"STATUS OF BROWN BEARS (*Ursus arctos*) IN ALBANIA AND FYROM"

Athens, June 2009

<u>Report prepared by:</u>

Alexandros A. Karamanlidis, PhD
ARCTUROS
Markou Botsari Sq. 3
15771 Zografos
Athens/GREECE
Email: akaramanlidis@gmail.com

&

Andreas Zedrosser, PhD
Department of Ecology and Natural Resource Management, Norwegian University of Life Sciences, P.O. Box 5003, 1432, Ås, NORWAY

&

Department of Integrative Biology and Biodiversity Research, Institute of Wildlife Biology and Game Management, University of Natural Resources and Applied Life Sciences, Vienna, Gregor-Mendel Str. 33, A-1180 Vienna, AUSTRIA
Email: andreas.zedrosser@umb.no

<u>Cover photo:</u> Young brown bear held captive at a restaurant in Voskopoje/Albania (© A.A. Karamanlidis/ARCTUROS)

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

2

Project participants:

➢ **Transborder Wildlife Association (TWA) - ALBANIA**

Stavri Pllaha – Project coordinator in Albania

Vangjel Dhono

Bajram Kullolli

Kostaq Luadhi

Pirro Pojani

Kristaq Shore

➢ **MOLIKA - FYROM**

Petar Andonov – Project coordinator in FYROM

Violeta Bucukovska

Elena Gagaceva

Nikola Mateski

Natalija Naumcevska

Hristina Petrovska

Slavica Petkovska

Stefan Petrovski

Tomce Petrovski

➢ **ARCTUROS - GREECE**

Lazaros Georgiadis, – International coordinator

Miguel de Gabriel Hernando

Lambros Krambokoukis

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

3

Table of Contents

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

4

<u>List of tables</u>

<u>List of Figures</u>

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

5

1 INTRODUCTION

The brown bear (*Ursus arctos*) is the most widespread bear in the world, with a holarctic distribution in Europe, Asia, and North America. In Europe, the species has disappeared from large parts of its original range due to habitat loss, fragmentation, and degradation, and due to human persecution (Swenson *et al.*, 2000). Especially in the western and Mediterranean parts of Europe, brown bears survive mainly in small, fragmented populations that are threatened by extinction. Bear populations in Albania and the Former Yugoslav Republic of Macedonia (FYROM) are of significant biological and genetic value, as they constitute the connecting populations between the brown bear populations of the Republic of Serbia, Croatia and Slovenia in the North and the endangered brown bear population of Greece in the South, where the species reaches its southernmost European distribution (Mertzanis, 1999).

In Albania, the current estimation of the bear population is about 250 individuals; the species has been steadily declining over the past 20 years, and the current population size estimate is the lowest ever. In FYROM, the brown bear population is estimated to consist of fewer than 200 individuals (Zedrosser *et al.*, 2001). Effective protection and management of both populations is of outstanding importance, not only for preventing a further decline, but also for preventing demographic and genetic isolation of greek bear populations. Protection and management actions in both countries should therefore rely on solid, but also rapidly gained information on the general status and biology of the species.

Brown bears are legally protected in both countries; however, neither the General Directorate of Forestry and Pastures, which is responsible for brown bear management in Albania, nor the Ministry of Forestry, Agriculture and Water Management, the responsible management agency in FYROM, possess a management plan or are implementing a national strategy (Action Plan) for the conservation of the species and bear populations in both countries are not being systematically monitored. Consequently, there is a severe lack of information on their general status and distribution, and the aforementioned population estimates are merely educated guesses. Furthermore, there is evidence suggesting that the practice of "dancing bears" still persists in Albania. It has also been reported that bear cubs

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

6

are kept as pets in restaurants. The individuals for these practices are most likely captured in the wild and the magnitude of both of these problems is still unknown.

The main aim of the project was to collect information that will enable a preliminary assessment of the current status of brown bears in Albania and FYROM and prepare the groundwork for the effective conservation and management of the species in the future. The main objectives of the project were the following:

- Collection of basic information on the distribution of brown bears in Albania and FYROM. Considering security issues regarding field research in areas close to the borders to Kosovo (i.e. areas in northeastern Albania and northwestern FYROM) expressed by our local partners, collection of information on brown bear distribution in both countries focused mainly at the transborder areas of both countries to Greece.

- Collection of basic information on demographic parameters and population size and trends of brown bears in the aforementioned study areas.

- Establishment of a network of non-invasive genetic sampling stations in both countries that can be used in the future for estimating brown bear distribution and population sizes.

- Evaluation of the magnitude of the "dancing bear" and "restaurant bear" problem in Albania and their potential effect on the wild bear population.

- Strengthening the already existing international cooperation between NGOs involved in the conservation and management of bears in Albania, FYROM and Greece.

- Exchange of scientific know-how between Albania, FYROM and Greece.

- Establishing a basis for trans-border management of bear populations in Albania, FYROM and Greece.

2 METHODOLOGY

Considering the unknown and potentially even endangered status of brown bears in Albania and FYROM, monitoring the species was conducted using exclusively non-

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

7

invasive research methods. In order to collect basic information on the distribution, demographics, population size and trend of brown bears in both countries and the welfare status of brown bears in Albania three different methodological approaches were applied:

2.1 Field surveys

Field surveys were carried out, during which, indirect signs of bear presence (i.e. tracks, scats, feeding signs etc.) were collected, while systematically surveying forestry roads within bear distribution. Such field surveys took place during favorable weather conditions (i.e. during the rainy season, in order to find tracks) in April – May in both countries. This methodology is widely and successfully applied in the study of the species in the area (Mertzanis, 1994; Mertzanis *et al.*, 2005).

In addition, a new, non-invasive study method developed in Greece was also used (Karamanlidis *et al.*, 2007). This method is based on the marking behavior of bears and uses signs (i.e. marks, bites, hair, mud prints) found on power poles to document the presence of the species in a given area. As marks and bites on poles persist for a long time, they provide information not only on the current status of bear populations but a cumulative history of the presence of the species and are thus more suitable for in-depth understanding of the status of the species in a given area than just sampling a snapshot in time. In both countries, power poles were inspected and the ecological parameters surrounding them recorded (see Annex I for a Power pole evaluation form). Based on suitability criteria (Karamanlidis, 2008) the most suitable poles for the creation of a non-invasive genetic monitoring network in the study area were identified.

Power poles are made of wood that has been processed with a preservative (usually creosote) in order to resist damage caused by insects and rotting. Depending on land topography, poles are placed 50 – 100 m apart and the vegetation at a distance of 5 m from each side of the pole line cleared away. Forest animals use these belts as travel corridors, with animal paths often leading from one pole to the next. In order to minimize the chance of a bear rubbing against a pole without leaving hair behind and its visit going undetected, poles were fitted with barbed wires. A single piece of barbed wire was fitted to each pole, reaching from the ground to a height of

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

8

approximately 2,0 m. Wraps around the pole were distanced approximately 30 cm from each other.

By attaching barbed wire to these poles a network of non-invasive sampling stations was created in both countries that were inspected on a monthly basis in order to collect genetic material (see Annex I for the Power pole sampling form in FYROM).

