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ORIGINAL PAPER

Human dimensions of wolf (*Canis lupus*) conflicts in Finland

Jukka Bisi · Sami Kurki · Marko Svensberg · Tuija Liukkonen

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Abstract The growth of the Finnish wolf (*Canis lupus*) population during the last years has highlighted people's contradictory attitudes toward wolves. The supranational conservation objectives brought on by Finland's membership in the European Union (EU) and the regional application of the official policy on wolves have led to conflicts. This article is based on the preparation process of the wolf management plan in Finland. As a part of the process, a nationwide hearing was arranged in 2004. Fear of wolves is widespread and even more common in areas with low wolf population. People living in areas where wolves occur feel that they can no longer influence decision making which affects them and that the authorities, conservationists, and the EU do not listen to their opinions. Numerous requests have been made for the legislation and its interpretation, and concessions to these requests would promote consensus and increase tolerance for wolves. Proposed changes include reforming the damage compensation system and formulating a clearer interpretation of the conservation status of wolves. However, it seems impossible to create a policy that would be universally supported. As the wolf question has become more central in environmental policy, the conservation and management of the species have become more complicated, and the cooperation between various interest groups has declined. The wolf conflict could be mitigated by compromises, but because the conflict is value-based, solutions are illusive.

Keywords Consensus · Conservation status · Population management · Social sustainability · Wolf discourse

J. Bisi (✉)
Metsähallitus,
Veteraanikatu 5,
P.O. Box 81, 90101 Oulu, Finland
e-mail: jukka.bisi@metsa.fi

S. Kurki
Ruralia Institute, University of Helsinki,
Kampusranta 9C,
60320 Seinäjoki, Finland

M. Svensberg
Hunters' Central Organization,
Fantsintie 13-14,
01100 Itäsalmi, Finland

T. Liukkonen
University of Oulu,
P.O. Box 3000, 90014 Oulu, Finland

Introduction

Conflicts between large predators and humans are common worldwide (Woodroffe 2000; Fritts et al. 2003; Mech and Boitani 2003; Treves and Karanth 2003; Woodroffe et al. 2005). The main sources of conflicts have been the interspecific competition for common prey, safety of cattle and pets, and attacks on humans (Kellert et al. 1996; Fritts et al. 2003; Thirgood et al. 2005). The wolf, although being the ancestor of the dog, has long been considered as a problem species in most cultures (Mech and Boitani 2003). Debate around the wolf is related to its abundance. As soon as population increases, conflicts with humans become increasingly likely (Bangs and Fritts 1996; Nie 2001; Byrd 2002; Treves and Karanth 2003; Mech and Boitani 2003). Examples from different regions of the world show clearly how challenging it is to find a widely accepted management policy for the species (Bjerke et al. 1998; Linnell et al. 2001; Mech and Boitani 2003).

The Finnish wolf population was fairly abundant until 1880 (Pulliainen 1974), but systematic persecution caused a

severe, long-time population decline. During the last 10 years, the population has increased and, especially, the birthrate has improved. In 1996, there were four wolf packs in Finland, but in 2005, there were already 16. In addition, there were five packs living close to the Finnish border in Russia (Kojola et al. 2006b). The Finnish population is strongly concentrated in eastern Finland. However, the population growth has increased the number of dispersing wolves throughout Finland during recent years (Kojola et al. 2005), including areas close to large cities in southern Finland where the human settlement is dense. The minimum number of wolves in 2005 was estimated to be between 205 and 215 individuals (Kojola et al. 2006b).

The growth of the wolf population has highlighted challenges in wolf management. Different kinds of objectives and requests toward wolf management have been raised, especially in the areas coinhabited by people and wolves. In eastern Finland, where wolf abundance is highest, the discussion has been especially heated. The wolf debate during the last years has mainly focused on methods used to regulate the growth of the population and about what to do with wolves causing damage. The controversial discussion concerning the Finnish wolf policy has intensified the friction between different parties or interest groups. Also, the European Union (EU) commission has become a party of the conflict. The commission has received several complaints from Finland concerning wolf management. People living in the rural areas have complained that the wolf policy is too rigid and does not adequately address their point of views (Väisänen 2005, personal communication). On the other hand, wolf conservationists, including environmental nongovermental organizations (NGOs), have complained that the Finnish legislation is not adequate and does not correspond to the Habitats Directive, and especially that the conducted wolf hunting does not adhere to the current legislation (Lumiaro 2005, personal communication). Local people's disaffection with the national wolf management has also led to different sorts of popular movements. For example, during the years 2003 and 2004, a total of 20,179 names were collected into a petition, which was also delivered to the EU commission, requesting more possibilities for local people to influence the wolf policy in eastern Finland. The commission reacted to the complaints with an announcement in January 2005 that Finland was charged to the Court of Justice of the European communities because of the systematic wolf hunting.

