "culling large carnivores", whilst people with less knowledge about hunting will associate "shooting large carnivores" as something unethical or emotionally disturbing. Krange et al. (2012) found that 53% inside Norwegian carnivore zones and 59% inside Swedish carnivore zones was positive to the culling of large carnivores. Supporting the interpretation that people in rural areas have a more nuanced view on shooting large carnivores, is that despite that most people living inside carnivore zones are positive towards large carnivores (Krange et al. 2012).

A higher level of education had a positive effect on opinions towards carnivore zones and large carnivore tourism as a conflict mitigation measure. As culture, local attitudes, and government policy are factors that all influence opinions of large carnivores, these results may suggest that education itself is not a strong predictor. Education has been an important factor in previous large carnivore-related studies, but it might be an important indicator for socio-cultural capital rather than education alone (Krange et al. 2011). To the support of this study, people with a higher level of education have higher trust in management authorities (Skogen et al. 2010). It is also a higher proportion of people with higher education in urban areas outside the wolf zone (SSB, 2021), this study show that people living in urban areas and outside the wolf zone is more positive towards carnivore zones.

Younger people were more positive towards positive information work, large carnivore tourism, move livestock, and removing hunters' right to kill carnivores that attack dogs. Older people were more supportive of translocating large carnivores and to the use of carnivore zones. These findings suggest that younger people are more positive about non-invasive measures. It may be that some respondents interpreted the statement "inform about positive sides of having large carnivores in nature" as an attempt to justify having large carnivores by focusing on positive effects rather than the negative effects of having large carnivores. Another interpretation of the same statement may be, "positive information" in the sense of reducing conflicts by giving neutral, and scientific information about large carnivores to provide a more nuanced picture of the carnivores themselves. The Norwegian Environmental Agency has established four centers with a goal to teach people about large carnivore biology, conflicts, and science with the goal to reduce large carnivore conflicts (Rovdyrsenter, 2021). The younger part of the adult population ($\leq$ 49 years) has a higher level of education (SSB, 2021) and a higher trust in science (Barmoen et al., 2021). Young people may therefore have a

higher trust in scientific information to better understand a topic or conflict. These two interpretations of the same question in the survey could potentially be a source of confounder.

5.0 Conclusion and management implications

Measures that have shown to reduce conflicts and depredation from large carnivores are electric fences, culling, moving livestock, funding for farmers to change husbandry practice, and positive information work (Hansen et al. 2020). This study suggests that the general population is positive towards the use of three of these measures; electric fences, own designated carnivore zones and positive information work. Although the general population is positive towards these measures, this study shows that there are different opinions between people living in rural- and urban areas, gender, age, living in relation to the wolf zone, and educational level. Wolf zone did not have the strongest effect in our analysis, but it did have an effect on opinions to carnivore zones and electric fences. People were generally positive towards the use of electric fences and positive information work, but there was still a high proportion of the respondents being negative. The majority were negative towards the use of GPS collars, moving large carnivores, funding for farmers to change husbandry practice, and carnivore zones. As people living inside carnivore zones live in areas where conflict mitigating measures are used, the highest potential to mitigate conflicts should be found there. By choosing measures that this group of people are positive towards, it could potentially result in higher satisfaction with the management. The high proportion of people being negative towards the other recommended measures indicates the need for management authorities to take opinions towards mitigating measures into consideration in handling large carnivore conflicts. Further research to assess people's opinions on other recommended mitigating measures will contribute to a wider understanding. Initially, it may be relevant to include people's opinions on measures in a possible new evaluation of conflict mitigating measures in the future.

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Appendix

TABLE 2. STEPWISE LOGLIKELIHOOD TEST SHOWING PREDICTOR VARIABLES TO GET BEST MODEL (MARKED AS BOLD) FOR EACH CONFLICT MITIGATING MEASURE.