2.2 Questionnaires

Two different types of questionnaires were carried out in Albania. The first questionnaire aimed in evaluating the magnitude of the welfare problem of bears held in captivity, while the second type aimed in evaluating the status of wild bear populations in areas of the country neighboring to Greece and FYROM.

To evaluate the magnitude of the welfare problem of bears held in captivity in Albania, members of the TWA field team carried out interviews with local citizens and authorities (i.e. representatives of the Forestry Department, veterinary authorities) in order to obtain information on the whereabouts of such animals. These locations were then visited and data on the status of the captive animals were collected (see Annex I for the Captive Bear Registration Form), in order to confirm the information received and evaluate the status of the captive bears.

In addition, and due to the fact that field conditions in Albania are harsh and field research in the area difficult, special questionnaires were designed and conducted in order to obtain information on the status of bears in the wild. The questionnaires were created based on questionnaires used in a similar project carried out in the area by the greek non-governmental organization ARCTUROS (Godes, 1997) and were conducted especially in the transborder areas of Albania to Greece and FYROM, but also in areas where habitat fragmentation was most likely to affect the status of the species. The questionnaire consisted of 35 questions organized in 4 different groups. These groups can be summarized as follows:

1. <u>Group 1:</u> This group of questions collected information on the questionnaire itself (i.e. Name of the person carrying out the questionnaire, date, location, name of the person interviewed, age, gender, occupation).

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

9

2. Group 2: This group of questions collected information on the status of the brown bear population in the area (i.e. permanent presence of the species in the area, date of last sign of presence of the species in the area, seasonal presence of the species in the area, locations with the highest bear presence and types of bear presence recorded).

3. Group 3: This group of questions collected information on human – bear interactions in the area (i.e. presence of bear damage in the area, type of bear damage, human response to the "problem – bear", average frequency of bear damage per year, season of bear damage, locations mainly affected by bear damage, last occasion of bear damage, mitigation measures applied, cases of bear aggression, cases of deliberate killing).

4. Group 4: This group of questions collected information on the attitudes of humans towards bears in the region (i.e. attitude towards bears, attitude towards "dancing" bears, attitude towards bears held as pets in restaurants).

For more detailed information on the questionnaire see Annex I.

2.3 Genetic analysis

Genetic material (i.e. hair) collected from the non-invasive sampling stations was analyzed in order to identify individuals and their sex.

For every collected hair sample, DNA extractions were performed using the DNeasy Blood & Tissue kits (QIAGEN, Hilden, Germany) following the manufacturer's instructions. We aimed at using ten guard hairs where available. All extractions took place in a building in which amplified DNA had never been handled.

Samples were screened at the following loci: *G1A, G1D, G10B, G10C, G10L, G10M, G10P, G10X* (Paetkau *et al.*, 1995), *G10H, G10J, G10O, G10U* (Paetkau, Shields & Strobeck, 1998), *CXX20, CXX110* (Ostrander, Sprague & Rine, 1993), *MU23, MU26, MU50, MU51, MU59* (Taberlet *et al.*, 1997), *Msut-2* (Kitahara *et al.*, 2000), *REN145P07* (Breen *et al.*, 2001).

Thermal cycling was performed using a MJ Research PTC100 thermocycler with 96 well 'Gold' blocks. PCR buffers and conditions were according to Paetkau et al. (1998) (Paetkau *et al.*, 1998), except that markers were not co-amplified as co-

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

10

amplification reduced success rates for hair samples. We used 3µl of a total extract volume of 125µl per PCR reaction, except during error-checking when 5µl was used. [MgCl2] was 2.0 mM for all markers except MU26 (1.5mM), MSUT-2 (1.5mM) and G10J (1.8mM). Microsatellite analysis used ABI's four color detection system; we used an automated sequencer (ABI 310) and genotypes were determined using ABI Genescan and Genotyper software. Error-checking and general quality assurance followed strictly the guidelines of Paetkau (2003) (Paetkau, 2003).

Subsequent individual identification was based on a set of microsatellite loci identified within the framework of the "Hellenic Bear Register" (Karamanlidis *et al.*, 2008) using protocols defined by Paetkau et al. (1995) and Taberlet et al. (1997) (Paetkau *et al.*, 1995; Taberlet *et al.*, 1997), while sex identification was facilitated using the methodology proposed by Ennis & Gallagher (1994) (Ennis & Gallagher, 1994).

Genetic analysis was carried out in cooperation with Dr. D. Paetkau, Wildlife Genetics International – Canada and Prof. L. Paule, Technical University of Zvolen - Slovakia.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

11

3   RESULTS

3.1   Albania

3.1.1   Preparatory phase

During the preparatory phase of the project and throughout the reporting period, members of ARCTUROS visited Albania six times. Three visits were carried out by the international coordinator of the project, Mr. L. Georgiadis, in order to arrange the terms of cooperation (i.e. signing of a Memorandum of Understanding (MoU) between ARCTUROS and TWA and coordinate field work activities. Another three visits (April, May, November) were carried out by the field team of ARCTUROS, consisting of Mr. L. Krambokoukis and Mr. A.A. Karamanlidis – these visits aimed in introducing field techniques to the field team of TWA and carrying out joint field surveys.

3.1.2   Field surveys

During two surveys carried out jointly by the field teams of TWA and ARCTUROS in April (12-19/04/08) and May (03-05/05/08), the southeastern and eastern part of Albania was surveyed, during which twelve indirect signs of brown bear presence were found (2 scats, 10 tracks) (Fig. 1).

In addition, 28 power poles were inspected and evaluated. Only seven of them were considered suitable (i.e. had recent signs of bear marking and rubbing activity on them) to serve as non-invasive sampling stations and were fitted with barbed wire. These seven poles were surveyed in May, June, July and November by the field teams of TWA and ARCTUROS. Bear presence was recorded on four power poles in May, on one in June, none in July and four in November.

Bear presence was verified also through interviews carried out during the field surveys in the areas of Voskopoje, Strelce, Vithkug, Radanj, Klenje, Steblere, Llange, Nikollare and Dardhe – Sinice.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

12

Figure 1: Locations of bear evidences found during two field surveys in April and May 2008 in southeastern Albania

3.1.3 Questionnaires regarding the welfare status of brown bears in Albania

Within the framework of the project the field team of TWA, supported by the field team of ARCTUROS, carried out an extensive survey aiming at determining the welfare status of bears in captivity in the country. During this survey 21 animals were found to be held as pet animals in restaurants, privately as "photo bears" or in private zoos (Table 1).