Wolf legislation and wolf management in Finland

According to the Finnish legislation, the wolf is a protected game species. The responsibility for its management and protection belongs, at the national level, to the Ministry of Agriculture and Forestry and, at the local level, to the game management districts, which are regional units of the Finnish hunting and game management organization. The Ministry of Environment has a role in the wolf protection defining the conservation status of the species (Ympäristöministeriö 2004). According to Rassi et al. (2001), the wolf is critically endangered (CR) in Finland, with this status being based on the population size in 1998.

Before the EU membership in 1995, Finland could independently define the content of wolf policy. The wolf was a normal game species, and the population was controlled by hunting. After the EU membership in 1995, Finland had to tighten its own legislation concerning the conservation status of the wolf (Hunting Law/Statute of Hunting: 666/1993, 1374/1996, 869/1998) and according to the EC Habitats Directive. In the Directive, the wolf is listed in Appendix 1V (strictly protected) with an exception in the Finnish reindeer herding area, where the wolf is listed in Appendix V (hunting is possible). The Ministry of Agriculture and Forestry has tried to find balance between the local requests and the legislation by partly granting a restricted number of licenses to kill some wolves. The number of animals killed per year (including animals killed in car accidents) has ranged between 5 and 27 in years 2000–2005 (Ministry of Agriculture and Forestry 2005, unpublished data).

Damage caused by wolves has been increasing during the recent years. The most common domestic prey is reindeer, and the number of reindeer killed by wolves has ranged from 50 animals in 1995 to 600 in 2002. The number of sheep, cattle, and dogs killed has been some dozens per year. The state compensates the damages, but there is an excess of €250/person per year. The total sum of compensated wolf-caused damage has increased from €80,000 in 2000 to €120,000 in 2003 (Ministry of Agriculture and Forestry, 2004 unpublished data).

Monitoring of the wolf population is based on 1,600 volunteers, who are mainly local hunters. They collect all wolf observations from their regions for the Game and Fisheries Research Institute. In addition, more than 80 wolves have been captured and marked with radio collars during the last years. This has produced new information about wolf population dynamics and predation (Kojola 2000, 2003; Kojola et al. 2004a–c, 2006b). Estimation on the distribution of wolves in different regions is based on Kojola et al. 2006b.

The aims of this study were (1) to identify the objectives and expectations related to the growth of the wolf population, (2) to examine their regional and national differences, (3) to identify various interest groups in relation to the objectives, and (4) to detect possibilities to solve the conflicts in Finnish wolf policy.

Materials and methods

The qualitative data of this study was collected as part of the preparation of the Finnish wolf management plan in 2004. Two main methods were used in the data collection. First, at the level of each of the 15 game management districts, a semistructured questionnaire was addressed to different regional organizations representing the different identified parties. In addition, corresponding parties at the national level received the same questionnaire (Table 1). Second, a total of 30 open meetings were arranged in the regions of different game management districts. These meetings gathered about 1,600 people to discuss wolves (Fig. 1). Eight of those open meetings were arranged in the city centers and 22 in the rural villages.

In each region, the target group of the questionnaire was determined independently, reflecting the existence of different regional organizations (Table 1). The content of the received answers on questions related to coexistence between humans and wolves and expectations concerning the future of the Finnish wolf population was analyzed and classified based on the main messages. Altogether, 221 answered questionnaires were received (Fig. 1), and over 1,000 people were involved, because 60% of questionnaires were answered as teamwork (with on average six to ten persons in a team).

Open meetings started with a short presentation about the status of the wolf population in Finland and in different regions, and the questions of the questionnaire were posed to the audience. In addition, people tended to speak according to their own interests, and this was used as a starting point when analyzing the discussion. From the discourse, two main themes were selected to this study. First, the problems that were experienced with the growing wolf population, and secondly, the requests that were expressed for the future wolf policy. The discussions were recorded and transcribed. Some 1,900 wolf-related comments were classified (Fig. 1).

Table 1 Numbers of regional and national respondents answering the questionnaires concerning wolf (*Canis lupus*) management in Finland

Respondents	*N*=235
Regional interest groups	
Conservationists, environmental NGOs	19
Hunting and kennel associations	24
Game management authorities	47
Police authorities	30
Environmental authorities	5
Municipalities and their federations	32
Top organizations for forestry and agriculture	37
Others	27
National interest groups	14

The analyzed and compiled statistics on the questionnaire and the wolf discourse were divided into three main regional groups according to the wolf occurrence (Fig. 1). The regional division was assumed adequate because the occurrence of the wolf and the growth of the population seem to have an effect on the people's objectives and point of views (Vikström 2000; Nie 2002; Williams et al. 2002; Mech and Boitani 2003). Estimation of the wolf occurrence was based on the wolf monitoring made by the Finnish Game and Fisheries Research Institute (Kojola et al. 2006a).

Results

Opinions about the future abundance of the Finnish wolf population

"How to manage the abundance of the wolf population?" was asked in the questionnaire. Respondents from the regional level were asked to consider the question from their own regional point of view, whereas the national respondents were asked to keep national approach.

