

# Management strategy to handle welfare problems of captive brown bears (*Ursus arctos*)



## Case study on captive brown bears in Georgia

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Alertis



NW&S





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## PREFACE

This study is the result of my internship period at Alertis, fund for bear and nature conservation, Rhenen. The internship period is part of the Master programme 'Natural Resources Management' at Utrecht University. Academic supervision during the internship was provided by Dr. Jos Dekker, Section Science, Technology and Society. At Alertis I was supervised both by Dr. Margje Voeten, senior project manager 'Conservation and Welfare' and Koen Cuyten, project coordinator 'Welfare'. The internship period at Alertis took place from 1<sup>st</sup> of February 2006 until 14<sup>th</sup> of July 2006. The period in which the case study of captive bears in Georgia was visited, took place from May to June 2006, for a period of three weeks.

My experiences within Alertis have been highly informative and interesting. I had both the opportunity to work independently as well as to experience a working environment of a small, dedicated conservation organization. Since this study focuses on captive bear problems abroad, the opportunity to visit Alertis partner organization in Georgia, South-eastern Europe, was worthwhile. It opened my view for the practical application of this study.

Within this study I tried to combine different disciplines together to show the interdisciplinary character of the subject. Obtained knowledge from my Master programme Natural Resources Management became useful in this way.

I would like to thank my supervisors Dr. Jos Dekker, Dr. Margje Voeten, as well as Koen Cuyten for their advice and enthusiasm during the internship period. The meetings were very useful. I also want to thank the team of NACRES, Alertis partner organization in Georgia, Tbilisi, in particular Irakli Shavgulidze, Bejan Lortkipanidze and Mari Shikhashvili. Their dedication to the subject, hospitality and support during the trips to captive bears are unforgettable.



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## SUMMARY

This study aimed to create a manual for the management of welfare problems of captive brown bears in Europe. This manual is meant to be especially useful for non-governmental organizations (NGO's) that want to solve welfare problems of captive brown bears. Alertis, fund for bear and nature conservation, aims to give organizations abroad advice about solutions to the welfare problems. This study was part of the Master programme 'Natural Resources Management', at Utrecht University.

The study consisted of three parts. The first part, literature study on welfare problems of captive brown bears, was used as a background on the manual. The second part of this report consisted of a manual to guide in the management of welfare problems of captive brown bears. The third part consisted of a case study on current welfare problems of captive brown bears in Georgia, South-eastern Europe.

The literature study described several topics that are important for management of welfare problems of captive brown bears in Europe. An overview was given of current status of brown bear populations, threats and public attitude towards bears. International legislation concerning brown bears was explained as well. Enforcement of already existing treaties, such as effective implementation into national law, is often missing and should be controlled more strictly in future. Next to that, the legal status of brown bears kept by private persons was found not to be described specifically into legal frameworks and therefore needs consideration. Several subjects need emphasis in legislation, most importantly the development of specific international welfare living standards for captive brown bears and law enforcement. The literature part was finalized by a survey of strategies performed in the past by NGO's to handle welfare problems of captive brown bears.

There is a need for NGO's and governmental bodies to find sustainable solutions to solve welfare problems of captive brown bears. The call for advice from parties concerning management of captive brown bears highlighted the importance of a manual for guidance. Up to today, no manual had been developed to guide parties in the management process of solving welfare problems of captive brown bears. In this study, a manual was developed to give an answer to this need.

The manual can be used as a guideline to find suitable management strategies to handle welfare problems of captive brown bears. The manual gave advices for surveying and analysing problems, and the selection of a strategy. The first part of the manual was a survey that consisted of a step-by-step questionnaire, in which information from different stakeholders was needed. The questions were accompanied by suggestions, highlighted in the text boxes at the end of each subject.



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The survey consisted of seven main topics:

1. The current legal status of the brown bear and law enforcement
2. Status of wild populations/ illegal trade
3. The current situation of captive bears
4. Intentions of the owners of the captive bears
5. Public awareness and opinion
6. Groups working on welfare problems
7. Feasibility of confiscating the bears and their possible placement

By answering the question included in the survey, several problems could be detected. With an assessment the most important problems could be revealed, together with main strategies to solve them. In the second part of the manual, these strategies were described, together with actions to be taken.