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

13

Table 1: Information on the welfare status of brown bears in captivity in Albania

No	Location	District	Purpose of captivity	Sex	Age	Origin	Enclosure size	Enclosure description	Water	Diet	General physical conditions	Additional Comments
1	Restaurant "Shqiponja"	Shkoder	Restaurant Bear	Female	>10 years	Unknown	50m²	Floor: cement, Walls: mesh	Yes, continuous water	Usually restaurant waste (bread, maize, fruits, fish, etc.)	Health: good, Skin: good, Eyes: good, Wounds: no, Teeth: normal	The female and male are sister and brother; the two bears have contact to each other as they are being held in the same cage; Visitors have access to the bears; people do not pay for visiting.
2	Restaurant "Shqiponja"	Shkoder	Restaurant Bear	Male	>10 years	Unknown				Usually restaurant waste (bread, maize, fruits, fish, etc.)	Health: good, Skin: good, Eyes: good, Wounds: no, Teeth: normal	
3	Restaurant "Castelo"	Berat	Restaurant Bear	Male	9 months	Berat area	4m²	Floor: wood, Walls: mesh,	Yes, provided during the day	Grass, roots, milk, bread	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: normal	Access to visitors; Bear is acquainted to the presence of visitors
4	Restaurant "Fladi", Mbrostar Commune	Fier	Restaurant Bear	Female	10 years	Albania	6m²	Floor: soil, Walls: mesh	No, water in the cage, It is provided during the day	Vegetables, bread and meat 2-3 times a day	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: normal	Access to visitors; Sometimes the bear is aggressive towards them.
5	Restaurant "Germenj" Germenj Village	Erseka	Restaurant Bear	Male	8 years	Shemtir, Erseka, Korca Region	4m²	Floor: cement, Walls: mesh	No water in the cage	Macaroni, fruits, restaurant meal etc.	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: normal	Access to visitors, people pay for entrance (there are also other animals); The bear is not aggressive.

6	Korca City	Korca	Photo bear	Female	8 years	Unknown	Unknown	Unknown	Unknown	Unknown	Health: not so good, Skin: dirty, not good, Eyes: normal, Wounds: no, Teeth: normal	The bear has daily contact to people who like to have a photo with the bear; The bear is not in a good condition as it has a chain in its mouth.
7	Restaurant "Manastiri" or "Te Ariu"	Fier	Restaurant Bear	Male	12 years	Puka District	4m²	Floor: concrete, Walls: mesh	There is no water (2 times a day)	Vegetables, bread and meat 3 times a day	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	Access to visitors
8	Peshkopi Town	Diber	Home bear	Female	1 year and 6 months	Not known	4m²					The bear is kept at a house, maybe to be sold to a restaurant.
9	Restaurant and Park-Zoo "Zaferi" Mbrostar Commune	Fier	Restaurant Bear	Female	5 years	Albania	15m²	Floor: concrete, Walls: walls 3 sides and mesh 1 side.	There is no water (2 times a day)	Vegetables, bread and meat 3 times a day	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	Both bears are in the same cage; Access to visitors.
10			Restaurant Bear	Male	7 years	Albania					Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	
11	Restaurant "Sofra e Ariut"	Tirane	Restaurant Bear	Unknown	4 months	Born in captivity in the small cage	9m²	Floor: cement, Walls: mesh	No water in cage. Twice a day provided	Mother's milk	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	Born in captivity in the same cage and restaurant.
12			Restaurant Bear	Female	>10 years	Unknown				Waste of restaurant, everything including meat.	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	Male and Female are in separated cages; Both bears are surrounded by another mesh wall for people not to be close to the bear; Access for visitors.

No.	Location	District	Type	Sex	Age	Origin	Area	Cage	Water	Food	Health	Comments
13			Restaurant Bear	Male	<10 years	Unknown				Waste of restaurant, everything including meat	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	
14	Krehes Commune	Tepelen	Restaurant Bear	Male	3 years	From that area	4m²	Floor: metallic, Walls: metallic	No water. Provided twice a day	Vegetables, bread and meat three times a day	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: not clear	Access to visitors; Sometimes aggressive, because of the car noise.
15	Taverna "Ura Kovaçit" Voskopoje	Korca	Restaurant Bear	Female	13 months	Lubonja village, Korca District	1m²	Floor: cement, Walls: mesh	No water, provide twice a day	Bread, potatoes, fruits	Health: not so good, Skin: dirty not good, Eyes: normal, Wounds: no, Teeth: normal	Access to visitors; The cage is dirty
16	Rushkull	Durres	Zoo bear	Male	3 years	Albania	4m²	Floor: wood, Walls: mesh,	No water. Provided twice a day	Vegetables, grass, bread three times a day	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: good	This is a private zoo 1 km away from the sea; Access to people; Sometimes nervous.
17	Rushkull	Durres	Zoo bear	Female	<3 years	Albania	6m²	Floor: wood, Walls: mesh	No water. It is provided twice a day	Vegetables, grass, bread three times a day	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: good	Both male and female are in the same cage. Access to visitors. Sometimes nervous.
18			Zoo bear	Male	<4 years	Albania					Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: good	
19			Zoo bear	Male	9 years	Albania	4m²	Floor: wood, Walls: mesh	No water. It is provided twice a day	Vegetables, grass, bread three times a day	Health: good, Skin: dirty, Eyes: normal, Wounds: no, Teeth: good	Access to people. Aggressive and nervous towards people.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

16

20				Zoo bear	Female	<14 years	Albania	4m²	Floor: Iron, Walls: mesh	No water. It is provided twice a day	Vegetables, grass, bread three times a day.	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: good	Access to people, sometimes nervous.
21				Zoo bear	Male	10 years	Albania	4m²	Floor: Iron, Walls: mesh	No water. It is provided twice a day	Vegetables, grass, bread three times a day.	Health: good, Skin: good, Eyes: normal, Wounds: no, Teeth: good	Access to people; Aggressive and nervous towards people.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

17

3.1.4 Questionnaires regarding the status of wild brown bear populations in Albania

In addition to the questionnaires conducted in order to evaluate the welfare status of bears in captivity in Albania, the field team of TWA conducted questionnaires aiming at collecting information on the status of brown bears in the wild. During the project 93 questionnaires were conducted in seven different areas in the southeastern part of the country (Fig. 2).

Figure 2: Areas and number of questionnaires conducted in southeastern Albania in 2008

The detailed results of the questionnaires are presented in Tables 2, 3 and 4.

Table 2: Results of the second group of questions of the questionnaires carried out in southeastern Albania in 2008 regarding the status of wild bear populations in the region

Area	Nr. of questionnaires conducted	Bear presence in the area (%)	Season	Type of data (%)	Bear evidence					
					Tracks (N)	*Scat (N)*	*Feeding site (N)*	*Winter den (N)*	*Day bed (N)*	*Broken branches (N)*
Permet	4	Permanent (50)	Summer, autumn, winter	Indirect information (75)	4	2	0	0	0	3
Erseka	13	Permanent (61)	Spring	Direct information (76)	12	12	2	0	4	11
Korca	8	Permanent (100)	-	Direct information (100)	8	7	0	0	0	8
Gramsch	24	Permanent (41)	Summer, autumn	Indirect information (66)	18	20	4	3	5	8
Leskovik	17	Permanent (82)	Summer, autumn	Direct information (100)	16	16	1	3	1	14
Librazhd	20	Permanent - seasonal (50)	Summer, autumn	Direct information (95)	19	19	5	8	6	14
Pogradec	7	Permanent (85)	Autumn	Direct information (71)	7	7	3	3	3	4

Table 3: Results of the third group of questions of the questionnaires carried out in southeastern Albania in 2008 regarding the status of human – bear interactions in the area

