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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

22nd meeting
Strasbourg, 2-5 December 2002

**Follow-up of Recommendation No. 82 (2000)
concerning brown bear in Slovenia**

Report by the Slovenian Government

*Document prepared by
the Governmen tof Slovenia*

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Ljubljana, 28 November, 2002

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**Council of Europe
Mr. Eladio Fernández Galiano
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France**

**Subject: Clarification of the brown bear cull in Slovenia in 2002 for the Bern
Convention Standing Committee meeting (2-5 December, 2002)**

Dear Mr. Fernández Galiano,

With reference to your letter of 20 November, 2002, please find enclosed the clarification of the brown bear cull in Slovenia in 2002, to be presented at the Bern Convention Standing Committee meeting in December.

The document was prepared by Slovenia Forest Service, the competent technical body, together with the Ministry of Agriculture, Forestry and Food and Ministry of the Environment, Spatial Planning and Energy, and adopted by the Slovenian Government.

Yours sincerely,

Janez Kopač, MA
The Minister

CC:

- Mr. Marko Jonozovič, Head of the Department for Wildlife, Slovenia Forest Service
 - Mr. Jože Sterle, State Secretary, Ministry of Agriculture, Forestry and Food
- Permanent Mission of the Republic of Slovenia to the Council of Europe

Clarification of the brown bear cull in Slovenia in 2002 for the Bern Convention Standing Committee Meeting

1. Introduction

The bear in Slovenia – yesterday, today and tomorrow – is not an issue that the Slovene or the European public, particularly those concerned about the fate of the scarce bear population in Europe, need to raise. There is no reason for concern, either professionally or politically, even though at first sight it may seem that the brown bear population management strategy as a whole and in part lies outside the domestic legal, professional and moral or ethical norms, comparable to those in Europe.

The Slovenian brown bear population (*Ursus arctos*) is one of the most vital in Europe, with an expanding habitat and strongly increasing numerically. That this is really the case can be demonstrated by the facts and parameters concerning the bear population, which are presented below.

2. The conservation and protection of the bear in Slovenia, past and present

Bear protection in Slovenia, particularly in the area known as the High Karst, is traditional and permanent. Its beginnings go back to the 19th century when elsewhere, that is in most parts of Europe, bears were being persecuted and, finally, exterminated. The first initiatives for the protection of bears came from the private estates of large landowners and, even if we ignore the reasons for it, the “Ordinance on the Protection of bears in the Kočevje, Črnomelj, Novo mesto, Logatec and Ljubljana Districts”, dating from 1935, effected a ban on the shooting and killing, as well as buying and selling of bears, which represented one of the first measures taken for the protection and preservation of bears in Europe and the first attempt at demarcating the various bear habitat zones in Slovenia.

The protection of bears on Slovene territory was maintained in all the legislation relating to hunting from the end of the Second World War to the present. The bear has always had the status of a protected, but at the same time a game species, the granting of permission for the culling of which has always been planned and in line with a top-down approach (the state – game breeding area – hunting ground), recognising and taking into consideration the specific ecology of bears. Mention should be made here of the Decision adopted in 1966, which defined a special ‘bear region’ in Slovenia, encompassing most of the central area of the bear’s habitat.

These are the foundations on which the present legal documents for the protection of bears in Slovenia are based. In 2001, the “Brown Bear Management Strategy in Slovenia” was drawn up and then adopted in 2002 by the Government. This is a strategy for the management of free-ranging species, based on scientifically founded ecological principles and involving considered and mutually complementary legal and administrative measures in the fields of culture, sociology and the economy with the intention of preserving the bear and its natural habitat. It allows animals to live in the way that nature intended, ensuring a sustainable use that man can expect from this part of living nature, whilst also facilitating the bear’s coexistence with man. For the strategy to succeed, measures based on it must be adapted to the ecological characteristics of the environment and the historical socio-economic conditions in Slovenia. The purpose of the management of the brown bear population in Slovenia is to

determine the aims and goals as well as the measures for the protection of this species and its habitat, as well as measures facilitating the coexistence of man and bear.