The main strategies described in the strategic part of the manual were:

1. Adjustments to national legislation
2. Law enforcement
3. Support and cooperation needed
4. Establishing a bear registration system
5. Improving living conditions of captive bears
6. Informing and rehabilitating the owners
7. Public information strategy
8. Confiscation of captive bears
9. Establishing a bear sanctuary for the short and longer term
10. Placement of the bears elsewhere

The case study aimed to test the manual and was made possible with the cooperation of NACRES (Noah's Ark Centre for the Recovery of Endangered Species), Alertis' partner organization in Georgia. The case study on captive bears in Georgia detected suitable strategies for this particular case. A three-week visit to partner organization NACRES was made to collect information for answering questions of the survey. In total sixteen captive bears were visited to collect information, of which nine bears were kept by private persons. Next to that, the strategic part of management was discussed with NACRES. The manual proved to be a useful tool for receiving a clear view on several complex, interrelated problems in Georgia. Application of the survey showed that poaching pressure and lack of enforcement by governmental bodies probably are most important problems to handle within the management process. The survey revealed that these problems need strong focus in development of definite strategies for an action plan. Although national legislation concerning conservation of brown bears was present in Georgia, this was not enforced. The case study made clear that cooperation between different groups is important. In Georgia, the involvement of the Ministry of Environment within the management process has shown to be necessary.

The created manual can be a useful tool for future development of management strategies to handle welfare problems of captive brown bears. The case study has shown the utility of the manual for NACRES, working on welfare problems in Georgia. The usefulness of the manual for other NGO's, needs to be investigated in future.



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## 1. INTRODUCTION

*This chapter aims to give an introduction to the study. The background of the study is highlighted shortly, followed by the aim of the study, demarcations that have been made and definitions and concepts that are used in this report. This chapter is finalized with a report outline.*

### 1.1. Welfare problems of brown bears (*Ursus arctos*)

Brown bears are officially recognized as a protected species in Europe. Despite of this, many welfare problems related to brown bears do exist today, for example in South-eastern Europe (Alertis, 2006a). In several countries in this region brown bears are kept as dancing bears or placed in small cages at public places like restaurants and bars to entertain the public (Swenson *et al.*, 2000; Alertis, 2006). Most of these bears have health problems and show behavioural anomalies. Usually, these captive bears are caught in the wild. The risk of threat to wild populations is present, especially when a demand for these animals stimulates the capturing of new bears in the wild. The keeping of brown bears can in this way negatively influence the conservation status of the bear populations in the wild (Van Dijk, 1998).

To work on the problems related to captive bears and to try to solve them is often complex because of historical, social and legal aspects in each country. Moreover, it is difficult to decide where to start. The demand for information and advice on the management of captive animals has increased in recent years (IUCN, 2002).

A manual that guides in solving welfare problems of captive brown bears could be a useful tool for management. Alertis, fund for bear and nature conservation, is a non-governmental organization working on welfare problems of brown bears since 1993. The organization aims to give organizations abroad advice about solutions to the welfare problems. The manual that is developed in this report is meant as a guideline for non-governmental organizations (NGO's) in countries like Croatia, Serbia, Georgia as well as countries from the European Union where welfare problems related to captive bears still exist today.

### 1.2. General aim of the study

The general aim of this study is to create a manual for the management of welfare problems related to captive brown bears in Europe. Integrating information about strategies that have been used in the past for the management of captive bear problems is needed. Lessons learned from this can be used to develop future strategies. This manual aims to be useful for especially NGO's that aim to solve welfare problems of captive brown bears.

The study consists of three parts that each have a different aim. The first part is a literature study on welfare problems of captive brown bears, which also includes a survey of strategies performed in the past by NGO's. This information is used in the second part of this report, which consists of a manual that guides in the management of welfare problems related to captive brown bears. This manual gives advices for surveying and analysing problems, and the selection of a strategy. The third part is a case study about current welfare problems of captive brown bears in Georgia and is made possible with the cooperation of NACRES (Noah's Ark Centre for the Recovery of Endangered Species), Alertis' partner organization in Georgia.





### 1.3. Demarcations

This study is focused on welfare problems related to captive brown bears. While many other wild animals are kept by people, this species is chosen because of its special conservation status in Europe. Most literature used in the literature part considers this specific species.

NGO's usually have a different management cycle than governmental bodies and play an important role in finding solutions to welfare problems of captive brown bears. The manual is meant for NGO's working on welfare problems in Europe. Similar welfare problems related to bears in the rest of the world are shortly discussed in the literature part. However, since they often have a different scale of magnitude (number of bears) and/or ways of exploiting the bears (other commercial reasons), they are excluded in the rest of the report. The complexity of welfare problems related to brown bears makes it interesting to develop a manual for the management of this specific subject of animal welfare.