Area	Bear damage (%)	Annual number of damages by bears (*N*)	Season of damages	Main commodity damaged (%)	Human response to bear damage		Bear aggression (*N*)	Deliberate killing of bears (*N*)
					Killing (N)	*Organized actions (N)*		
Permet	No (75)	0					0	0
Erseka	Yes (53)	1-5	Autumn and summer	Crops (30)	1	5	1	2
Korca	Yes (100)	1-5	Summer	Orchards (87)	Not available	Not available	0	0
Gramsch	Yes (70)	1-5	Autumn and summer	Crops (66)	8	14	6	7
Leskovik	Yes (100)	1-5	Autumn and summer	Apiaries (100)	1	14	0	0
Librazhd	Yes (100)	1-5	Summer and autumn	Free-grazing animals (80)	2	15	7	5
Pogradec	Yes (100)	1-5	Autumn	Crops (100)	2	5	2	2

Table 4: Results of the fourth group of questions of the questionnaires carried out in southeastern Albania in 2008 regarding the attitudes of locals towards brown bears and their conservation problems

Area	Perception of bears (%)				Attitude towards "dancing" bears (%)	Attitude towards "restaurant" bears (%)
Permet	Not dangerous (100)	Not harmful (75)	Shy (75)	Not aggressive (100)	Negative (100)	Negative (100)
Erseka	Not dangerous (100)	Not harmful (100)	Not shy (61)	Not aggressive (100)	Negative (76)	Negative (84)
Korca	Dangerous (100)	Not available	Not available	Not available	Negative (87)	Negative (87)
Gramsch	Dangerous (75)	Harmful (66)	Not shy (58)	Aggressive (62)	Negative (75)	Negative (87)
Leskovik	Not dangerous (100)	Harmful (88)	Not shy (52)	Not aggressive (94)	Negative (94)	Negative (100)
Librazhd	Dangerous (85)	Harmful (90)	Not shy (45)	Aggressive (70)	Negative (70)	Negative (80)
Pogradec	Dangerous (71)	Harmful (85)	Not shy (71)	Aggressive (57)	Negative (71)	Negative (85)

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

21

The most important results of the questionnaires can be summarized as follows:

➢ All of the people interviewed were male, the majority of whom were involved professionally in some kind of rural activity (i.e. farmers 44%, shepherds 24%).

➢ The majority of the people interviewed (93%) claimed to be living or working within a 25-km radius of mostly permanent or seasonal bear presence. Only five people interviewed believed not to be within a 25-km radius of permanent bear presence and all of them were from the area of Gramsch.

➢ The majority of people interviewed (except in the area of Permet) believed that bears caused damages to human property in their area. Such damages (*N:* 1-5) occurred mostly in summer and autumn and affected mostly crops.

➢ In all areas where bear damages were reported, affected locals often reacted by killing the problem bear. Organized actions, such as setting snares to catch the bear, lighting fires or scaring away the bear were however most frequently the preferred solution. Shepherd dogs were the most favored prevention measure; reinforcing fences was a solution rarely chosen. There was no report of electric fences being used as a mitigation measure.

➢ Several cases of bear aggression and deliberate killings were reported.

➢ The majority of the people interviewed had a negative image of the bear as a species; the intensity of this image was in direct relationship to the severity of damages caused by brown bears to human property in a specific area.

➢ People in southeastern Albania had a negative image of bears held in captivity.

3.1.5 Genetic analysis

During field work in Albania we collected 12 hair samples (three in April, four in May and five in November). Ten originated from the monthly power pole sampling efforts and two were collected opportunistically. One sample was collected from a female cub captured in the wild and held captive at a restaurant at Voskopoje, while the second one originated from a bear killed in the mountains of Voskopoje. DNA extraction was attempted from nine of the samples and was successful at three of them. We managed

to identify the female cub from the restaurant in Voskopoje and the male "1092"[1] at two different locations in May 2008.

---

[1] This number refers to the internal number given to a bear identified within the "Southwestern Balkans Bear Register" Karamanlidis, A. A., Georgiadis, L. & Zedrosser, A. (2009). The "Southwestern Balkans Bear Register": a tool in the conservation of brown bears in the southwestern Balkans. *International Bear News,* **18:** 13-14.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

23

3.2   Former Yugoslav Republic of Macedonia (FYROM)

3.2.1   Preparatory phase

During the preparatory phase of the project and throughout the reporting period, members of ARCTUROS visited FYROM six times. Three visits were carried out by the international coordinator of the project, Mr. L. Georgiadis, in order to arrange the terms of cooperation (i.e. signing of a MoU) between ARCTUROS and Molika and coordinate field work activities. Another three visits were carried out by the field team of ARCTUROS, consisting of Mr. M. de Gabriel Hernando and Mr. A.A. Karamanlidis – these visits aimed in introducing field techniques to the field team of Molika and carrying out joint surveys.

3.2.2   Field surveys

During three surveys carried out jointly by the field teams of Molika and ARCTUROS in April (07-12/04/08) and May (30/04-02/05/08 & 29-30/05/08), the southwestern part of FYROM was surveyed, during which four indirect signs of brown bear presence were found (2 scats, 2 tracks) (Fig. 2).

In addition, 278 power poles were inspected and evaluated. Seventy one power poles had evidence of bear marking and rubbing activity on them (Fig. 2); 33 of them were considered "suitable" enough (i.e. had recent signs of bear marking and rubbing activity on them) to serve as non-invasive sampling stations and were fitted with barbed wire (Fig. 3). This network of non-invasive sampling stations was surveyed in May, June and October by the field teams of Molika and ARCTUROS. Bear presence was recorded on twelve poles in May, thirteen in June and on seven in October.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

24

Figure 3: Locations of bear evidences found during three field surveys in April and May 2008 in the Former Yugoslav Republic of Macedonia (FYROM)

Figure 4: Locations of non-invasive genetic sampling stations in the Former Yugoslav Republic of Macedonia (FYROM). A radius of 10km has been set around

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

25

each sampling station, indicating the minimum species range coverage of the network.

3.2.3 Genetic analysis

During the monthly sampling of the power poles in the Former Yugoslav Republic of Macedonia 48 hair samples were collected (seven in April, twelve in June, 22 in May and seven in October). Following macroscopical analysis these samples were classified as follows: 37 were bad, seven were of medium quality and four were good. We tried to extract DNA and analyze twelve samples; we were successful with five samples and identified three females (Individuals "1080", "1081" and "1087") and two males (Individuals "1069" and "1741"). The locations where these individuals were identified are presented in Figure 5.

Figure 5: Locations of the five bears identified in the Former Yugoslav Republic of Macedonia (FYROM)

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

26

4 DISCUSSION

The main aim of this project was to collect information that would enable a preliminary assessment of the current status of brown bears in Albania and the Former Yugoslav Republic of Macedonia and prepare the groundwork for the effective conservation and management of the species in the future. The information in this report was collected during surveys in the field using a variety of non-invasive methodologies – this has been attempted, to the best of our knowledge, in such a systematic manner and geographical extent for the first time in both countries.