Candidate models	Df	Loglikelihood	Chisq	Pr(>chisq)
(I)Opinions towards electric fence as conflict mitigating measure				
Wolf zone + gender + population size + age + education	15	-1720.7		
Wolf zone + Gender + population size + age	12	-1721.4	1.4215	0.700
Wolf zone + gender + population size	11	-1722.2	1.7606	0.184
Gender + population size	10	-1727.9	11.234	<0.001***
(II)Opinions to moving large carnivores as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1545.4		
Gender + age + population size + education	14	-1545.4	0.072	0.788
Gender + age + population size	11	-1546.9	2.880	0.410
Age + population size	10	-1550.2	6.653	<0.01**
(III)Opinions to using radio monitoring as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1656.9		
Wolf zone + gender + population size + education	14	-1656.9	0.064	0.800
Gender + population size + education	13	-1657.6	1.250	0.264
Population size + education	10	-1660.8	6.514	0.089
Population size	9	-1663.7	5.768	0.0163*
(IV)Opinions to shooting carnivores as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1657.7		
Gender + age + population size + education	14	-1657.7	0.042	0.838
Gender + age + population size	11	-1659.1	2.859	0.414
Gender + population size	10	-1670.6	22.911	<0.001***
(V) Opinions to designated carnivore zones as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1710.8		
Wolf zone + age + population size + education	14	-1712.4	3.125	0.077
Wolf zone + age + population size	11	-1719.0	13.162	<0.01**
(VI) Opinions to moving sheep as conflict mitigating measure				
wolf zone + gender + age + population size + education	15	-1787.4		
Wolf zone + age + population size + education	14	-1787.4	0.060	0.806
Age + population size + education	13	-1787.5	0.159	0.069

Population size + age	10	-1788.5	1.954	0.582
Population size	9	-1797.7	18.521	<0.001***
(VII) Opinions to substitutes to farmers to change industry				
Wolf zone + gender + age + population size + education	15	-1580.7		
Gender + age + population size + education	14	-1580.8	0.137	0.711
Gender + population size + education	13	-1581.1	0.604	0.437
Gender + population size	10	-1582.5	2.917	0.405
Population size	9	-1588.5	11.8	<0.001***
(VIII) Opinions to strengthening police efforts to wildlife crimes as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1750.9		
Wolf zone + gender + age + population size	12	-1752.0	2.126	0.545
Gender + age + population size	11	-1752.2	0.478	0.489
Age + population size	10	-1753.4	17.1	0.132
Population size	9	-1754.6	2.51	0.113
(IX) Opinions to carnivore tourism as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1530.4		
Gender + age + population size + education	14	-1530.4	0.007	0.934
Gender + age + population size	11	-1535.2	9.603	<0.05*
(X) Opinions to focus on positive information work as conflict mitigating measure				
Wolf zone + gender + age + population size + education	15	-1743.3		
Gender + age + population size + education	12	-1745.6	4.491	0.213
Gender + age + population size	11	-1746.8	2.496	0.114
Age + population size	10	-1752.4	11.108	<0.001***
(XI) Opinions on removing hunters rights to shoot carnivores in self-defence when attacking dogs				
Wolf zone + gender + age + population size + education	15	-1464.6		
Gender + age + population size + education	14	-1464.6	0	0.991
Gender + age + population size	11	-1465.0	0.772	0.856
Age + population size	10	-1466.3	2.642	0.104
Population size	9	-1473.7	14.748	<0.001***

Spørreskjema om rovdyr i Norge 2018

Prosjekt	**1708565201**
Skjemanummer	

Spørsmålene skal besvares av den skjemaet er adressert til. Les nøye gjennom spørsmålene og svaralternativene før du merker av dine svar ved å krysse av i ruten til høyre for eller rett under det svaret som passer. Utfylling skal skje når du er alene og helst uten at andre blir kjent med svarene du gir.

Alle dine svar blir behandlet konfidensielt. Som deltaker i undersøkelsen er du anonym og ingen svar knyttes til navnet på den som har svart.

Først trenger vi noen opplysninger om deg selv, slik at vi senere kan se på forskjeller i svar mellom ulike grupper av spurte.

1 **Kjønn, er du mann eller kvinne?**

- Mann ☐ 1
- Kvinne ☐ 2

2 **Alder, hvor gammel er du?**

Skriv alder (et tall i hver ¨bås¨) ☐☐ 1

3 **Omtrent hvor mange er det som bor på stedet der du bor?**

Ett svar

- Mindre grend eller spredtbygd strøk ☐ 1
- 200-2000 innbyggere ☐ 2
- 2000-10 000 innbyggere ☐ 3
- 10 000-40 000 innbyggere ☐ 4
- 40 000-100 000 innbyggere ☐ 5
- 100 000-300 000 innbyggere ☐ 6
- Bor i Oslo ☐ 7
- Vet ikke ☐ 8

4 **Hva er din hovedbeskjeftigelse for tida? Hvilken type stilling har du?**

Ett svar

- Arbeider/operatør, ufaglært ☐ 01
- Arbeider/operatør, faglært ☐ 02
- Toppleder/ Daglig leder ☐ 03
- Funksjonær, ledende stilling ellers ☐ 04
- Funksjonær ellers ☐ 05
- Selvstendig ☐ 06
- Elev/Student/Lærling ☐ 07
- For tiden arbeidsløs ☐ 08
- Alderspensjonist ☐ 09
- Trygdet ☐ 10
- Gift uten eget betalt arbeid ☐ 11
- Annet ☐ 12

5 **Har du selv betalt arbeid på heltid eller deltid?**

Ett svar

- Ja, heltid ☐ 1
- Ja, deltid ☐ 2
- Varierer ☐ 3
- Nei ☐ 4

6 **Innen hvilken bransje arbeider du?**

Ett svar. Det som passer best.