The strategy is based on two fundamental postulates:

Brown bear – a living being and biological species

- The bear, like other free-living plant and animal species on the territory of Slovenia has, for ecological and ethical reasons, a right to exist.
- Large carnivores, of which the bear is one, are an important part of biotic diversity – in their own right and because of the role they play at the top of the food pyramid.

Brown bear – man

- The brown bear is an animal species that needs a large habitat and lives in areas also populated by people. There is almost no place where man is not present. The bears' prey can include domestic animals and, potentially, bears can be dangerous to man. The protection and preservation of bears is therefore possible alongside coexistence with man and with the provision of measures enabling this.

The two, completely equal, goals of the strategy are:

- the long-term preservation of the brown bear species in Slovenia, including its habitat and
- ensuring the coexistence of man and bear.

In the Strategy, the territory of Slovenia is divided into 4 basic “bear” areas:

- a central area
- a marginal area;
- a transit (corridor) area;
- an area of exceptional bear presence

Each of these areas has a different regime with regard to both goals of the strategy: the preservation of the bear and its habitat and the creation of suitable conditions for the coexistence of man and bear. These regimes are reflected through both the protection of and encroachments on the population, as well as the adaptation of man and his activities (local population, farming, forestry, tourism, infrastructure, etc.) to coexistence with bears. Presently, the greatest difficulties Slovenia has in the setting up of regimes of bear population management are in the transit area, where we face on the one hand the clearly expressed standpoints and expectations of the international public, particularly in neighbouring countries, and on the other the way this area is used and the difficulties arising from this in relation to the presence of bears in Slovenia.

The foundations of the Strategy take into account all the legal postulates, both with respect to Slovenian, as well as European and international legislation – the most important undoubtedly being the Bern Convention with its action plan for the brown bear population in Europe.

In 2002, an action plan based on the Strategy was created for the Slovenian bear population, which is now being adopted and implemented. The action plan takes into

consideration and includes all those points contained in the European action plan referring to Slovenia. Let us mention here that in 2002 a workshop for the Dinaric and Pindos area on the implementation of the action plan points for individual countries, organised by LCIE (Large Carnivore Initiative for Europe), was held in the Risnjak National Park in Croatia. The workshop was intended for representatives of the countries between Slovenia and Greece, which is from the unified ecological habitat of the so-called Alps-Dinaric-Pindos brown bear population. Slovenia presented its brown bear management strategy to the nine countries participating at the workshop and was the only country there to have a strategy that is fully set up and officially accepted at state level. During the review of the individual points of the European action plan for individual countries, it was established that, with the exception of three points, Slovenia is fulfilling the action plan in its entirety.

3. The management of the bear population in Slovenia at present

In contrast to the traditional, but now outdated approach, the modern management of free-ranging species, based on ecological principles, cannot be limited only to animal species or just a small proportion of these species in isolation from everything else that enables them to survive in nature. Modern management must include all the animal and plant species, which are by their nature linked together in living communities, closely connected and co-dependent on each other and on all the elements of the area they live in, which includes man and his activities. In this integrated approach, all the modern management measures try to consider the natural laws that determine and govern relations and relationships among individual species in a particular community.

The management of the brown bear population in Slovenia is not left to the free market and, chaos; it is a part of the integrated planning system. As bears are a species of special importance, both in Slovenia as well as in a wider European and even world sphere, bear management takes into consideration all the factors already mentioned and legal and professional documents.

The principles of encroachment into the bear population are a part of this management. It is probably hard for that elsewhere in Europe to imagine that with the present number of bears in Slovenia there is simply no other alternative but to carry out regular culls. With this in mind Slovenia, in line with the provision in paragraph 1 of Article 22 and in relation to Article 6 of the Bern Convention, negotiated a reservation to Appendix II for the brown bear (as well as for the wolf).