The study considers welfare problems related to captive brown bears kept by private owners. These people often depend on the bears, because they generate income by the exploitation of them. In most cases the bears are used to entertain the public. Other ways of keeping brown bears are excluded in this manual, such as the use of brown bears in circuses or theatres or the commercial farming of bears for the extraction of their bile.

The literature study is demarcated by the theoretical character of it. It is not a practical study, but forms the background of the developed manual. The major goal of the manual is to ameliorate living circumstances of captive brown bears in the short and long term, as well as to discourage illegal trade and poaching practices. The management strategy that is most suitable depends on the specific problems in the country where the management is planned. Therefore political, social, economical and ecological aspects need to be taken into account.

The case study is made in Georgia, South-eastern Europe. This country is chosen because of the present welfare problems of captive brown bears and the good contact between Alertis and partner organization NACRES, currently working on the problems.



### 1.4. Definitions and concepts

In this report the definition ‘captive bear’ covers the group of (brown) bears that is kept imprisoned by civilians. Usually the owners generate income with the bears and are in this way financially dependent on them.

The definitions ‘interest group’ or ‘stakeholder’ are defined in this report as people and groups with an interest in certain resources. Their interests, resources, power or authority are being likely to considerably impact, or to be impacted by management or the lack of proper management. Different stakeholders within a community may have different interests in the same resource. (Barrow *et al.*, 2002)

The definition NGO is in this study used in the following context: a non-governmental environmental or animal welfare organization working independently.

The concept ‘welfare problem’ usually refers to a poor health state and living circumstances of the individual captive bear as well as of the population of captive brown bears. In the report it is mentioned when the problems refer to individual captive bears or to the population as a whole.

In chapter 3 the concept ‘adaptive management’ is explained. The concept is used in this report as a systematic process for continually improving management policies and practices by learning from the outcomes of operative management programs (Lee, 1993).

### 1.5. Approach of the study

To cope with complex problems related to welfare problems with captive brown bears, a manual is designed to facilitate the development of a management strategy. A literature study is performed to get insight in the background of the problems and to give examples of past management strategies used by NGO’s to handle welfare problems related to captive brown bears.

National and international legislations concerning welfare of captive brown bears as well as the regulations of illegal trade and hunting are considered in this report as important aspects to deal with in the management strategy. These subjects therefore have a strong focus in this report. Important dynamic factors, such as ecological, economical, social and political factors are taken into account, a natural resources management approach is chosen.

The experience and knowledge of Alertis are used to write this report. Next to that, information is collected from other (international) NGO’s on their past or current management of welfare problems related to captive bears. Important international guidelines for management of endangered species are used, such as the IUCN guidelines on confiscated animals (IUCN, 2002).

The report consists of a literature study and a manual to assess important welfare problems of captive brown bears. Next to that, a case study on captive bears in Georgia serves as a ‘test’ for the developed manual.



### 1.6. Report outline

In chapter 2 a literature study describes the current legal status of brown bears, such as important national and international laws on the conservation status of the brown bear. Also current welfare standards are explained. The chapter finalizes with examples of strategies that have been used to handle welfare problems related to captive bears in the past.

Chapter 3 consists of a manual that guides in the management of welfare problems related to captive brown bears. The first part of the manual is a survey that includes a structured list of questions regarding for example the effective legislations present, the welfare status of the bears and information about the owners of the captive bears. These questions should first be answered to be able to assess and analyse the problems. The second part of the manual consists of ideas to handle the problems which were determined in the first part of the manual. This will form the baseline of a strategy to solve them (and possible pro and con's of certain solutions). Each part will be accompanied by practical suggestions.

In chapter 4 a case study is described on captive bears in Georgia. Information on this case study is collected during a visit to NACRES, a Georgian NGO currently working on captive brown bear problems in Georgia. Finally, the usefulness of the manual is reviewed in chapter 5 'Discussion and conclusion'.