- Jordbruk/Skogbruk ☐ 01
- Fiske / fangst ☐ 02
- Industri/Bergverk/ Olje ☐ 03
- Bygg og anlegg ☐ 04
- Varehandel/Butikk ☐ 05
- Samferdsel/Transport/Post/ Tele ☐ 06
- Helsevesen/Sosialomsorg ☐ 07
- Undervisning/Forskning ☐ 08
- Bank/Forsikring/Finans ☐ 09
- Reiseliv/ hotell/ restaurant/ servering ☐ 10
- Annen forretningsmessig tjenesteyting ☐ 11
- Offentlig administrasjon/Forsvar/ Politi/ Rettsvesen ☐ 12
- Interesseorganisasjon/ Frivillig organisasjon ☐ 13
- Annen bransje ☐ 14
- Ingen bransje/ Arbeider ikke ☐ 15

7 **Arbeider du i offentlig eller privat virksomhet?**

Ett svar, der du har din hovedinntekt

- Offentlig stat ☐ 1
- Offentlig kommune ☐ 2
- Privat ☐ 3
- Andre svar ☐ 4
- Arbeider ikke ☐ 5

8 **På hvilket nivå er din høyeste fullførte utdanning?**

Ett svar

- Folkeskolenivå (Inntil 8 års skolegang) ☐ 1
- Ungdomsskole/ Realskolenivå (9-10 års skolegang) ☐ 2
- Videregående skole - Almennfag/ Gymnasnivå (11-13 års skolegang) ☐ 3
- Videregående skole - Yrkesfag/ fagbrev/ yrkesskolenivå ☐ 4
- Universitet/ Høyskole, lavere grad (Bachelor, Cand.mag/ høyskoleutdanning uten sivilgrad (f.eks. Sykepleier, Lærer, Politi etc.) ☐ 5
- Universitet/ Høyskole, høyere grad (Master, Hovedfag, høyskoleutdanning med sivilgrad, f.eks. Sivilingeniør, Siviløkonom etc.) ☐ 6

9 **Hvor mange bøker tror du det er hjemme hos deg? (50 bøker er ca. 1 meter i bokhylla.)**

Ett svar

- Ingen ☐ 1
- Mindre enn 20 bøker ☐ 2
- 20 - 50 bøker ☐ 3
- 50 - 100 bøker ☐ 4
- 100 - 500 bøker ☐ 5
- 500 - 1000 bøker ☐ 6
- mer enn 1000 bøker ☐ 7
- Vet ikke ☐ 8

10 **Hvilke av disse tingene fantes hjemme hos deg da du vokste opp?**

Gjerne flere svar

- Piano ☐ 1,
- Sjakkspill ☐ 2,
- Bøker på andre språk enn norsk ☐ 3,
- Ingen av dem ☐ 4.

11 **Hva er/ var dine foreldres høyeste fullførte utdannelse?**

SVAR BÅDE PÅ DELSPØRSMÅL A FOR MOR OG B FOR FAR

	11.A **Mors utdannelse** ETT SVAR	**11.B** **Fars utdannelse** ETT SVAR
Folkeskolenivå (Inntil 8 års skolegang)	☐ 1	☐ 1
Ungdomsskole/ Realskolenivå (9-10 års skolegang)	☐ 2	☐ 2
Videregående skole - Almennfag/ Gymnasnivå (11-13 års skolegang)	☐ 3	☐ 3
Videregående skole - Yrkesfag/ fagbrev/ yrkesskolenivå	☐ 4	☐ 4
Universitet/ Høyskole, lavere grad (Bachelor, Cand.mag/ høyskoleutdanning uten sivilgrad, f.eks. Sykepleier, Lærer, Politi etc.)	☐ 5	☐ 5
Universitet/ Høyskole, høyere grad (Master, Hovedfag, høyskoleutdanning med sivilgrad, f.eks. Sivilingeniør, Siviløkonom etc.)	☐ 6	☐ 6
Vet ikke	☐ 7	☐ 7

12 **Når det gjelder natur- og miljøspørsmål, hvor stor tillit vil du si at du har til følgende aktører og institusjoner?**