Clear differences between the regions (Fig. 2) and the parties (Table 2) could be found concerning the suitable future wolf abundance. In those regions, where the wolf population is stable, almost half of the respondents wanted to reduce it. Existence of wolf was accepted but not at the present abundance. However, in the areas where the wolf population is progressive (but still low), almost 40% of the respondents considered the present day population suitable, which practically means very low wolf densities. Overall, about 20% of respondents wanted to increase the population. The most negative opinions, i.e., suggestions about wolf-free areas, mainly emerged from the areas where the wolf population is rather low or no wolves exist at all, whereas in the regions with a stable population, those kinds of opinions were rare (Fig. 2).

About half of the respondents at the national level and less than 20% of the respondents at the regional level wanted to increase the Finnish wolf population. Those parties willing to increase the wolf numbers were mainly conservationists, environmental NGOs, and authorities (Table 2). They explained their opinion with the vulnerability and unfavorable conservation status of the wolf population and with its status as an endangered species. Those parties supporting significant growth in "others" were nature entrepreneurs.

The parties most eager to decrease the wolf populations were hunters and municipality representatives. Their explanations were mainly related to the damage and fear the wolves incur.

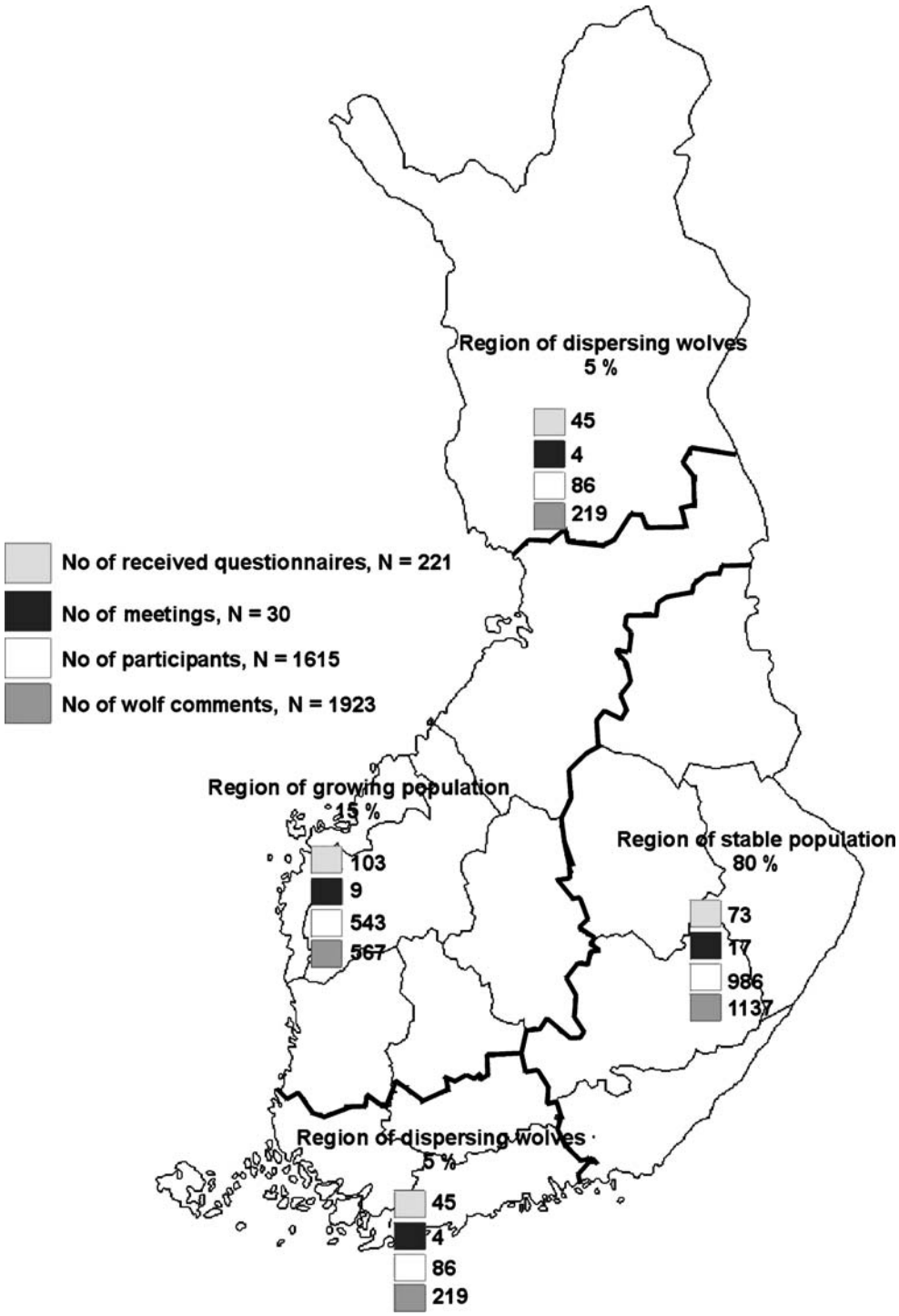

Fig. 1 Regions of different wolf (*Canis lupus*) abundance in Finland (percentage of total wolf population). Numbers of received questionnaires, arranged public meetings, participants, and comments are given for each region. The region of dispersing wolf is divided into two, but same figures concern both areas

Problems experienced with growing wolf population and requests concerning it

Altogether, almost 400 comments in the open meetings were classified as criticism: 240 from the region of stable wolf population, 138 from progressive wolf population, and 21 from the region of dispersing wolves. People, particularly in the areas where wolves occur, strongly denounced the wolf and its behavior. Criticism was also directed at authorities, researchers, the damage compensation system, EU/Brussels, "wolf haters" and "wolf lovers", possible translocations, etc.