## **PART I. LITERATURE STUDY**

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## 2. LITERATURE STUDY

*This chapter aims to give a clear view on subjects that are important to keep in mind while managing welfare problems of captive brown bears. Firstly, main reasons for brown bear conservation are explained (paragraph 2.1.), the current status of wild brown bear populations in Europe (paragraph 2.2.), and current threats including the keeping of bears (paragraph 2.3.). Public attitude concerning the brown bear is taken into consideration. Welfare standards related to animal welfare are described (paragraph 2.4.). International legislation concerning brown bears is explained, as well as law enforcement and implementation into national legislation (paragraph 2.5. to 2.7.). Finally, several examples of strategies taken by NGO's to solve welfare problems of captive bears are given (paragraph 2.8.). This literature study is used as a background on the manual for management of welfare problems of captive brown bears, which is described in the next chapter.*

### 2.1. Bear conservation: the reasons

The most important reasons for bear conservation, or conservation of any species, can be categorized into four different motivations: the intrinsic value of the species, the officially recognized protected status, the ecological functions as well as other functions of the species. Public attitude towards the brown bear is an important factor to consider.

#### **Intrinsic value**

An obvious or direct reason for conservation of bears is the intrinsic value of the species. The term intrinsic value can be generally defined as the inherent worth of something, independent of its value to anyone or anything else (Callicott, 1995). This means that every species on earth has the right to live, and is in its form unique. By animal welfare organizations this definition can be interpreted in a way that animals have value in their own rights and as a consequence, their interests are not subordinate to men's interests (Animal freedom, 2006).

#### **Protected status**

The protected status of the brown bear is embedded in several international conventions, such as the Bern Convention and CITES, the Convention on International Trade in Endangered Species of wild fauna and flora. When the treaty is legally binding, the contracting parties have to implement the legal provisions into their national framework in order to ensure the survival of the brown bear. However, the brown bear as an entire species is not considered as a species threatened with extinction by international organizations, except for some local populations. The species is not listed in the IUCN (the World Conservation Unit) Red List of Threatened Species, in contrast to several other threatened bear species such as the Asiatic black bear (*Ursus thibetanus*) (IUCN Red list of threatened species, 2006).

#### **Ecological functions**

An important reason for protecting the brown bear is that it is an important species for its ecological functions, generally defined as a "key species". The species plays a key role in maintaining the ecosystem community structure. An example is that they are a major seed disperser of numerous plant species and act as an agent of disturbance as a predator (CITES, 1997). For these reasons the conservation of bears can be a key focus for ecosystem conservation.



The conservation of bears and the natural habitat they need to survive can positively enhance the preservation of habitat that many other species need. Bears are often referred to as an “umbrella species” in the majority of the ecosystems they inhabit, because the management of brown bears has the potential to benefit many other species (Servheen *et al.*, 1999; Knapp, 2006). The presence of brown bears is a measure of regional biodiversity (Swenson *et al.*, 2000).

The conservation of bears will also contribute to the conservation of natural resources that are important for humans. Examples are watersheds and other wildlife that can be of great importance for local communities (Servheen *et al.*, 1999). As a globally endangered species, bears also have the potential to rouse positive public attention. In this point of view bears are often referred as a “flagship species” (Kolter, 1994). Bears have a positive image for many people, and can in this context be used for conservation purposes (Servheen *et al.*, 1999). Its flagship function is promoted and facilitated if the species serves as a representative of many species of the ecosystem by its ecological positions. In this way bears can also play a leading role in conservation education, in order to find support for the ideas of nature conservation (Kolter, 1994). Also ecotourism may contribute to the conservation of the brown bear and many other species.

### **Public attitude towards brown bears**

Public attitude is an important subject to consider, when trying to achieve effective conservation of brown bears. The natural fear of people in their interaction with nature is a fact to consider. According to Van den Berg and Ter Heijne (2005), human encounters with natural threats, such as large predators, can be strongly associated with fearful emotions. Many times these fear-evoking situations seem to have an evolutionary background (Van den Berg and Ter Heijne, 2005). These fundamental fears of people can form the basis of persecution of the brown bear. Next to that, brown bears are many times persecuted because of records of predation on livestock and people have been injured by brown bear attacks.

Some national surveys have shown that people from the countryside have a different attitude towards bears than urban people do. Young age and a higher education level are in most cases linked to a more positive attitude towards bears (Swenson *et al.*, 2000).