Encroachments into the brown bear population are carried out on the basis of proposals submitted to a special commission within the Ministry of Agriculture, Forestry and Food responsible for game, by the expert services of the Slovenia Forest Service which is, pursuant to the Forests Act, responsible for integral planning, that is encroachments into the population of free-ranging animal species and their habitat. The commission is a balanced one consisting of independent experts (from the Department of Forestry, the Department of Biology and the Zootechnical Department at the Biotechnical Faculty of the University of Ljubljana, from the Natural History Museum and from the Slovenian Forest Service, representatives of various interested parties (hunters, livestock breeders and local communities) and state officials (the Ministry of Agriculture, Forestry and Food and the Ministry of the Environment, Spatial Planning and Energy). The commission is an advisory body to the minister responsible for game and hunting, that is the Minister of Agriculture, Forestry and Food. The minister passes decisions on encroachments into the bear population (as well as other large carnivores), and mainly relies on the commission for this, even though he has a discretionary right to decide independently. The Department for Wildlife of the Slovenia Forest Service draws proposals

for the encroachments at the end of each calendar year for the following year. Proposals for the necessary cull of brown bears are based on the Brown Bear Management Strategy.

Each proposal takes consideration of all the available professional postulates and is harmonised with the responsible bodies in game breeding areas, which are the wider, ecologically rounded units for game management in Slovenia. Each proposal is thus agreed with those carrying out the encroachments on the basis of the following parameters:

- brown bears culled so far (shot, captured or lost),
- ascertainable damage to crops, livestock, buildings, vehicles and elsewhere,
- conflict situations involving bears as recorded by the brown bear intervention group,
- data on the counts and the assessment of the number of brown bears that have, since 2000, been carried out two or three times each year by the Slovenia Forest Service and the Hunters Association of Slovenia,
- experience (both theoretical and practical) obtained in previous years by animal experts working within the scope of the activities of the Slovenia Forest Service.

When the Minister adopts a decision on an encroachment into the bear population, he divides the planned quota of the number of bears to be culled among the bear zones defined in the Strategy and among the game breeding grounds. The latter further divide their quota among individual hunting grounds, taking into consideration the criterion that those hunting grounds and areas where conflicts between man and bear have occurred have the priority. The joint quota of bears to be culled is divided according to weight categories (up to 100 kilograms, 100 – 150 kg, over 150 kg), with most of the planned cull being in the first weight category, involving young, immature animals, most often involved in conflict situations. The cull is monitored, and any violations are controlled and dealt with by the hunting inspectors with the help of the courts.

The planned cull includes not only bears that are to be shot – proven losses in the bear population are also subtracted from the quota. This ensures that the population dynamics are controlled, as the planning of shooting alone could lead to an uncontrolled number of accidental losses, the occurrence of which seems to have grown in recent years.

Reasons for the increased cull of bears in 2002

Why the decision to cull more bears in 2002?

Problems connected with the coexistence of man and bear in Slovenia have started to increase particularly over the last five to seven years and have escalated in the last two to three years. There are a number of reasons for this, which cannot be wholly explained, as experts provide assessments of the reasons from their own particular point of view and cannot agree either on the reasons themselves or their relative importance. It is unarguable that the Slovene bear population is progressively increasing, as is the area in which they live. These two reasons, alongside other as yet unnamed ones, have led to difficulties. Today, the number of bears in Slovenia exceeds the sustainable capacity of their environment and problems involving bears have turned the image of the species into a negative one.

How do we ascertain the number of bears?

The absolute number is not the only important factor, more significant is the population trend that is, as already mentioned, a progressive one. The absolute number is used only when it is necessary to decide in what way and how much to encroach into the population by culling, starting from the assessed number of bears, which again differs depending on the point of view. Whether the number of bears can be simulated with various models or whether it is easier to assess it on the basis of “hard” facts derived from the actual monitoring of the population, is left to individual judgement. The actual monitoring of the bear population in Slovenia means that the number of bears is ascertained via direct counts in relatively permanent places (bear meat feeding stations, corn feeding stations for wild boar, and other counting places) and via the daily monitoring indices in the Slovenia Forest Service professional game breeding areas in the central bear zone, encompassing an area of over 70,000 ha. All hunting organisations in whose hunting grounds bears are permanently present participate in this, counting bears on the same day (on a moonlit night), two to three times a year. After the count, the collected forms are analysed and any sightings judged on the basis of the time they were recorded to be duplicated, are excluded. Dr Miha Adamic, together with the Hunters Association of Slovenia, devised this method a few years ago. With this count, it is possible to show the population trend, as well as determining the social structure of the population, that is the proportion of bears sighted involving female bears with cubs. We maintain that on the counting nights, when there are also optimum weather conditions, it is possible to sight and count at the feeding stations up to 70% of the bear population. After the count, hunting organisations fill another part of the form, where they estimate the number of bears more or less constantly present in their hunting grounds, which were not spotted during the count. And this produces the difference between the numbers recorded (the number of animals actually counted – the assessed number).