People identified and described the problems that the growth of the wolf population would cause (Fig. 3). Several issues were classified from the comments, but problems were not equally highlighted in each region. "Fear and concern" and "problems with dog keeping and hunting" were more common in the areas where the wolf population

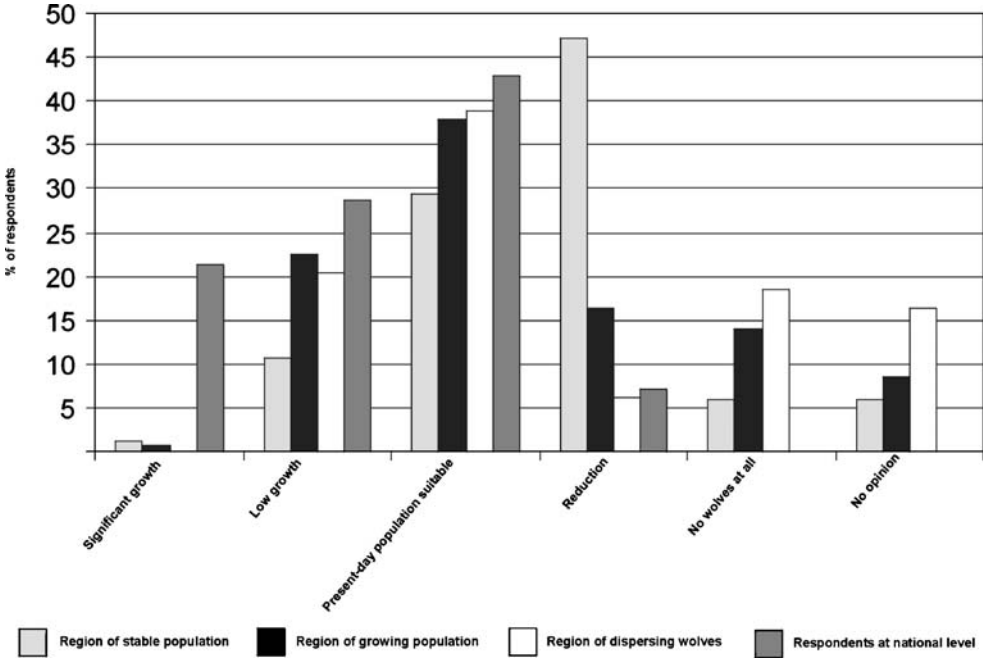

Fig. 2 Opinions about the management of the wolf (*Canis lupus*) population. *Each bar* represents the proportion (%) of respondents supporting the alternative

is low or where no wolves exist at all. It could be considered not only as lack of awareness and experience concerning wolves in this region but also as secondary importance of the topic in the region of stable population. These people had other important issues to discuss.

In the open meetings, many comments made specific requests or suggestions, which were addressed mostly to the authorities who are responsible for the wolf management. Overall, 567 such presentations were classified: 316 from the region of stable population, 212 from the region of progressive population, and 39 from the region of dispersing wolves. People requested better compensation for damages and flexibility with killing licenses, especially with damage-causing or garden wolves (i.e., wolves repeatedly visiting gardens). There were suggestions of translocations of wolves to southern Finland and to Brussels.

There were many comments about the lack of possibilities to affect one's own surroundings and about inequality in living conditions between cities and countryside, especially in the areas of stable wolf population. People pointed out that the principle of subsidiarity should be adopted into decision making. In the areas where the wolf population is low, comments were more speculative and calm. It was also typical that the comments were peculiar to some theme in different areas, for example, the comments about ecotourism, and its problems were detected mainly in the areas where some entrepreneurs practice that business.

Methods to improve human and wolf coexistence

The purpose of the question "What kind of methods will support human and wolf coexistence?" was to find out people's standpoints about those actions they deem necessary to deal with the growing wolf population, how they assess the succession in the wolf management, and also, what kind of managing methods they prefer. The respondents answered freely without any offered alternatives. Responses were classified into five themes (Table 3, Fig. 4).