An example of a country where mostly a positive public attitude towards bears exists is Croatia. A study was made about the attitudes from the general public, foresters and hunting unit leaseholders ( $n = 779$ ). This study revealed that all of the three groups interviewed had positive attitudes towards bears. The most positive attitudes were the hunting unit leaseholders and the foresters (80% respectively 76% in favour for bears) and the general public in two central bear ranging areas (Gorski Kotar and Lika; 75% in favour). Representatives of the general public from the peripheral areas, where bears are temporarily present had the least positive attitude (72%, 71% and 50% in favour in three different peripheral areas). Respondents with past experience with damage caused by bears had a significant less positive attitude towards bears than the general public. As much as 85% of the respondents from the bear ranging state Lika felt that the presence of bears increases tourism in the region (Dečak *et al.*, 2005).

Serbia is an example of a country where mostly a negative public attitude exists towards bears. This is probably caused by human-bear conflicts that arose when habituated bears were released into the wild after a period in captivity. The local people opposed the presence of the brown bears that were released in the specific area. Probably these bears have been hunted illegally after their release (Van Dijk, 2002).



It is not always easy to find good reasons for the differences in public attitude towards brown bears. While in most Western European countries brown bears are seen as a species that needs protection, it can be argued that in these countries bears do not exist in the wild anymore. Public attitude towards bears apparently depends on the specific social group and of negative or positive experiences related to bears that occurred in a certain region. For example, people dependent on farm practices experiencing damage from the bears, may have a more negative attitude towards bears than people from more urbanized regions.

Solutions for the human-bear conflicts should be created in order to improve human attitude. A compensation program for the damage that wild bears may cause is a tool that is used in many countries from the European Union. Precautionary measures, such as the use of dogs to keep wild bears away from herds of livestock, can help to ameliorate the public attitude towards bears. An example of these management measures is the project in Bulgaria (see paragraph 2.8). Educational programs are an important tool for the creation of positive public awareness about brown bears, for example about their biology, ecology and special behaviour. A possibility to create awareness among the public about threats that bears face today, is education. Combining a bear sanctuary together with educational purposes has been proven to be a suitable option in several countries, such as in the Netherlands and Bulgaria. Bear sanctuaries give benefits through their educational possibilities, because of the potential to create awareness among the public about wildlife and conservation (IUCN, 2002). Despite of these possibilities to improve human attitude towards bears, it can be argued that it is hard to change the natural fear that many people have for bears.

### **Attitude towards captive brown bears**

In this study the welfare situation of captive brown bears in Europe is considered. Bears in captivity kept under satisfactory circumstances in which they can display their natural behaviour can serve as a flagship species to promote conservation of brown bears in the wild. The design of the enclosure must stimulate this natural behaviour (Kolter, 1994). In this way they can promote conservation of the species as a whole.

The situation of captive bears as it is today in many countries, does not promote this flagship function. Often living conditions of captive brown bears are poor and do not stimulate the natural behaviour of the species. Next to that, it can be argued that the intrinsic value of the species is not respected, and in many cases the actual capturing and keeping of wild brown bears is not legal according to national and/or international legislation. Unfortunately, international treaties signed by contracting parties, are poorly enforced in several countries (Zedrosser *et al.*, 2001). Up til now, no social survey has been performed on the opinion of local people visiting the locations of captive bears. Their opinion is important to get clear what the exact motivations of these people are to visit places where captive bears are located. Also the attitude of owners that are keeping bears is important to consider.



## 2.2. Wild population numbers in Europe

In the last centuries, brown bear numbers in Europe have decreased severely due to mass exterminations in the 18<sup>th</sup> and 19<sup>th</sup> century. The urge to protect the brown bear started in the 20<sup>th</sup> century. The continuing growth of the human population and the increasing habitat loss and fragmentation remain serious threats for the survival of brown bears. Threats to brown bears have a different nature and intensity in each country and not every bear population is threatened with extinction. (Berkhoudt, 1999) In almost half of the 49 brown bear ranging states in Europe, populations of brown bears are thought to be declining (Knapp, 2006).

Today, several relict wild brown bear populations are suspected to be under direct threat of extinction. They are highly fragmented in Southern, Central and Western Europe (Swenson *et al.*, 2000). Many populations may be divided into several sub-populations or have become distinct populations, which make the population more vulnerable for extinction. This occurs when corridors become unusable for bears due to human activities. Other brown bear populations are more viable, such as the brown bear population in Romania. The data presented in this report on population numbers of brown bears in Europe were obtained by Zedrosser and colleagues in the years 1997 to 1999. They used a standard questionnaire mailed out to different interest groups involved in bear management. These population numbers are estimates derived by different methods and should be regarded as approximate. It should be mentioned that more recent data on population numbers of brown bears are hardly available. Therefore a workable overview of European populations is hard to achieve.