4.1 Albania

We believe that the results of the questionnaires and field visits in respect to the welfare status of bears in captivity in Albania indicate that the problem of captive bears in the country is significant. This is not due only to the large number and some times bad conditions the animals are kept in, but due also to the ongoing demand for new animals. During the questionnaires carried out in the field the TWA team got the general impression that captive animals originated from the wild and we believe therefore that illegal poaching in order to capture wild cubs may be a threat to the survival of the species in Albania. What is even more disturbing is the fact that there appears to be also a demand for trophy bears and hides – the extent of this problem is still unknown and needs to be investigated.

Regarding the collection of information on brown bears in the wild in Albania, the field teams of TWA and ARCTUROS encountered one major difficulty. Studying poles of the electricity network in the region has proven to be an effective methodology in order to establish presence / absence of brown bears in a given area (Karamanlidis *et al.*, 2007). However, almost all of the wooden power poles in Albania have been recently replaced by poles made of concrete. Some old wooden poles were located in the area of Voskopoje, these were however not enough to create an extensive network of non-invasive genetic sampling stations in the country. Considering this difficulty, efforts to collect information on the status of the species, both, the demographic and genetic, in the wild had to focus on the "traditional" collection of indirect signs of bear presence in the field and information resulting from the questionnaires.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

27

Based on the results obtained from these two sources we estimated the approximate main areas of distribution and reproduction of brown bears in southeastern Albania (Fig. 6). It appears that the main areas of distribution and reproduction of the species are isolated from each other, raising fears of habitat and population fragmentation in this area. Due however to the small number of "hard" evidence collected in the field during the project we consider it of utmost importance to continue monitoring activities in order to evaluate and verify these facts.

Figure 6: Main areas of distribution and reproduction of brown bears in southeastern Albania as estimated from data from field surveys and questionnaires

Finally, the questionnaires on the status of brown bears in the wild in southeastern Albania indicated an additional conservation problem for the species in the area. A number of human-bear conflicts were recorded – these included damaged property by bears, attacks of bears on humans and deliberate killings of bears. It appears that a number of deliberate killings occurred as a protection measure against property damage and loss. Apart from guarding dogs, throughout the entire area people resulted to rather "primitive" and cheap mitigation measures in order to protect their property, such as snares to trap problem bears or fire to scare them away. Additional fencing to protect orchards was rarely reported and electric fencing to protect apiaries was never reported. It appeared that financial constraints led

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

28

people to use these cheap and probably ineffective mitigation measures, which in turn appears to have had a negative effect on their perception of bears. The results of the questionnaires indicated that perception of bears was negative throughout the largest part of the region (i.e. bears are harmful, bears are dangerous), but mostly in areas that reported the most cases of property damage. Despite this, most people interviewed expressed their objections towards wild bears in captivity, either as "dancing" bears or as pets in restaurants.

Most of the results of this questionnaire survey are in accordance with the results of a similar survey carried out in the same region by the greek NGO ARCTUROS more than a decade ago (Godes, 1997). During both surveys, bear presence in the area appeared to be permanent, locals appeared to experience often damage to their property (mostly on crops), aggressive interactions and deliberate killings were reported and people interviewed had in general a negative perception of the species. The only facts that seem to have changed since the last survey in the area are the number of damages caused by bears, which appear to be less now and the attitude of Albanians towards bears in captivity, which appears to have improved.

4.2   Former Yugoslav Republic of Macedonia (FYROM)

In the Former Yugoslav Republic of Macedonia the results of the project up to date have been extremely promising. Until now the "power pole method" had been applied with considerable success only in Greece. The results of this project indicate however that the success of the method in FYROM is similar. During this project we managed to establish a small network of non-invasive genetic sampling stations, which, during the sampling sessions carried out until now, have documented the presence of the species in different areas of the country and provided valuable genetic material. At this point we must note that the quality of the sampling stations and the quality of the genetic samples collected is still inferior to the equivalent sampling stations and samples collected across the border in Greece. This difference might be due to the fact that we still have not found the best locations for our sampling stations, in which case, field efforts will have to intensify, or due to innate differences in the characteristics of the bear populations of the two countries (i.e. different population density, different sex ratio or different marking behaviour).

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

29

The data collected through field research during the project indicate the permanent and almost continuous presence of brown bears from the borders of the country to Greece in the south at least to the town of Gostivar in the north and from the borders to Albania in the west to halfway the town of Prilep in the east. Due to security issues we were not able to survey the area in the northeastern part of the country, close to the town of Tetovo, which is considered to be one of the main strongholds of the species in the country. It is of utmost importance to survey this area as well, in order to gain a complete picture of the distribution of the species in the country.

4.3 Genetic monitoring of brown bears in the region

One of the main objectives of the project was the genetic monitoring of brown bears in the area. Despite the fact that we were successful in extracting DNA only from eight samples until now, we believe that the project has laid the groundwork for the systematic genetic monitoring of the species in both countries. The samples collected during the project in both countries were used successfully to test microsatellite polymorphism and identify individuals of the local bear populations. Due to the small number of samples analyzed, no conclusive results on the genetic status of the species in the two countries can be drawn yet, but through the efforts of the project, sampling protocols and laboratory procedures in Albania and FYROM have been standardized with those applied in neighbouring Greece. This has resulted in the application of a common methodology of genetic monitoring of brown bears throughout the region.

The non-invasive genetic sampling stations set up in Albania and FYROM, in combination with the sampling stations of the "Hellenic Bear Register" form now a network of more than 300 sampling stations in the region (Fig. 7). The monthly genetic tracking of brown bears in the area (approximately 30.000 square kilometres) in 2009 is now part of a new scientific initiative that has been tentatively named the "South western Balkans Bear Register" (Karamanlidis *et al.,* 2009).

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

30

Figure 7: Locations of the approximately 300 non-invasive genetic sampling stations of the "South western Balkans Bear Register" project

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

31

5   CONCLUSIONS – FUTURE ACTIVITIES

In respect to the objectives laid out in the project proposal, the project achieved the following:

- <u>Collection of information on the distribution of brown bears in the region:</u> Information from the project in conjunction with information from monitoring efforts of brown bears in Greece indicates the permanent and almost continuous presence of the species throughout the region. Areas in Albania where potentially habitat and population fragmentation might occur have been identified and should be the focus of future research activities in the country. In FYROM, areas that were not surveyed within the framework of the current project will be the focus of a follow-up project in 2009 supported by Alertis, fund for bear and nature conservation and ARCTUROS.

- <u>Collection of basic information on demographic parameters and population size and trends:</u> The short duration of the project in combination with the difficult field conditions in both countries did not allow the thorough assessment of the status of the population of brown bears in both countries. However, the data of the project indicate the clear presence of individuals of all age classes and reproductive stages of the species in both countries; only long-term, systematic monitoring efforts of the species in the field will collect the information required to reach in full the aforementioned objective. Monitoring efforts in both countries are carried out in 2009 within the framework of a follow-up project.