Table 2 Proportion (%) of respondents supporting the alternative for acceptable management of the wolf (*Canis lupus*) population in Finland

	Significant growth	Low growth	Present suitable	Reduction	No wolves at all	No opinion
Conservationists	3.7	66.7	22.2	3.7	0	3.7
Hunters and kennel	0	6.3	25.0	46.9	15.6	6.3
Game authorities	0	16.4	45.5	21.8	10.9	5.5
Police authorities	0	16.7	55.6	11.1	11.1	5.6
Municipalities	0	11.1	30.6	38.9	5.6	13.9
Agriculture and forestry	0	7.0	32.6	25.6	25.6	9.3
Others	3.1	18.8	28.1	21.9	6.3	21.9
All regional together	0.7	17.0	33.0	22.7	18.1	8.5

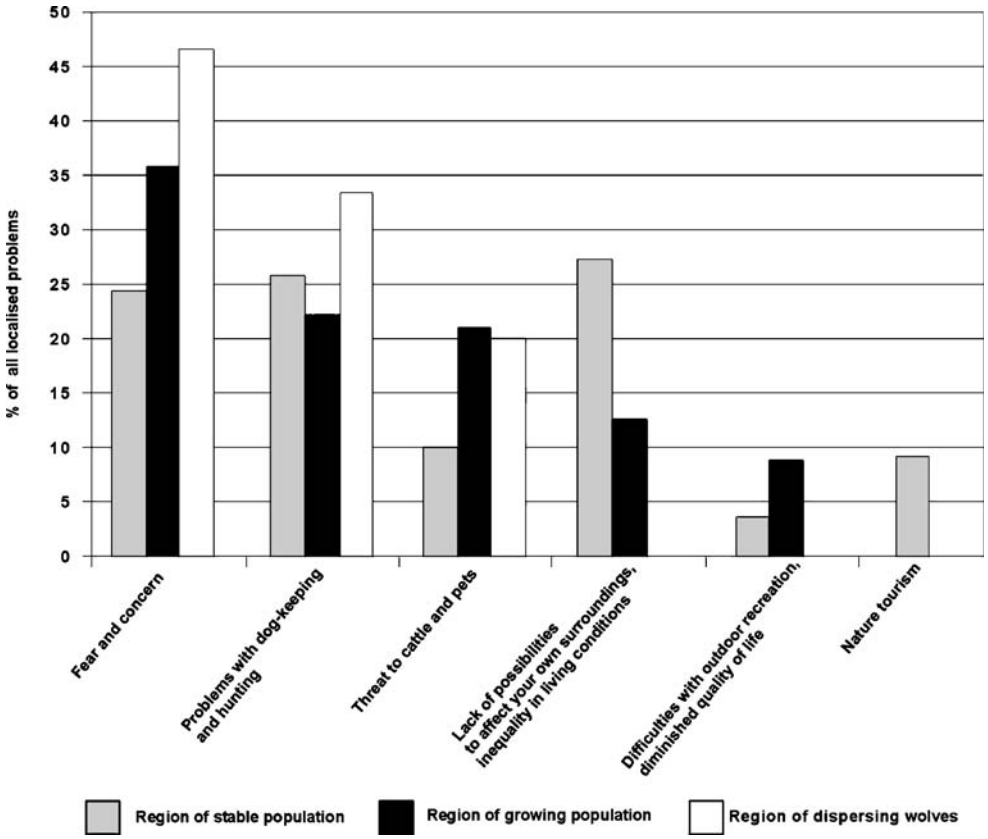

Fig. 3 Future problems with the growing wolf (*Canis lupus*) population according to respondents from different regions. Each respondent could offer several alternatives

Regional respondents offered hunting as the most important method for improving coexistence (Fig. 4). Furthermore, respondents at the national level offered hunting, information and education, and damage prevention/compensation as equally important tools, and they also suggested research and monitoring as useful. All respondents at the national level suggested more alternative methods to improve coexistence than those at the regional level (Fig. 4).

Conservationists did not support hunting as a method to support coexistence but preferred information and education as well as damage prevention (Table 3). On the other hand, hunters and parties close to agriculture and forestry preferred hunting, which was also supported by the other parties as an important method.

Discussion

Wolf attitudes

According to this study, attitudes toward wolves in Finland were generally negative and problem-based. A distinct difference arose between the conservationists and the hunters—the parties most frequently debating in publicity about wolves. There was also a clear difference between respondents at the local and national levels. At the local level, attitudes were more negative. However, because of the data collection method, there must be caution over generalizing the attitudes of Finnish people because only people most interested in wolves would be likely to attend. Research by Williams et al. (2002) showed that over a third

Table 3 Percentage (%) indicates how a large proportion of each group of respondents support the different method to improve coexistence between wolves (*Canis lupus*) and people in Finland

Each respondent could offer several alternatives.