The results of the counts over the last three years are shown in the following table:

Year and count no.	No. of counting locations	Assessed number	Counted in total	Females	Cubs in their 1 st and 2 nd year	Cubs per female
2000 – 1	206	580	228	51	87	1.71
2000 – 2	278	621	326	67	156	2.33
2000 – 3	315	696	432	84	156	1.86
2001 – 1	293	547	212	41	76	1.85
2001 – 2	290	566	285	57	103	1.81
2001 – 3	321	612	279	53	104	1.96
2002 – 1	349	731	344	57	105	1.84
2002 – 2	372	894	468	100	186	1.86

Comparing all the counts, the most interesting is the number in the last column – the number of cubs per female (in their 1st and 2nd year) – which is very stable, most often around 1.8 to 2 cubs per female, the lowest number – only 1.71 – occurring in April 2000, and the highest – 2.33 – in May 2000. The number of bears counted (since 2000) was highest in the last count, as was the assessed number of bears, which additionally confirms the thesis about the progressive growth of the population. We estimate, that the annual increment of bears (newly born) in Slovenia is between 100 and 150. It should be mentioned here that we estimate the survival level of cubs to be very high, the main reason being the sufficiency of both natural food and food offered to bears by man (at feeding stations, etc.).

Cases of damage involving bears

The assessment of the present state of affairs, based on the data collected so far (8-year analysis), regarding damage incurred by bears (in line with the methodology of compensation payments) and the analysis for 2002 shows the following:

Year	Number of damage cases	Damages paid out in SIT
1994	7	837,000.00
1995	57	2,826,562.00
1996	45	6,139,890.00
1997	81	9,724,539.00
1998	105	28,913,215.00
1999	138	23,921,963.00
2000	139	12,614,238.00
2001	123	10,601,558.00
2002	374	18,146,990.00

The data shows that, prior to 2002, the number of damage cases settled around just over a hundred a year. The nominal value of compensations kept increasing, slowly at first, whereas in 1998 and 1999 it went up dramatically. But the amount declined after 1998. In 2002, the number of cases shot up. It is highest in the Kočevje and Notranjska areas and in the wider Alpine and sub-Alpine region. In the former, this is the result of the higher number of bears; whilst in the latter the main cause is the utilisation of the land (free pasture in the mountains), as the number of bears here, compared to the central area, is considerably lower, but nevertheless on the increase.

Experts of the Slovenia Forest Service assess the damages incurred, whilst compensation is paid out by the Ministry of Agriculture, Forestry and Food. In 2002, there were so many cases of damage incurred by bears and wolves that for a few months now the Ministry has been unable to pay compensation, as the amount is much greater than the funds available for this in the national budget.

Bears culled so far:

An overview of bears culled so far in seven hunting years (i.e. from 1st April to 31st March) during the period between 1994 and 2000 and the cull in the 2001 and 2002 calendar years, according to gender and weight (as of 18th November 2002):