MERK AV ETT SVAR I HVER LINJE	Meget stor tillit	Ganske stor tillit	Litt tillit	Ingen tillit	Vet ikke	
	1	2	3	4	5	
• Statens naturoppsyn (SNO)	☐	☐	☐	☐	☐	1
• Vanlige folk som bruker sunn fornuft	☐	☐	☐	☐	☐	2
• Norges Bondelag	☐	☐	☐	☐	☐	3
• Stortingspolitikere	☐	☐	☐	☐	☐	4
• Rovdyrforskere i Norge	☐	☐	☐	☐	☐	5
• Lokalpolitikere	☐	☐	☐	☐	☐	6
• Miljødirektoratet	☐	☐	☐	☐	☐	7
• Klima- og miljødepartementet	☐	☐	☐	☐	☐	8
• Naturvernforbundet	☐	☐	☐	☐	☐	9
• Erfarne jegere	☐	☐	☐	☐	☐	10
• Norsk institutt for naturforskning (NINA)	☐	☐	☐	☐	☐	11

13 **Hvor enig eller uenig er du i følgende påstander om miljøsaker?**

Merk av ett svar i hver linje

	Helt uenig (1)	2	3	4	5	Helt enig (6)	Vet ikke	
	1	2	3	4	5	6	7	
• Jeg er villig til å betale mer skatt som er øremerket til å verne om miljøet	☐	☐	☐	☐	☐	☐	☐	1
• Jeg ser på miljøproblemer i andre land som mitt problem også	☐	☐	☐	☐	☐	☐	☐	2
• Jeg synes det er viktig å gi penger til TV-aksjoner med miljøvennlig formål ...	☐	☐	☐	☐	☐	☐	☐	3
• Dyr og planter har like stor rett til å leve på jorda som mennesker	☐	☐	☐	☐	☐	☐	☐	4
• Jeg syns det er riktig at norsk naturvernlovgivning har naturens egenverdi som utgangspunkt	☐	☐	☐	☐	☐	☐	☐	5
• Naturen gir meg en følelse av å høre til i en større sammenheng	☐	☐	☐	☐	☐	☐	☐	6

14 **Folk kan føle frykt for å møte ulike dyr i norsk natur. Hvor stor frykt føler du for å møte hvert av følgende dyr?**

MERK AV ETT SVAR I HVER LINJE

	Stor frykt	En viss frykt	Liten eller ingen frykt	
	1	2	3	
• Gaupe	☐	☐	☐	1
• Kuer	☐	☐	☐	2
• Elg	☐	☐	☐	3
• Huggorm	☐	☐	☐	4
• Grevling	☐	☐	☐	5
• Bjørn	☐	☐	☐	6
• Flått	☐	☐	☐	7
• Løshund	☐	☐	☐	8
• Ulv	☐	☐	☐	9
• Kongeørn	☐	☐	☐	10
• Jerv	☐	☐	☐	11

Så kommer noen spørsmål om rovdyr og rovdyrforvaltning.

15 **Hvor engasjert er du i spørsmål om rovdyr og rovdyrforvaltning i Norge?**

Ett svar

Svært engasjert	☐ 1
Nokså engasjert	☐ 2
Noe engasjert	☐ 3
Ikke engasjert	☐ 4
Vet ikke	☐ 5

16 **Rovdyrkonfliktene kan håndteres på forskjellige måter. I hvor stor grad tror du følgende tiltak kan redusere konfliktene som noen mener at rovdyrene skaper?**

MERK AV ETT SVAR I HVER LINJE	I meget stor grad	I ganske stor grad	I mindre grad	I liten eller ingen grad	Vet ikke	
	1	2	3	4	5	
• sette opp elektriske gjerder for å hindre rovdyr i å angripe husdyr.	☐	☐	☐	☐	☐	1
• flytte rovdyr.	☐	☐	☐	☐	☐	2
• merke rovdyr med radiosender slik at de kan overvåkes.	☐	☐	☐	☐	☐	3
• skyte rovdyr.	☐	☐	☐	☐	☐	4
• opprette/opprettholde egne soner hvor rovdyra har lov til å være (eks. ulvesonen).	☐	☐	☐	☐	☐	5
• flytte sauebesetninger til beiter i områder uten rovdyr.	☐	☐	☐	☐	☐	6
• gi sauebønder midler til å starte annen næring	☐	☐	☐	☐	☐	7
• styrke politiets innsats mot faunakriminalitet	☐	☐	☐	☐	☐	8
• satse på rovdyrturisme	☐	☐	☐	☐	☐	9
• informere om positive sider ved å ha rovdyr i norsk natur	☐	☐	☐	☐	☐	10
• ta fra jegere retten til å skyte rovdyr som angriper hund	☐	☐	☐	☐	☐	11

Så kommer noen spørsmål om jakt

17 **Hva er din grunnleggende innstilling til jakt?**

Ett svar

- Jeg er negativ til jakt ☐ 1
- Jeg har ingen klar oppfatning om jakt ☐ 2
- Jeg godtar jakt ☐ 3
- Jeg er positiv til jakt ☐ 4
- Vet ikke ☐ 5

18 **Har du selv vært på i jakt i løpet av de siste fem årene?**

Ett svar

- Ja ☐ 1
- Nei ☐ 2
- Vet ikke ☐ 3

Så kommer noen spørsmål om ulv spesielt.