	Population regulation by hunting, elimination of problem wolves	Information, education	Damage prevention, compensation	Research, monitoring	Others
Conservationists	29.2	83.3	70.8	20.8	54.2
Hunters and kennel	100.0	16.7	20.8	0	25.0
Game authorities	63.8	23.4	14.9	2.1	34.0
Police authorities	73.3	43.3	23.3	10.0	23.3
Municipalities	75.0	37.5	50.0	6.3	31.3
Agriculture and forestry	83.8	18.9	40.5	8.1	29.7
Others	47.8	39.1	21.7	26.1	47.8

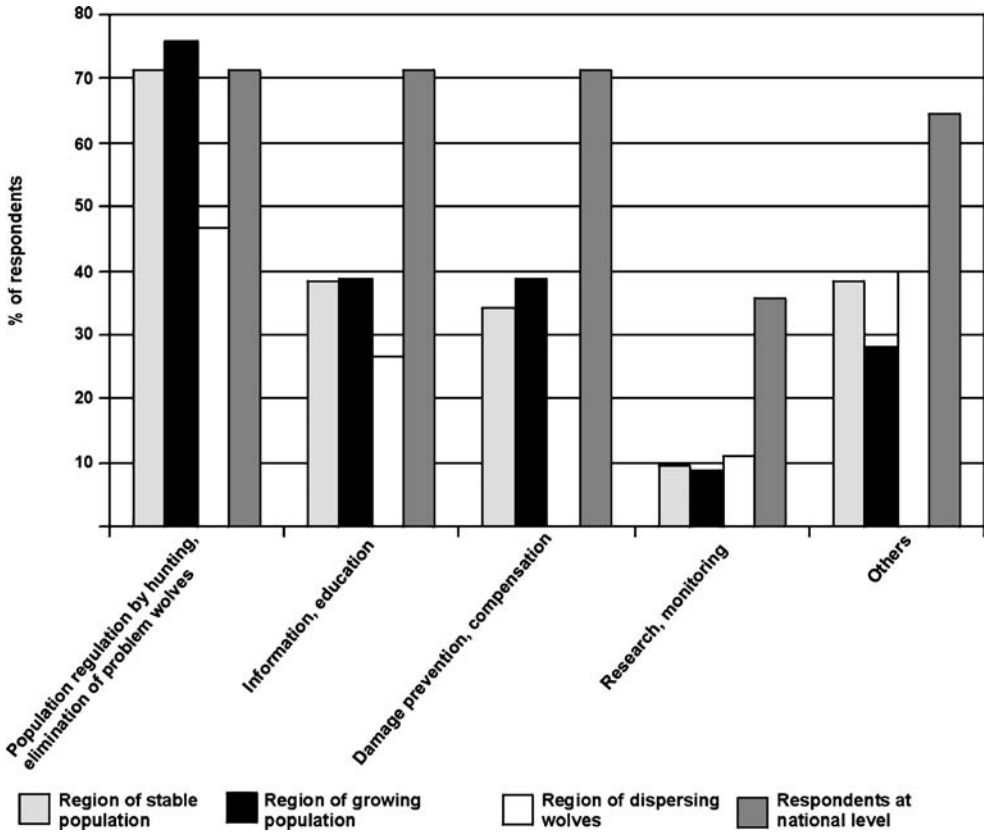

Fig. 4 Methods to support human and wolf (*Canis lupus*) coexistence by respondents from different regions. *Each column* describes the proportion (%) of regional respondents choosing certain alternative. Each respondent could offer several alternatives

of the population across studies had no strong feelings about wolves. Still, those who attend meetings are important as Ericsson and Heberlein (2003) noted. Attitudes of those people who are mostly involved are important because they mostly influence the success or failure of the wolf conservation. In this study, their perspectives were highlighted.

Previous surveys conducted in Finland (Palviainen 2000; Vikström 2000; Ratamäki 2001) confirm rather the negative attitudes of the Finnish people toward wolf. However, Lumiaro (1997) suggested that 52% of the Finnish people thought positively about the species, and only 27% had negative opinions. Similar to this study, another finding showed that people in rural areas were more negative than people in cities, and older people were more negative than the young ones. In North Karelia (Palviainen 2000), people were concerned about the increasing wolf and bear populations, and 67% of the respondents also favored regulation of the wolf numbers. According to Vikström (2000), 60% of the respondents in western Finland did not accept wolves near their own homes at all.

There are clear similarities in Finland and Sweden. People who interact with wolves have more negative attitudes than the general public (Ericsson and Heberlein 2003; Svarstad 2003). In Sweden, hunters seemed to have rather negative attitudes although before the recovery of the Swedish wolf population, their attitudes were more positive. No comparative data is available from Finland, but a difference is probable. Russian wolves have continuously supplemented the Finnish population, and people have always been aware of the problems that wolves could cause to rural sources of livelihood. In this study, the main explanation for Finnish hunters' negative attitudes was the threat that wolves cause to hunting dogs. In the open meetings, it was repeatedly pointed out that hunters do not dare to use dogs in hunting anymore. Hunting plays an important socioeconomic role in the Finnish countryside, and in some municipalities in North Karelia or in Kainuu (East Finland), half of the adult men are hunters.