No. of bears culled	BY GENDER			BY WEIGHT				TOTAL
	male	female	unknown.**	up to 100 kg	101-150 kg	over 150 kg	unknown**	
throughout Slovenia								
Hunt. year 94/95	19	20	2	23	11	6	1	41
Hunt. year 95/96	23	8	1	16	9	6	1	32
Hunt. year 96/97	29	17	1	28	16	3	-	47
Hunt. year 97/98	29	20	-	32	13	4	-	49
Hunt. year 98/99	37	21	4	29	20	9	4	62
Hunt. year 99/00	33	23	-	40	5	11	-	56
Hunt. year 00/01	38	21	-	37	19	3	-	59
Cal. year 2001*	33	20	2	33	16	5	1	55
Cal. year 2002	68	39	1	83	18	6	1	108
Total 94/2002	303	186	11	316	123	53	8	500
Ratio (%)	61	37	2	64	25	11	-	100

* the calendar year 2002 includes 9 bears which have also been included in the cull of 2000/01 (1.4.2000 - 31.3.2001), but which are not included twice in the total for the period between 1994 and 2002

** the categories "unknown" with regard to gender and weight are the result of incomplete records maintained by hunting grounds managers or the inability to determine gender in some cases of bear loss;

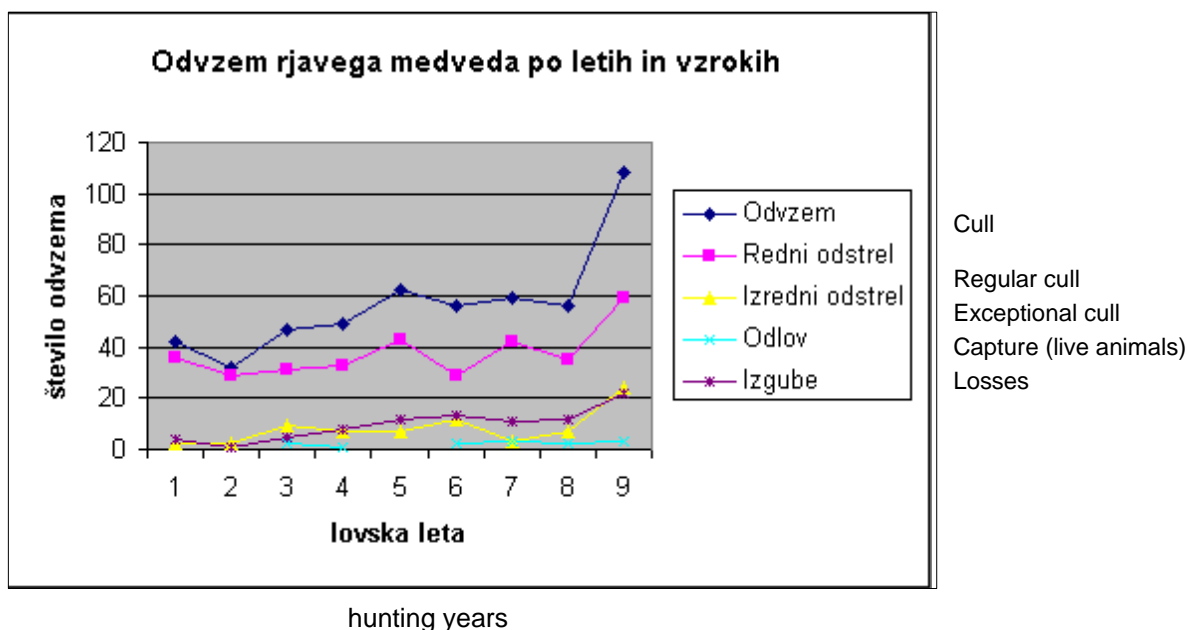
The following can be established from the analysis of the bear cull:

- It is estimated that for a number of years, if not a whole decade, fewer bears have been culled than born; bears are more common in areas where they were once rare, and the population density in the core presence area has increased.
- The cull predominantly involves bears weighing up to 100 kg (64% of all the proven cull), however, the share of the culled bears weighing between 101 and 150 kg and above 150 kg is relatively high (36% of the total), particularly as in the first weight category (up to 100 kg) more than 50% of the bears culled weighed over 70 kg. With respect to the correlation between weight and age, it is estimated that the natural age composition of the population is altered and leaning towards younger and middle aged immature bears, which are also the ones involved in conflict situations within their environments.
- According to the gender structure in the period of five years, it was males that predominated in the cull in comparison with females (61:37%), while 2% of bears were of unknown gender. The natural gender structure of the population is thus likely to be considerably altered, which is the result of the internal documents adopted by the Hunters Association of Slovenia, protecting females with young.