19 **Hva syns du om at ulv finnes i Norge?**

ETT SVAR

- Misliker sterkt ☐ 1
- Misliker ☐ 2
- Nøytral ☐ 3
- Liker ☐ 4
- Liker godt ☐ 5

20 **Hva syns du om å ha ulv i naturen der du bor?**

ETT SVAR

- Misliker sterkt ☐ 1
- Misliker ☐ 2
- Nøytral ☐ 3
- Liker ☐ 4
- Liker godt ☐ 5

21 **Kunne du godta å ha ulv i nærheten av der du bor?**

ETT SVAR

- Nei, absolutt ikke ☐ 1
- Nei, helst ikke ☐ 2
- Ja, kanskje ☐ 3
- Ja, absolutt ☐ 4
- Vet ikke ☐ 5

22 **Ønsker du flere eller færre ulv i naturen der du bor, eller er det passe som det er?**

ETT SVAR

- Ønsker flere ☐ 1
- Ønsker færre ☐ 2
- Passe som det er ☐ 3
- Vet ikke ☐ 4

23 **Finnes det ulv i naturen der du bor?**

Ett svar

Ja ..... ☐ 1,
Nei ..... ☐ 2,
Vet ikke ..... ☐ 3.

24 **Regner du med at det vil komme ulv i traktene der du bor i løpet av de nærmeste årene?**

☆

Ja ..... ☐ 1
Nei ..... ☐ 2
Vet ikke ..... ☐ 3

25 **Bor du i forvaltningssonen for ulv, den såkalte «ulvesonen»?**

Ja ..... ☐ 1
Nei ..... ☐ 2
Vet ikke ..... ☐ 3

26 **Hva synes du om å drive jakt på ulv?**

ETT SVAR

Bør tillates ..... ☐ 1
Kan tillates under tvil ..... ☐ 2
Bør ikke tillates ..... ☐ 3
Vet ikke ..... ☐ 4

27 **Har du gjort eller opplevd følgende når det gjelder ulv?**

MERK AV ETT SVAR I HVER LINJE

	Nei, aldri	Ja, en gang	Ja, flere ganger	Tvil/ vet ikke	Kan ikke svare	
	1	2	3	4	5	
• Sett ulven	☐	☐	☐	☐	☐	1
• Sett ulv i nærheten av der du bor	☐	☐	☐	☐	☐	2
• Hørt ulven ule	☐	☐	☐	☐	☐	3
• Sett ulvespor	☐	☐	☐	☐	☐	4
• Sett ulvespor i nærheten av der du bor .	☐	☐	☐	☐	☐	5
• Sett andre sportegn, som hår, avføring etc. etter ulv	☐	☐	☐	☐	☐	6
• Dratt ut for å se etter ulvespor	☐	☐	☐	☐	☐	7
• Deltatt i samtaler/diskusjoner om ulv ...	☐	☐	☐	☐	☐	8

28 **Ulver som lever vilt i naturen kan vekke mange følelser.**

Merk av på skalaene nedenfor hvordan du ville føle deg dersom du møtte én ulv i naturen:

Merk av ett svar i hver linje

	1	2	3	4	5		
Trist/Utslått/ Misforøyd	☐	☐	☐	☐	☐	**Glad/Munter/ Fornøyd**	1
Sløv/Passiv/Søvnig	☐	☐	☐	☐	☐	**Pigg/Aktiv/Våken**	2

29 Merk av på skalaene nedenfor hvordan du ville reagere ved å møte en flokk med fem ulver i naturen:

Merk av ett svar i hver linje

	1	2	3	4	5		
Trist/Utslått/ Misforøyd	☐	☐	☐	☐	☐	**Glad/Munter/ Fornøyd**	1
Sløv/Passiv/Søvnig	☐	☐	☐	☐	☐	**Pigg/Aktiv/Våken**	2

30 **Tanken på å møte en ulv i naturen kan også vekke mer spesielle følelser.**

Merk av nedenfor hvor sterkt et møte med ulv i naturen vil vekke hver av følgende følelser:

MERK AV ETT SVAR I HVER LINJE	Ikke i det hele tatt (0)	1	2	3	4	5	Meget sterkt (6)	
	0	1	2	3	4	5	6	
• Interesse	☐	☐	☐	☐	☐	☐	☐	1
• Glede	☐	☐	☐	☐	☐	☐	☐	2
• Sinne	☐	☐	☐	☐	☐	☐	☐	3
• Avsky	☐	☐	☐	☐	☐	☐	☐	4
• Forakt	☐	☐	☐	☐	☐	☐	☐	5
• Redsel	☐	☐	☐	☐	☐	☐	☐	6
• Fiendtlighet	☐	☐	☐	☐	☐	☐	☐	7

31 **Tenk deg at du møter en ulv i naturen.**

Nedenfor ser du noen beskrivelser av hvordan du ville tenke og reagere, dersom du møter en ulv i naturen? Hvordan slutter du deg til disse beskrivelsene?

MERK AV ETT SVAR I HVER LINJE	Nei, absolutt ikke	Nei, i liten grad	Hverken eller	Ja, i noen grad	Ja, absolutt	
	1	2	3	4	5	
• Det er umulig for meg å vite på forhånd hvordan en ulv vil oppføre seg	☐	☐	☐	☐	☐	1
• Om jeg kom nær en ulv, ville jeg sannsynligvis bli angrepet	☐	☐	☐	☐	☐	2
• Om jeg traff på en ulv, tror jeg at jeg ville håndtere situasjonen bra	☐	☐	☐	☐	☐	3
• Jeg tror jeg ville kunne forutse en ulvs bevegelser	☐	☐	☐	☐	☐	4
• Jeg tror at de fleste ulver er ufarlige for meg	☐	☐	☐	☐	☐	5
• Jeg tror nok jeg ville få panikk dersom en ulv kom nær meg	☐	☐	☐	☐	☐	6

32 **Hvor sannsynlig er det at du at du kommer til å gjøre følgende dersom noen har hørt eller sett ulv i naturen der du bor?**

MERK AV ETT SVAR I HVER LINJE	Nei, helt sikkert ikke	Sannsynligvis ikke	Usikker	Ja, til en viss grad	Ja, helt sikkert	
	1	2	3	4	5	
• Jeg går ut i skogen fordi jeg gjerne vil høre eller se ulv	☐	☐	☐	☐	☐	1
• Jeg holder utkikk hjemme fordi jeg gjerne vil høre eller se ulv	☐	☐	☐	☐	☐	2
• Jeg lar barn og hunder være ute som vanlig	☐	☐	☐	☐	☐	3
• Jeg bryr meg ikke om ulven og gjør akkurat som vanlig	☐	☐	☐	☐	☐	4
• Jeg følger ekstra godt med, men fortsetter mine hverdagsrutiner	☐	☐	☐	☐	☐	5
• Jeg slipper ikke barn og husdyr av syne utomhus	☐	☐	☐	☐	☐	6
• Jeg unngår å gå alene i skogen	☐	☐	☐	☐	☐	7
• Jeg går ikke ut når det er mørkt	☐	☐	☐	☐	☐	8

33 **Hvor enig eller uenig er du i følgende påstander om ulv?**

Merk av ett svar i hver linje

	Helt enig	Delvis enig	Hverken enig eller uenig	Delvis uenig	Helt uenig	Vet ikke	
	1	2	3	4	5	6	
• Ulven er et intelligent dyr	☐	☐	☐	☐	☐	☐	1
• Ulven er sosialt dyr	☐	☐	☐	☐	☐	☐	2
• Ulven er et vakkert dyr	☐	☐	☐	☐	☐	☐	3
• Ulven hører bare til i villmarka	☐	☐	☐	☐	☐	☐	4
• Ulven er et tilpasningsdyktig dyr, som greier seg godt nær mennesker	☐	☐	☐	☐	☐	☐	5
• Det er ingen problemer med å drive friluftsliv der det finnes ulv	☐	☐	☐	☐	☐	☐	6
• Ulv kan være farlig for mennesker	☐	☐	☐	☐	☐	☐	7
• Ulven er en blodtørstig lystmorder på sau	☐	☐	☐	☐	☐	☐	8
• Det er alltid hundeeierens eget ansvar å sørge for at hunden ikke blir angrepet av ulv	☐	☐	☐	☐	☐	☐	9