Estimates of populations in many countries are quite uncertain. Many uncertainties should be taken into account, such as overestimates of observations. Estimates in South-eastern Europe for example, are often made by hunters that count bears at feeding sites during 1 or 2 nights per year. (Zedrosser *et al.*, 2001) Due to these uncertainties it can be argued that it is hard to make estimations on vulnerability of populations brown bears in Europe. However, brown bear populations in some European countries can be labelled as 'viable' due to the high number of bears. Other brown bear populations are very small and scattered. The estimates of population numbers of brown bears in Europe are given in table 1.

### Population numbers in Europe

The North-eastern European population of brown bears is estimated at about 37,500 individuals. This population is the largest continuous brown bear population in Europe and stretches from the Ural Mountains in the east to the west coast of Finland. It ranges from 53° N in the south to 69° N in the north. This population is continuous with bears on the east side of the mountains in Russia.

Research in the year 1996-1997 has shown that Georgia, a country located in the Caucasus region, has an estimated number of 600-650 brown bears mainly located in the Greater and Lesser Caucasus and on the Iveri plateau. (NACRES, 2006)

In Finland, brown bears are distributed all over the country. After a period of overharvest and habitat degradation at the beginning of the 20<sup>th</sup> century, the brown bear has re-established most of its former range in Finland. Probably there is some genetic exchange between the population of North-western Finland and the Scandinavian brown bear population. (Swenson *et al.*, 2000).





The second largest population is estimated to be about 8,000 bears and is found in the Carpathian Mountains. This population includes the brown bears in Slovakia, Poland, Ukraine and Romania. In the second part of the 20<sup>th</sup> century, the population increased rapidly. The range expanded with 200 km in almost 20 years. The Carpathian population probably exists of three sub-populations. A sub-population consists of bears that have male-mediated genetic exchange with bears in other nearby areas, but there is little contact among females.

In the rest of Europe, population estimates are lower. The Alps-Dinaric-Pindos population consists of an estimated number of 2,800 brown bears and extends from the eastern Alps in Austria and North-eastern Italy to the Pindos Mountains in Greece in the South. The habitats in this region are less connected than it is in the Carpathian area. Therefore it can be suspected that the population may be divided into several sub-populations. In Austria an estimation of 15 to 20 bear was made in 2004 (LCIE, 2004). Especially population estimates of the former Yugoslav Federation are quite uncertain, partly because of unknown effects of the former war on the brown bear population (Huber, 1999).

The brown bear population in Scandinavia includes Norway and Sweden. After times of heavy human persecution in the 1930's, the population has increased from 130 individuals to about 1,000 bears. It is the most productive population yet documented in the world. More than 95% of the Scandinavian bear population is living in Sweden.

The Rila-Rhodope Mountain population consists of an estimated 500 bears and is located in South-western Bulgaria and North-eastern Greece. It consists of 3 sub-populations in the Bulgarian Rila Mountains, Pirin Mountains and the western Rhodope Mountains. Only about 15-25 bears are found in this part of Greece.

The Stara Planina Mountains population consists of about 200 bears. The population became isolated from the Rila-Rhodope Mountain population after efforts to exterminate the species, however male dispersal between these two populations may be possible.

Five very small, isolated populations were found in Southern and Western Europe. In 1999, the threat of extirpation was considered to be high in three of these populations (Pyrenees, Southern Alps, and Eastern Cantabrians). Unless the populations in the eastern Cantabrian Mountains and the Southern Alps receive additional bears, they are likely to go extinct. Nevertheless, reintroduction of brown bears should only be carried out when local people support for introduction (Swenson *et al.*, 2000). An illustrative example is the extermination of the population in the Pyrenees. Local farmers were not supportive of the presence of the brown bears close to their home range. In 2004, every large newspaper revealed that the last native female brown bear of the Pyrenees was killed by hunters (Bremner, 2004). These human-bear conflicts occur quite often in Europe. Recently, a brown bear that moved from Italy to Southern Germany was killed by hunters. The bear several times encountered livestock and was probably habituated to men. The German government decided to permit the killing of the bear, despite of protest from several conservation organizations to apply other solutions. (AD, 2006)

Population monitoring is an important tool that should be used for bear conservation purposes (Servheen *et al.*, 1999). Accurate monitoring is necessary for providing a basic understanding of the species status as well as for measurements of the response of populations to certain management regimes. It should be mentioned that the official population estimates of several countries including Romania, Slovakia and Slovenia have been criticised by scientists and international NGO's as being inaccurate or overestimates of the actual size. (Knapp, 2006) In many countries more reliable estimates are needed in order to support bear conservation in future.