A table and graph showing the reasons for the cull:

Hunting year	Cull	Regular cull	%	Exceptional cull	%	Capture of live bears	%	Losses	%	Regular exceptional cull (%)
94/95	42	36	0.86	2	0.05		0.00	4	0.10	0.91
95/96	32	29	0.91	2	0.06		0.00	1	0.03	0.97
96/97	47	31	0.66	9	0.19	2	0.04	5	0.11	0.85
97/98	49	33	0.67	7	0.14	1	0.02	8	0.16	0.81
98/99	62	43	0.69	7	0.11		0.00	12	0.19	0.80
99/2000	56	29	0.52	12	0.21	2	0.04	13	0.23	0.73
00/01	59	42	0.71	3	0.05	3	0.05	11	0.19	0.76
2001	56	35	0.63	7	0.13	2	0.04	12	0.21	0.76
2002	108	59	0.55	24	0.22	3	0.03	22	0.20	0.77
TOTAL	511	337	0.66	73	0.14	13	0.03	88	0.17	0.80

Brown bear cull by year and reason (in numbers)



The work of the brown bear intervention group:

The intervention group for problems involving brown bears was founded on the basis of Government resolutions and Decision No. 017 – 62/00, dated 5.4.2000, adopted by the Ministry of Agriculture, Forestry and Food. The group acts on the basis of a written operative agreement with the police and on the basis of the resolution adopted by the director of the Slovenia Forest Service No. 16/00, dated 30.5.2000. In cases of a conflict with bears, the group answers calls to the intervention numbers 112 and 113 – the operative communication centre and the police. From the records kept by the intervention group, we can surmise that in 2002 the group responded to over 80 calls for intervention, which is almost 50% more than in the previous year. In line with its legal and professional responsibilities, the methods for solving problems with bears used by the intervention group are the capture of bears, scaring bears with different technical devices and rubber missiles or killing them with fire arms.

4. Conclusions

On the basis of the above we can conclude that:

- The population of the brown bear in Slovenia is in a “favourable position” (stable) and not threatened either in the short or long-term. The population size is increasing and the area where bears can be found is widening;
- It has been empirically established that an increment of 2 cubs per female in a population of 500-700 bears means an annual increment of 100-150 bears. Following the increase in the number of bears in the past decade, the encroachment at a level of 15% of the estimated population in 2002 is the first radical one and includes bears eliminated by all possible causes;
- The number of bears in the total culling quota actually shot is falling, while the number of animals exceptionally culled in conflict situations and the number of bears lost, particularly in road and rail accidents, is growing;
- Instances of damage incurred by bears and the number of conflicts with man are increasing, causing the image of this species to be perceived in a progressively negative way. In the last five years, 3 serious incidents involving a bear’s attack on a person resulting in serious bodily harm have been recorded. As a consequence of this, there is the strong possibility of the unlicensed hunting of bears, that is completely uncontrolled encroachments into the bear population;
- The species is above the sustainability threshold for its environment and the areas in which bears appear in Slovenia could not sustain a larger population.

In its management of the brown bear, Slovenia is respecting international regulations, including all the documents and plans involving the international area, as well as the ecologically integral Eastern Alps-Dinarics-Pindos area, but at this particular point in time, a greater encroachment into the population has to be a reality, too. This is also one of the measures set out in the adopted *Brown Bear Management Strategy* and the action plan based on it. The implementation of most of the other measures ensuring the achievement of the two strategy goals will be carried out by Slovenia using its own knowledge and resources and, of course, in this it will take advantage of definitely required international help (for example, LIFE projects, etc.). We shall (as we are already doing) take into account the integrity of the measures aimed at solving the problems, which does not involve just the culling of bears, but also the implementation of a whole range of measures in the brown bear habitat (feeding, habitat improvement, prevention relating to the breeding of small livestock, illegal refuse dumps, etc.).

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