Fear of the wolf is widely spread

The widespread fear of wolves, also described by Linnell et al. (2002, 2003b), and its roots, may be attributed to the cases where wolves killed and ate humans in the nineteenth century and the related stories and tales. However, Brainerd and Bjerke (2002) have suggested that knowledge about what creates and maintains the fear is limited. According to previous studies, based on quantitative surveys, one-third or even more of Finns (a total of 5.2 million people) were afraid of wolves (Lumiaro 1997; Palviainen 2000; Vikström 2000). Also, in Norway, a clear majority of the population express fear of large carnivores (Brainerd and Bjerke 2002).

In this study, fear of wolves raised more discussion in western and southern Finland (region with low wolf population) than in northern or eastern Finland. This could be explained by the divergence in awareness of the wolf's biology or by the difference in the general relationship with nature. In the regions of stable wolf population, local people were not talking about fear. In public meetings, they pointed out their disappointment on authorities, and criticism dominated the discussions.

People were very aware of the damage that wolves have caused during the recent centuries and spoke a lot of this topic. When the wolf population was at its highest at the end of the nineteenth century (Aspi et al. 2006), damages were severe: large predators killed 40,198 sheep, 6,972 cattle, 14,189 reindeer, and 4,436 other domestic animals (Finnish Official Statistics 1877–1880). During this study, people repeatedly speculated about the growth of the wolf population and the harm and damage it will cause. Wolves were generally considered as a real threat to animal husbandry, especially to reindeer herding.

One very important finding of this study was that people who interact with wolves in their everyday lives (Eastern Finland) seemed more tolerant than those people with no experience of wolves (Western Finland). This may result from the fact that people in Western Finland wanted to take the chance to affect their own lives and to prohibit spreading wolves in their home areas. Although, according to the results, it seemed that the growth of the wolf population would make people more tolerant, this is not the case. Anyway, people in Eastern Finland share a long coexistence with wolves, and they have learned how to live among wolves. In a way, from their point of view, the interaction with wolves "is bad but not so bad" as the people in Western Finland believe. Also, media has spread effectively news about damages in Eastern Finland through the whole country.

Conflicts between different parties

In this study, we could identify some conflicts between different parties and different regions concerning objectives for managing the wolf population. Most of the respondents and especially local people found the wolf population in eastern Finland too large. The majority of respondents wanted to regulate the wolf population by license-based hunting, and most respondents stated that social impacts of population growth should be taken into account in the management of the population.

Almost all respondents preferred a more evenly distributed countrywide wolf population, but the countryside residents outside eastern Finland were not keen on accommodating a growing wolf population. The difficulties of reconciling reindeer farming and wolf management were also generally recognized. Those most willing to enlarge the wolf population were from southernmost Finland. This can be seen as a kind of paradox because in southern Finland, dense settlement and traffic would weaken the possibilities of wolf survival.

Those involved in hunting with dogs or reindeer farming were the most vociferous proponents of cutting down the wolf population, and they also held the most negative attitudes toward wolves. Similar conclusions were drawn from other attitude surveys in Scandinavia (Ericsson and Heberlein 2002, 2003; Williams et al. 2002).

In contrast to other respondents, many conservationists and environmental authorities aimed to expand the wolf population and found it difficult to accept hunting as a method of managing the population. They suggested increased knowledge and improved awareness as the most important means to maintain coexistence between people and wolves, and they stressed out the importance of ecological sustainability. In their opinion, damage-causing wolves should be eliminated by authorities and not by local hunters. Conservationists' arguments against hunting, strongly supported by the legislation, seemed to be among the most critical points of the wolf question. The wolf is defined as a CR species, and it is totally protected in Finland. Killing is possible only in some specific circumstances (EC Habitats Directive article 16, Finnish Hunting Law). The majority of Finnish people (82%) supported the regulation of the populations of large predators (Taloustutkimus Oy 2004). It is noteworthy that hunting and killing, according to the legislation, are not synonymous, and the population regulation can be conducted by both methods.

According to local people's opinions, those who are most eagerly protecting wolves were mainly living in the cities, and their positive attitudes toward wolves were based on the lack of experience of the wolf and its biology (this study; Williams et al. 2002). Ericsson and Heberlein (2003) suggested that to educate the public is difficult. The wolf question does not touch most of the people, who may lack interest for information and education. According to Brainerd and Bjerke (2002), one important social explanation of conflicts is the lack of trust between different stakeholders. They suggested that in large carnivore debate, only a few Norwegians totally trust politicians, NGOs, or the mass media. However, there is some confidence toward researchers or authorities. In the Finnish wolf conflict, the lack of trust can be defined even wider, and distrust seemed to vary regionally. In general, there was some trust toward researchers, but in some municipalities in eastern Finland, the trust was totally lost.

Pulliainen (1984; personal communication 2005) and Pulliainen and Rautiainen (1999) assumed that negative wolf attitudes may be caused by opinion leaders and

their strong effect on public. They use the wolf as a tool to carry on their own political interests, and they spread negative information by using media. Media's attention, news, and headlines about wolves have usually negative implications for the wolf's image (Pulliainen 1984; Bangs and Fritts 1996; Pulliainen and Rautiainen 1999; Fritts et al. 2003).