## Literature study

Table 1. Population numbers of brown bears in Europe. In the table an estimation of bear numbers is given for each bear population in Europe, defined per country. These estimated numbers are derived by different methods and different interest groups. The small, isolated populations are mentioned separately and are not included in the numbers of the larger bear populations.

<b>Bear population:</b>	<b>Number of bears:</b>	<b>Country:</b>	<b>Estimated number of bears in each country:</b>
North-eastern Europe	37,500	European Russia Finland Estonia Belarus Norway Latvia	36,000 800-900 440-600 250 or less 8-21 20-40
Carpathian Mountains	8,100	Romania Ukraine Slovakia Poland Czech Republic	6,600 400 400 100 2-3
Alps-Dinaric-Pindos	2,800	Bosnia, Herzegovina Serbia, Montenegro Croatia Slovenia Greece FYR, Macedonia Albania Austria	1,200 430 400 300 95-120 90 250 23-28
Scandinavia	1000	Sweden Norway	1000 18-34
Rila-Rhodope Mountains	520	Bulgaria Greece	500 15-25
Stara Planina Mountains	200	Bulgaria	500
<b>Small, isolated populations:</b>			
Western Cantabrian Mountains	50-65	Spain	50-65
Eastern Cantabrian Mountains	20		20
Apennine Mountains	40-80	Italy	40-80
Western Pyrenees	6	France	6
Central Pyrenees	5	France	5
Southern Alps	3-4	Italy	3-4
<b>Total numbers of bears in Europe</b>	<b>approx. 50,000</b>		

Source: (Zedrosser *et al.*, 2001)



## 2.3. Threats to wild populations

Bear numbers and the ranges of their habitats are rapidly declining in most areas of the world. Although conservation measurements are increasing last decades, it is growing short for bear conservation. It is likely that many isolated bear populations will go extinct forever in the next 50 years (Servheen *et al.*, 1999).

The scattered distribution of brown bears in Europe is the result of the former exterminatory policy as well as habitat loss. Habitat loss, habitat degradation, as well as habitat fragmentation are the consequence of human activity and probably are the greatest threats for brown bear populations (Swenson *et al.*, 2000). Other factors are also of importance for survival of bear populations in Europe. The major threats for brown bears can be divided into four subjects: habitat loss (as well as degradation and fragmentation), human-bear conflicts, poaching and illegal trade and the occurrence of welfare problems related to brown bears in captivity. Information about poaching and illegal trade is mostly derived from a recent TRAFFIC report written by Knapp (2006).

### 2.3.1. Habitat loss, degradation and fragmentation

Today, brown bears are still threatened in Europe by habitat destruction. Especially forestry, agricultural expansion, resource extraction and urban development are the causes for habitat loss and degradation (Swenson *et al.*, 2000). The bears' natural habitat is disappearing and changing in many places over the world, mainly due to the rapid human population growth and by that the human impact on their natural habitat (Servheen *et al.*, 1999). Brown bears need suitable habitat for their survival. Habitat suitability is closely linked to food availability and limits population density and range of brown bears, because reproduction is strongly correlated to food availability (Swenson *et al.*, 2000).

Habitat fragmentation means that large uninterrupted blocks of habitat are converted into less continuous habitat, caused by human disturbance (Franklin *et al.*, 2002). The construction of highways, railways and other construction projects that are established through bear habitat are important factors causing habitat fragmentation. These barriers to bear movements also cause many deaths of bears by collisions with vehicles and trains. Fragmentation of bear habitat is a serious threat to the survival of viable brown bear populations and in some cases can even be more destructive than loss of habitat. (Swenson *et al.*, 2000)

### 2.3.2. Human-bear conflicts

Bears that attack humans or prey on livestock are often killed as a reason to control these problems (Berkhoudt, 1999). In the past the extermination of bears was most of the time encouraged because bears depredated livestock and bounties were paid by the state and local authorities for the killing of bears. This was an effective method, because bears have a low reproductive rate and are perceptive to high killing rates. Human persecution combined with habitat destruction led to the extermination of bears from most parts of Western Europe (Zedrosser *et al.*, 2001)