- <u>Genetic monitoring of brown bears:</u> This objective was successfully met in the Former Yugoslav Republic of Macedonia, where 33 power poles / sampling stations were inspected monthly and genetic samples were collected. This was not possible in Albania, where future genetic monitoring efforts will have to rely primarily on the opportunistic collection and analysis of other types of genetic samples, such as scats or on the systematic setting of hair traps using bait. Genetic monitoring sampling protocols and laboratory procedures have been standardized in both countries and a common research protocol is being used throughout the region. Genetic monitoring efforts in both countries are being continued in 2009 within the framework of a follow-up project.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

32

- <u>Evaluation of the welfare status of bears in captivity in Albania:</u> This objective was fully achieved; the results of the project indicated that throughout the country several bears are kept in captivity, often in unsuitable conditions. These results, in conjunction with indications of trophy-hunting of bears in the area and the negative perception of the species by Albanians in the southeastern part of the country constitute a potentially "explosive" conservation situation for the species. Future activities in the region will include an assessment of the situation of trophy hunting in the area. All this information will be used in order to compile a status report of brown bears in the region and inform the General Directorate of Forestry and Pastures.

- <u>Strengthening international cooperation of stakeholders involved in the conservation of brown bears and exchange of scientific know-how in the region:</u> Within the framework of the project members of ARCTUROS visited their colleagues in Albania and FYROM twelve times. During these visits common field surveys were conducted and the "power-pole" methodology was implemented. However, at the end of 2008 and due to the inability of the NGO Molika to meet the scientific and conservation goals of the project, cooperation with this NGO was discontinued and current research activities in the country are carried out in cooperation with the Macedonian Ecological Society (MES). Within the framework of the follow-up project currently underway, members of MES are planned to visit Greece and participate in common field activities with the research team of ARCTUROS. In addition, the follow-up project is going to cover the costs of an annual membership of both NGOs (i.e. TWA in Albania and MES in FYROM) to the International Bear Association.

Accounts of the projects activities have already been presented twice in the newsletter of the International Bear Association and are going to be the focus of two presentations at the IBA Conference in Georgia in 2010, thus bringing efforts to study and protect brown bears in Albania and The Former Yugoslav Republic of Macedonia closer to the "bear" scientific and conservation community. Apart however from the media outreach effects of the project, we believe that the current project managed to collect important information on the status of the species and lay the groundwork for future monitoring activities in both countries that will promote the effective conservation of the species in the region.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

33

ACKNOWLEDGMENTS

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

34

6   LITERATURE CITED

Breen, M., Jouquand, S., Renier, C., Mellersh, C. S., Hitte, C., Holmes, N. G., Cheron, A., Suter, N., Vignaux, F., Bristow, A. E., Priat, C., McCann, E., Andre, C., Boundy, S., Gitsham, P., Thomas, R., Bridge, W. L., Spriggs, H. F., Ryder, E. J., Curson, A., Sampson, J., Ostrander, E. A., Binns, M. M. & Galibert, F. (2001). Chromosome-specific single-locus FISH probes allow anchorage of an 1800-marker integrated radiation-hybrid/linkage map of the domestic dog genome to all chromosomes. *Genome Research,* **11:** 1784-1795.

Ennis, S. & Gallagher, T. (1994). PCR based sex determination assay in cattle based on bovine Amelogenin locus. *Animal Genetics,* **25:** 425-427.

Godes, C. (Ed.) (1997) *The brown bear in the south Balkans,* Thessaloniki.

Karamanlidis, A. A. (2008). *Development of an innovative method for studying genetic, demographihc and behavioural aspects of the brown bear (Ursus arctos).* PhD Thesis, Aristotle University of Thessaloniki.

Karamanlidis, A. A., de Gabriel Hernando, M., Krambokoukis, L. & Georgiadis, L. (2008). Monitoring the Status of Bears in Greece: The "Hellenic Bear Register". *International Bear News,* **17:** 16-17.

Karamanlidis, A. A., Georgiadis, L. & Zedrosser, A. (2009). The "Southwestern Balkans Bear Register": a tool in the conservation of brown bears in the southwestern Balkans. *International Bear News,* **18:** 13-14.

Karamanlidis, A. A., Youlatos, D., Sgardelis, S. & Scouras, Z. (2007). Using sign at power poles to document presence of bears in Greece. *Ursus,* **18:** 54-61.

Kitahara, E., Isagi, Y., Ishibashi, Y. & Saitoh, T. (2000). Polymorphic microsatellite DNA markers in the Asiatic black bear Ursus thibetanus. *Molecular Ecology,* **9:** 1661-1662.

Mertzanis, G. (1994). Brown bear in Greece: distribution, present status-ecology of a northern Pindus subpopulation. *International Conference on Bear Research and Management,* **9:** 187-197.

Mertzanis, G. (1999). Status and management of the brown bear in Greece. In: *Bears. Status Survey and Conservation Action Plan*: 72-84. Servheen, C., Herrero, S. , Peyton, B. (Eds.). Bern, Switzerland and Cambridge, U.K.: IUCN.

Mertzanis, Y., Isaak, I., Mavridis, A., Nikolaou, O. & Tragos, A. (2005). Movements, activity patterns and home range of a female brown bear (*Ursus Arctos,* L.) in the Rodopi Mountain Range, Greece. *Belgian Journal of Zoology,* **135:** 217-221.

Ostrander, E. A., Sprague, G. F. J. & Rine, J. (1993). Identification and characterization of dinucleotide repeat (CA)n markers for genetic mapping in dog. *Genomics,* **16:** 207-213.

Paetkau, D. (2003). An empirical exploration of data quality in DNA-based population inventories. *Molecular Ecology,* **12:** 1375-1387.

Paetkau, D., Calvert, W., Stirling, I. & Strobeck, C. (1995). Microsatellite analysis of population structure in Canadian polar bears. *Molecular Ecology,* **4:** 347-354.

Paetkau, D., Shields, G. F. & Strobeck, C. (1998). Gene flow between insular, coastal and interior populations of brown bears in Alaska. *Molecular Ecology,* **7:** 1283-1292.

Swenson, J. E., Gerstl, N., Dahle, B. & Zedrosser, A. (2000). Action Plan for the conservation of the Brown Bear (*Ursus arctos*) in Europe. In: *Nature and environment*: 1-68.).

Taberlet, P., Camarra, J.-J., Griffin, S., Uhres, E., Hanotte, O., Waits, L. P., Dubois-Paganon, C., Burke, T. & Bouvet, J. (1997). Noninvasive genetic tracking of the endangered Pyrenean brown bear population. *Molecular Ecology,* **6:** 869-876.

Zedrosser, A., Dahle, B., Swenson, J. E. & Gerstl, N. (2001). Status and management of the brown bear in Europe. *Ursus,* **12:** 9-20.