Nature conservation, as focused on the wolf question, is considered a threat to local people. They do not understand the basic values behind it; they find these concepts unfamiliar and uncontrolled (Nieminen 2003). Two different worlds and realities meet. Wolf conservationists' values and objectives presume that wolves have equal rights to live as wolves, i.e., to live in packs, to be top predators, and to regulate ungulates. From local people's point of view, their lives cannot be subordinated to conservationists' goals. The data of this study revealed zero tolerance for wolves in some parts of western Finland where the wolf abundance is low. However, people living in areas where wolves occur in eastern Finland felt that they cannot influence decision making and their lives and that authorities, conservationists, and EU do not listen to their opinions. Ratamäki (2001) arrived at the same conclusions and defined the wolf as the main source of conflict between different interest groups.

The Ministry of Agriculture and Forestry and the regional game management districts will be challenged by conflicting expectations. The Ministry has been under severe pressure for implementing a wolf policy that has been criticized by almost every party. Likewise, the research on wolves conducted by the Finnish Game and Fisheries Research Institute has been hampered by conflicting objectives. The possibility to use European Commission as a party, which can lead and control wolf policy with statements, and the threat of Court of Justice of European Communities seem to make the conflict even more complicated. In this study, especially local people criticized EU and asked for subsidiarity.

Conclusions and practical suggestions

Coexistence between people and wolves will never be easy in a country like Finland with plenty of scattered settlements, minor-scale animal husbandry around the country, huge reindeer herding area, and a strong tradition of hunting with dogs. Wolf managers have a constant challenge. A favorable conservation status of the wolf should be secured, and parallely, damage should be excluded.

It is hard to find general conclusions on how to manage wolves and to solve wolf–human conflicts (Mech and Boitani 2003). According to Linnell et al. (2003a), wolf management needs to be coordinated with management of the conflicts that arise. In Finland, the well-remembered historical events of wolves killing humans and significant damages for animal husbandry are noticeable marginal lines. When conservationists' strong attitudes toward wolf hunting hamper cooperation with local people and especially with local hunters, the hate of wolves among some hunters and reindeer farmers hampers cooperation with conservationists.

Reaching consensus on the issue of wolves requires willingness from the various parties to compromise on their objectives. Numerous requests have been placed on legislation and its interpretation, and concessions to these requests would promote consensus and increase tolerance for wolves. Such requests include reforming the damage compensation system and formulating a clearer interpretation of the conservation status of the wolf. However, it seems impossible to create a policy that everyone would endorse. Compensation for losses does not necessarily improve tolerance toward wolves (Naughton-Treves et al. 2003). The range of interpretations enabled by the EU's species-specific legislation on conservation is itself one major source of conflict. For example, the concepts of favorable conservation status and social sustainability are interpreted by each party according to its own interests.

As in many studies concerning the wolf conflicts (Mech and Boitani 2003; Treves and Karanth 2003), this study

Table 4 Practical suggestions to improve the acceptance of the wolf (*Canis lupus*) in Finland

Suggestions accepted by all the parties	Suggestions which need compromises
Improved damage compensation system	Responsibility to maintain a viable wolf population
New methods for damage prevention	Hunting as a method to control wolf population density
Acknowledging the special role of reindeer herding	A more evenly spread wolf population in Finland
Maintaining more active dialogue between parties	More power to regional authorities in the wolf policy
Extermination of tame wolves	More radio-collared wolves and information on their movements
More scientific research and information	Environmental authorities and NGOs included into the national wolf policy
Clear definition for the favorable conservation status of the wolf	Subsidiarity principle should be accepted
A widely accepted national wolf management plan	

showed that wolf management is rather a sociological than a biological question. Different parties in the conflict can be typically defined (Byrd 2002; Mech and Boitani 2003). Those who are acquainted with wolf conflicts have suggested that the best way to solve these conflicts is often through "a loud and messy" democratic process. "Inclusive", "participatory", "representative", "access", and "accountability" are the words that are demanded in the solution process (Nie 2002). The data collection process in this study showed that open meetings arranged for local people and a chance for interest groups to define their requests were ways to approach the process that Nie preferred. To succeed in the future will require a well-structured stakeholders' framework (Nie 2002), a sort of round table discussion to get familiar with others' values and standpoints.

Although the need for discussion was evident, wolf conflict should be defined as unsolvable in nature. It is a value-based conflict which changes in space and time depending on the change of values, the development of the society, and the structure of settlement. However, despite the unsolvability, it is possible to deal with the conflict.

A set of measures should help minimize the fear of wolves in Scandinavia (Linnell and Bjerke 2002). Most of these measures can also help in conflict management. The practical suggestions based on this study (listed in Table 4) offer some tools to solve the wolf conflict. They were divided into those which are accepted by all parties and into those where compromises will be needed. Many of these were requests to develop legislation or to clarify its interpretation. Finally, it is evident that many of these acts require active work from the game managers and the authorities.

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