34 **Hvor enig eller uenig er du i følgende påstander om ulv i Norge?**

Merk av ett svar i hver linje

	Helt enig	Delvis enig	Hverken enig eller uenig	Delvis uenig	Helt uenig	Vet ikke	
	1	2	3	4	5	6	
• Hensynet til ulv i norsk natur er viktigere enn jaktinteressene	☐	☐	☐	☐	☐	☐	1
• Hensynet til ulv i norsk natur er viktigere enn hensynet til sauehold	☐	☐	☐	☐	☐	☐	2
• De som mister husdyr på grunn av ulv, må alltid få full erstatning	☐	☐	☐	☐	☐	☐	3
• I noen land får ikke bønder erstatning for ulvedrept sau hvis de ikke har vokterhund, elektriske rovdyrgjerder el. lign. Slik burde det også være i Norge ..	☐	☐	☐	☐	☐	☐	4
• Hundeeiere må ha lov til å skyte ulv som truer hundene deres	☐	☐	☐	☐	☐	☐	5
• Ulveforvaltningen i Norge er godt faglig og vitenskapelig forankret	☐	☐	☐	☐	☐	☐	6
• Når Stortinget har bestemt hvor mange ulver vi skal ha i Norge, må man skyte overtallige for å hindre at bestanden blir større enn vedtatt	☐	☐	☐	☐	☐	☐	7
• Skogeiere som taper inntekter fra salg av jaktrettigheter på grunn av ulv, må få full erstatning for tapte inntekter	☐	☐	☐	☐	☐	☐	8
• Ulv som kommer inn i områder som er vedtatt skal være beiteområder for husdyr, må skytes	☐	☐	☐	☐	☐	☐	9
• Ulvebestanden i Norge er utrydningstruet	☐	☐	☐	☐	☐	☐	10
• Sålenge ulven i Norge er en del av en bærekaftig skandinavisk bestand, er det feil å hevde at den er utrydningstruet ...	☐	☐	☐	☐	☐	☐	11
• Ulvebestanden i Norge har økt de siste årene	☐	☐	☐	☐	☐	☐	12
• Norske myndigheter har klassifisert ulven som ¨kritisk truet¨, og derfor er det brudd på norsk lov og internasjonale avtaler å skyte så mange ulver som vi gjør	☐	☐	☐	☐	☐	☐	13

35 **Hvor farlig tror du ulven er i følgende situasjoner i områder der det er ulv? Er den.....**

Merk av ett svar i hver linje

	Meget farlig	Ganske farlig	Lite farlig	Ikke farlig i det hele tatt	Vet ikke	
	1	2	3	4	5	
• for barn på skolevei	☐	☐	☐	☐	☐	1
• for bærplukkere	☐	☐	☐	☐	☐	2
• for folk som driver med friluftsliv	☐	☐	☐	☐	☐	3
• for mennesker når ulven lusker nær hus	☐	☐	☐	☐	☐	4
• for hunder når hund og ulv møtes	☐	☐	☐	☐	☐	5

36 **Ulv i Norge tilhører en finsk-russisk ulvebestand. Gjør det at det blir mer eller mindre viktig å bevare en viss ulvebestand i Norge, eller spiller det ingen rolle for bevaringen hvor ulven kommer fra?**

Mer viktig ..... ☐ 1
Mindre viktig ..... ☐ 2
Spiller ingen rolle ..... ☐ 3
Vet ikke ..... ☐ 4

37 **Om det er noe innblanding av hund i norsk ulv, mener du det da blir mer eller mindre viktig å bevare en viss ulvebestand i Norge, eller spiller det ingen rolle for bevaringen om det er innblanding av hund i norsk ulv?**

Mer viktig ..... ☐ 1
Mindre viktig ..... ☐ 2
Spiller ingen rolle ..... ☐ 3
Vet ikke ..... ☐ 4

38 **Har du hund?**

Ja ..... ☐ 1
Nei ..... **(⇒ 45)** ☐ 2

De som ikke har hund hopper over spørsmål 39-44, og besvarer så sp. 45 og videre.

39 Til alle som har hund:

Hvilken type hund har du?

Gjerne flere svar hvis du har flere hunder.

☆

Jakthund ..... ☐ 1,
Trekkhund ..... ☐ 2,
Brukshund ..... ☐ 3,
Annen hund ..... ☐ 4.

40 **Hvilken av påstandene nedenfor beskriver best måten ulven har påvirket ditt hundehold?**

Ett svar. Det som passer best.

☆

Det finnes ikke ulv der jeg ferdes med hunden ..... ☐ 1
Det har ikke påvirket mitt hundehold, fordi jeg aldri har vært noe særlig i naturen sammen med hunden . ☐ 2
Det har ikke påvirket mitt hundehold og jeg har med hunden i eller nær skogen på samme måte som før ☐ 3
Jeg går like mye tur i eller nær skogen med hunden som før, men jeg passer bedre på den ..... ☐ 4
Jeg går mindre tur i eller nær skogen med hunden på grunn av ulven ..... ☐ 5
Jeg har sluttet helt å gå tur i eller nær skogen med hunden på grunn av ulven ..... ☐ 6
Vet ikke ..... ☐ 7

41 Til alle som har hund:

Går du på jakt med hunden din?