Final report of a project supported by a research and conservation grant from the IBA on the status of brown bears in Albania and FYROM

35

7 ANNEX I

7.1 Power pole evaluation form

POWER POLE MARKING/RUBBING FORM

Date: _____

_____ Location: _____ UTM N: _____ Elevation: _____

_____ UTM E: _____

1) Landscape position:
- Ridge – 0
- Upper slope – I
- Mid slope – II
- Low slope – III
- Bottom – IV
- Flat - V

2) Slope:
- Even – 0
- Low – I
- Extreme - II

3) Tar coverage:
- None; few spots – 0
- Medium - I
- Covers more than 50% of the surface - II

4) Coarse woody debris/vegetation at 25m radius:
- No/sparse – 0
- Common – I
- Heavy - II

5) Debris/vegetation size:
- No – 0
- Small; leaves & small plants – I
- Moderate - II
- Large – III

6) Human activity:
- Non existent – 0
- Low; forestry road/cultivated field within forest – I
- Medium; road connecting villages/open fields – II
- High; paved road/within 100m from human settlement - III

7) Visibility:
- Can't be seen – 0
- Seen only within 25m radius – I
- Seen from medium distance but not from all sides – II
- Seen from a distance and from all sides - III

8) Distance to forest/non forest edge:
- Within forest/forested area – 0
- Between 10 – 50m of forest edge – I
- > 50m from forest edge - II

9) Dominant vegetation within 25m radius: _____

10) Dominant vegetation within 500m radius: _____

11) Pole located on path:
- No – 0
- Inactive path – I
- Active path - II

12) Trees with diameter > 20cm within 25m radius:
- No
- Yes

13) Aspect: _____

14) Bite/claw mark presence:
- No – 0
- Some; circumstantial use – I
- Lots; frequent use - II

15) Mark quality:
- N/A – 0
- Fresh marks; within last year - I
- Old marks; older than 1 year - II

16) Direction of marks:
Multiple directions, N, S, E, W, N/A

17) Min/max height of marks: _____

18) Bear hair presence:
- None – 0
- Some – I
- Lots - II

19) Hair quality:
- N/A - 0
- Bleached/brittle – I
- Coloured/flexible - II

20) Location of marks in respect to path:
- N/A – 0
- Facing – I
- Not facing – II
- 90 degree angle - III

21) Comments:

22) Photos:

23)Final evaluation:

7.2 Power pole sampling form FYROM

HAIR TRAPS CHECKING FORM   **REPUBLIC OF MACEDONIA**

Date: Visit no: Researchers:

	Trap number	Area	Hair presence				Bite – claw marks			Comments
			Yes	No	FRESH	OLD	No	some	lots	
1	MK001	Nizepole								
2	MK002	Nizepole								
3	MK003	Capari								
4	MK004	Capari								
5	MK005	Rotino								
6	MK006	Slivnica								
7	MK007	Brajcino								
8	MK008	Brajcino								
9	MK009	Kuratica								
10	MK010	Orehovo								
11	MK011	Velusina								
12	MK012	Viduse								

	Trap number	Area	Hair presence				Bite – claw marks			Comments
			Yes	No	FRESH	OLD	No	some	lots	
13	MK013	Viduse								
14	MK014	Nistrovo								
15	MK015	Nistrovo								
16	MK016	Leunovo								
17	MK017	Leunovo								
18	MK018	G. Dobrenoec								
19	MK019	Mrenoga								
20	MK020	Mrenoga								
21	MK021	Boiste								
22	MK022	Boiste								
23	MK023	Boiste								
24	MK024	Prostranje								
25	MK025	Prostranje								
26	MK026	Lavcani								

Project supported by Alertis, ARCTUROS and the International Bear Association

	Trap number	Area	Hair presence				Bite – claw marks			Comments
			Yes	No	FRESH	OLD	No	some	lots	
27	MK027	Lavcani								
28	MK028	Godivje								
29	MK029	Visni								
30	MK030	Visni								
31	MK031	Lukovo								
32	MK032	Lukovo								
33	MK033	G. Divjaci								

General comments:

7.3 Captive Bear Registration Form

Captive Bear Registration in Albania

Data sheet

1. Location
   - Address: …………………………………………
   - Phone number: …………………………………………..
   - Owners name: ……………………………………….
   - National map and photo presentation

2. Purpose of captivity
   - Dancing bear: ……
   - Photo bear: ………
   - Zoo bear: …………
   - Restaurant bear: ….
   - Other: …………….

3. Sex:
   - Female: …..   Number: …..
   - Male: ……   Number: …..

4. Age: ………. Years or:
   - Young: ….. (until 3) Number: …..
   - Adult: …… (4- 15) Number: …..
   - Old: …….. (15+)   Number: …..

5. Origin: …………………………………………………………………..

6. Enclosure size: (L:…… X W:….. X H……) Total surface: ……..m2

7. Enclosure description:
   - Floor: Soil: ……….. Concrete: …………… Other: …………
   - Wall material: Wood: ……… Wall: ……… Mesh: ……. Other: …….
   - "Furniture" or enrichment: Den: …… Shade: …. Toys: ….
   - Water supply: ……..

8. Diet description:
   ………
   ………
   …………………………………….

9. General physical condition:
   - Health: …………………………………………………………..
   - Skin: ..………………………………………………………………
   - Eyes: .………………………………………………………………
   - Injury – wounds: …………………………………………………..
   - Teeth: ………………………………………………………………...
   - Other: …………………………………………………………………

10. Behavior:

- Normal: …… ….

- Sleepy: …………

- Stereotypic: ……

- Tame or aggressive with people or other animals in the same place: ………

- Other: …………………………………………………………………..

11. Public access – contact: …………………………………………………..

12. Other species present (eagle, wolf, etc):

- …………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………

Additional comments:
………
………
………
………
………
………
…………………………………………………………

7.4 Questionnaire form – Albania (*English*)

<u>QUESTIONNAIRE</u>

1. Name of the person filling in the questionnaire:

2. Date:

3. Location:

4. Name of the person interviewed:

5. Age:

6. Gender:

        Male:

        Female:

7. Occupation:

        Livestock raising:

        Timber:

        Farming:

        Other: (specify)

8. Are there any bears in your area (*with area we mean a radius of NOT more than 25km*):

        YES: NO: UNCERTAIN:

9. If **NO**, when was the (approximate) date of the last sign of bear presence: last year:

        2 – 5 years ago: 5 – 10 years ago: >10 years

        (*if this question is answered, then specify if the information was* DIRECT or SECOND HAND)

10. If **YES**, when was the last time bear presence was detected / recorded in your area?

        Date or season:

        Location (GPS position if possible or name of closest village):

        (DIRECT information: SECOND HAND)

11. Bear presence in the area is:

    Permanent: Seasonal: Sporadic:

12. If bear presence is **seasonal** WHAT season?

    Spring: Summer: Autumn: Winter:

13. Mention the names of localities (areas) with most frequent bear presence:

- .....

- .....

- .....

- .....

- .....

    (DIRECT information: SECOND HAND)

14. In case of visual contacts with a bear specify the following:

    Nr of animals or females with cubs:

    Location:

    Date of observation:

    Time:

    (DIRECT information: SECOND HAND)

15. In case of bear signs, which type (category) was detected?

    Tracks:

    Returned stones:

    Winter den:

    Scats:

    Destroyed nests of insects:

    Summer beds:

    Broken branches:

Damage (specify below):

Other (specify below):

16. Is there any damage caused by bears in your area?

    YES: NO:

17. If **YES**, specify the type of damage: (*Note, that more than one answers can be given*)

    On livestock in enclosure:

    On free-grazing livestock:

    Crops:

    Beehives:

    Other (specify):

    (DIRECT information: SECOND HAND)

18. In any case of the above, what happened to the bear?

    Killed:

    Organized chasing:

    Other kind of action (specify):

19. What is the average yearly frequency (number of cases) of bear damage in your area?

    1 – 5:

    6 – 10:

    >10

20. What is the main season in which the damages occur?

    Spring: Summer: Autumn: Winter:

21. What type is mainly affected? (*Note, that only ONE answer can be given*)

22. Which area is mainly affected?

23. When was the last case of bear damage in your area?

    Date:

Location:

Type of damage:

(DIRECT information: SECOND HAND)

24. What do people do to protect their selves from bear damage:

Guarding dogs:

Electric fences:

Additional fencing:

Other:

25. Do you know of any case of bear aggression to humans?

YES: NO:

26. If YES, specify the:

Location:

Date:

Number of bears:

Describe the circumstances:

(DIRECT information: SECOND HAND)

27. Do you know of any cases of killed bears in your area?

YES: NO:

28. If YES, specify the:

Location

Date:

Number of bears:

Describe the circumstances:

(DIRECT information: SECOND HAND)

29. What do you feel about bears as an animal? Bears are:

Dangerous / NOT dangerous

Harmful / NOT harmful

Shy / NOT shy

Aggressive / NOT aggressive

30. What is your feeling about dancing bears?

Positive:

Negative:

Neutral/indifferent:

Uncertain:

31. Have you heard about or seen any case of dancing bear in your area recently?

YES: NO:

32. If YES, specify the:

Location:

Date:

Number of bears:

Describe the circumstances:

(DIRECT information: SECOND HAND)

33. What is your feeling about bears held captive in restaurants?

Positive:

Negative:

Neutral/indifferent:

Uncertain:

34. Have you heard about or seen any case of bears being held captive in restaurants in your area recently?

YES: NO:

35. If YES, specify the:

Location:

Date:

Number of bears:

Describe the circumstances:

(DIRECT information: SECOND HAND)

7.5   Questionnaire form – Albania *(Albanian)*

__PYETSOR__

1.   Emri i personit qe ploteson pyetsorin:

2.   Date:

3.   Vendi: (Emri I fshatit ose koordinatat me G*PS*):

4.   Personi i intervistuar:

5.   Gjinia:

> Mashkull:

> Femer:

6.   Punesimi:

> Blektor:

> Sharxhi:

> Fermer:

> Tjeter: (specifko)

7.   Ka arinj ne zonen tuaj (me zone kuptohet nje reze jo me shume se 25*km*):

> Po: JO: I pasigurt:

8.   Ne qofte se **JO,** kur ka qene date e fundit qe mund te kete pasur gjurme apo shenja per presence te ariut ne zonen tuaj.   Viti I fundit:

   2 – 5 vjet perpara: 5 – 10 vjet perpara: Me shume se 10 vjet :

> (*specifiko nes ky informacion eshte* DIRECT or Jo direkt)

9.   Ne qofte se PO, kur ka qene rasti I fundit qe ka pasur presence ariu?

> Data ose sezoni:

> Koordinata e GPS ne qofte se eshte e mundur (ose emir I fshatit me te afert):

> (Informacion DIREKT :   JO DIREKT)

10. Prezenca e Ariut eshte :

I perhereshem: Sezonal: Sporadik:

11. Ne qofte se prezenca e ariut eshte **sesonal** CFARE sezoni?

Pranvere: Vere: Vjeshte: Dimerr:

12. Permend emrat e vendeve me pezence me te shpeshte te ariut:

- .....

- .....

- .....

- .....

- .....

(Informacion DIREKT: JO DIREKT)

13. Ne rast se eshte pare me sy ariu shpjego:

Numur I ariut: Me kelyshe numur:

Vendi ku eshte pare:

Date qe eshte pare:

Koha:

(Informacion DIREKT: JO DIREKT)

14. Ne rastet kur jane vene re shenja ariu cfate tipi kane qene keto shenja?

Gjurme:

Strofull dimri:

Jashteqitje:

Fole insektesh te shkaterruara:

Strofull vere:

Dege e thyera:

Demtim (specifiko):

Tjeter (specifko:

15. Ka demtime te shkaktuara nga ariu ne zonen tuaj?

    PO: JO:

16. Ne qofte se **PO**, specifiko tipin e demit: (*Mund te jepet me shume se nje pyetje*)

    Blektori ne stalle/vathe:

    Blektori ne kullote:

    DRITHRA:

    Koshere bletesh:

    Tjeter (speciko):

    (Informacion DIREKT: JO DIREKT)

17. Ne rast te ndonje demtimi t emesiperm cfare ka ndodhur me ariun?

    Vritet:

    Organizohet gjueti per ta vrare:

    Apo ndonje veprim tjeter (specifiko):

18. Sa eshte numuri i rasteve te demtimit nga ariu ne zonen tuaj?

    1 − 5:

    6 − 10:

    >10

19. Ne cilen stine ka me shume demtim nga ariu?

    Pranvere: Vere: Vjeshte: Dimer:

20. Cili ka qene tipi I demit? (*Jepet vetem nje pergjigje*)

21. Cila eshte zona ku ka me shume demtim?

22. Kur ka qene rasti I fundit I demtimit nga ariu ne zonen tuaj?

    Date:

    Vendi:

    Tipi I demtimit:

(Informacion DIREKT: JO DIREKT)

23. Cfare bejne njerezit per te mbrojtur pronat e tyre nga demtimi I ariut?

    Perdorin qen stani:

    Gardh elektrik:

    Gardh shtese:

    Tjeter:

24. Dini ndonje rast qe ariu eshte bere aggressor me njeriun?

PO: JO:

25. Ne qofte se PO specifiko:

    Vendin:

    Date:

    Numuri i arinjve:

    Pershkruaj rrethanat:

    (Informacion DIREKT: JO DIREKT)

26. Dini ndonje rast te vrasjes se ariut ne zonen tuaj?

PO: JO:

27. Ne qofte se po specifiko:

    Vendin:

    Date:

    Numuri I arinjve:

    DesPershkruaj rrethanat:

    (Informacion DIREKT: JO DIREKT)

28. Cila eshte ndjenja juaj per ariun si kafshe? Ariu eshte:

    I rezikshem/JO   I REZIKSHEM

    I demshem /JO I demshem

I ndrojtur/JO I ndrojtur

agresiv/JO agresiv

29. Cila eshte ndjenja juaj per arinjte qe mbahen nga romet per vallzim?

Positive:

Negative:

Neutral/indiferent:

I pasigurt:

30. Ka arinj ne roberi ne zonen tuaj?

31. PO:Ne qofte se po sepcifiko:

Vendin:

Numuri i arinjve:

Pershkruaj rrethanat:

(Informacion DIREKT: jo direkt)

32. Cila eshte ndjenja juaj per arinjte qe mbahen ne roberi ne restorante?

Positive:

Negative:

Neutral/indiferent:

I pasigurte:

33. Keni pare arinj ne restorante qe mbahen ne kafaz ne zoene tuaj??

PO: JO:

34. Ne qofte se PO, specifiko:

Vendin:

Date:

Numur i arinjve:

Pershkruaj rethanat:

(Informacion DIREKT: JO DIREKT)