Ett svar

☆

Ja ..... ☐ 1
Nei ..... ☐ 2

42 **Hvilke av påstandene nedenfor beskriver best måten ulven har påvirket din bruk av hunden på jakt?**

Gjerne flere svar.

	☆
Det finnes ikke ulv i områdene jeg jakter	☐ 1,
Jeg har ikke jakthund eller jakter ikke med hunden min	☐ 2,
Hvis det dukker opp ulv der jeg jakter, er jeg villig til å endre måten jeg bruker hunden på	☐ 3,
Jeg bruker hunden like mye på jakt som før, og i de samme områdene, selv om det finnes eller kan finnes ulv der	☐ 4,
Jeg jakter andre steder enn før, som følge av ulven	☐ 5,
Jeg jakter mindre enn før, som følge av ulven	☐ 6,
Jeg jakter på andre måter enn før, som følge av ulven (f.eks. med hund i bånd, slipper hunden mindre, etc.)	☐ 7,
Vet ikke	☐ 8.

43 **Har du noengang opplevd at din hund er blitt angrepet av ulv?**

Ett svar

	☆
Nei	☐ 1
Ja, en gang	☐ 2
Ja, flere ganger	☐ 3
Vet ikke	☐ 4

44 **Hva er din holdning til å ta spesielle forholdsregler (beskyttelsesvest, skifte hunderase, jakte med hund i bånd, e.l.) for å forebygge ulveangrep på hunden din?**

Ett svar, det som passer best

	☆
Kommer helt sikkert ikke til å ta forholdsregler	☐ 1
Vil helst unngå å ta forholdsregler	☐ 2
Usikker, i tvil om hva jeg vil gjøre	☐ 3
Vil trolig ta forholdsregler	☐ 4
Kommer helt sikkert til å ta forholdsregler	☐ 5

45 Til alle

Til slutt kommer noen generelle spørsmål om politikere og viktige samfunnsspørsmål

Hvor enig eller uenig er du i følgende påstander?

Merk av ett svar i hver linje

	Helt enig (0)	Delvis enig (1)	Hverken enig eller uenig (2)	Delvis uenig (3)	Helt uenig (4)	Vet ikke (5)	
• Hvis jeg ville, kunne jeg raskt få et tillitsverv i et politisk parti eller i en organisasjon	☐	☐	☐	☐	☐	☐	1
• Folk som meg kan godt stemme ved valg, men vi har ingen innflytelse over politikken og samfunnsutviklingen	☐	☐	☐	☐	☐	☐	2
• Jeg har sjelden problemer med å følge med på hva eksperter sier på TV	☐	☐	☐	☐	☐	☐	3
• Den såkalte eliten («toppene» innen politikk, forvaltning, næringsliv, osv.) bestemmer samfunnsutviklingen over hodene på vanlige folk	☐	☐	☐	☐	☐	☐	4
• I Norge kan alle som vil få politisk innflytelse	☐	☐	☐	☐	☐	☐	5
• Politikerne er mest opptatt av å sikre seg selv og sine egne posisjoner	☐	☐	☐	☐	☐	☐	6
• Sunt folkevett er bedre enn formell utdannelse	☐	☐	☐	☐	☐	☐	7

46 **Folk føler frykt for ulike ting i tilværelsen. Hvor stor frykt føler du for hver av følgende ting?**

MERK AV ETT SVAR I HVER LINJE	Stor frykt	En viss frykt	Liten eller ingen frykt	
	1	2	3	
• Bli utsatt for vold	☐	☐	☐	1
• Bli utsatt for ulykker	☐	☐	☐	2
• Ikke klare deg økonomisk	☐	☐	☐	3
• Terroraksjoner i Norge	☐	☐	☐	4
• Møte ulv i naturen	☐	☐	☐	5
• Bli syk av maten du spiser	☐	☐	☐	6
• Forurensing og miljø-ødeleggelser	☐	☐	☐	7
• Svikt i eldreomsorgen	☐	☐	☐	8
• Arbeidsløshet	☐	☐	☐	9
• Ekstremvær (flom, storm, ras ol.)	☐	☐	☐	10

DA TAKKER VI FOR HJELPEN, OG ØNSKER DEG LYKKE TIL I PREMIELOTTERIET. SEND DET UTFYLTE SKJEMAET I SVARKONVOLUTTEN TIL IPSOS MMI SNAREST. IKKE SKRIV NAVN PÅ SKJEMAET!

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