Several bear attacks on humans are reported in Europe over time. People have been killed in Romania, Russia, Slovenia, Bosnia and Herzegovina, Croatia and Finland. Attacks on humans are not thought to be a result of predatory behaviour, but is more the result from the defending of the bear itself, its cubs or a carcass. These attacks may negatively influence the public attitude towards bears. Also livestock losses, caused by brown bear predation, can lead to a negative public attitude. (Swenson *et al.*, 2000)

These human-bear conflicts do not only occur in Europe. An example of human-bear conflicts in another region of the world is Asia. Currently there are many conflicts between men and bears in highly populated countries such as in Japan. There has been a severe increase in conflicts between Asian black bears and humans in Japan in recent years. Probably this is the result of the disappearance of buffer zones that originally divided bear habitat from human activity. Japan has a large population restricted to a narrow land; therefore bear habitat and human settlement are very close and can overlap (Yamazaki, 2004). A similar trend is seen in certain regions of India, where conflicts occur between sloth bears and local people.

### **2.3.3. Poaching and illegal trade**

Illegal hunting (poaching) and illegal trade impose a large threat to the survival of bear species over the world. Commercialisation of the species brought negative population trends in many populations of brown bears. In many countries, such as Sweden and Finland, but also new applicants to the EU such as Romania, large bear populations are traditionally hunted (Zedrosser *et al.*, 2001). In Serbia for example, poaching has always been present according to Paunovic (2002). The brown bear is one of the most popular and valuable trophy hunting species for European hunters according to TRAFFIC, the wildlife trade monitor network (TRAFFIC, 2006). The responsibility of the European Union in the trade of brown bear trophies has increased, due to recent expansion of the EU with new brown bear ranging states.

Poaching occurs for several reasons; the bears can be perceived as a threat to life or property, they can be killed for trophy hunting, or for economic reasons (Swenson *et al.*, 2000). Poaching may be more indiscriminate in contrast to legal harvest, when certain restrictions are taken such as the season when hunting is permitted, or number of young, male or females to be taken.

The maximum sustainable harvest pressure that brown bear populations can handle is dependent on many factors and is therefore hard to set. Managers often include a factor of uncertainty into their legal harvest quota, such as unreported mortality due to poaching, to try to develop a sustainable harvest rate. Several figures are used for a sustainable human-induced mortality of brown bears. According to Swenson and colleagues (2000), European brown bears in general can sustain higher harvest rates than North American populations, due to the higher reproductive rate of the European brown bear. However, sustainable harvest is dependent on many factors. Habitat quality and capacity should be taken into consideration, because they influence reproductive rates as well (Knapp, 2006).

The brown bear is a valuable species for trophy hunting businesses. Fees set by European agencies to hunt a brown bear can vary between € 1400 and € 8700. This makes the species one of the most expensive Eurasian mammals available for trophy hunting. The economic value that is created by these trophy hunting practices may create economic motivations for bear conservation, as long as it is practiced in a sustainable way and controlled strictly (Voeten, pers. comm. 2006).



Next to pressure of trophy hunting, the use of traditional medicine derived from bear parts, forms a great threat to the survival of bears, particularly in South-east Asia. Bears are especially threatened in the wild due to the increasing demand of bear gall bladder and bile. Bear bile has been used in Traditional Chinese Medicine (TCM) for over 3,000 years. Bears are the only animals to produce large quantities of ursodeoxycholic acid or UDCA. The giant Panda is the only exception to this. The Asiatic black bear or the brown bear are recommended in Chinese medical text as sources of medicinal bile. In Western medicine UDCA is made synthetically or from cow bile and is used to dissolve gallstones and in delaying onset of liver cirrhosis (Chochrane and Robinson, 2002). Synthetic UDCA can be produced cheaply and easily, still the trade in TCM is a flourishing business and a great threat to the continued survival of bears over the world.

Bears that are kept imprisoned can be subject to illegal trade which can harm natural (wild) populations. Captive bears are usually illegally captured in the wild (Alertis, 2006a). When there is a demand for these bears, there is a stimulus for continued illegal capturing of brown bears from the wild. The conservation status of brown bear populations in the wild can in this way become threatened due to the occurrence of or demand for captive bears.

### **2.3.4. Welfare problems of captive bears**

In many regions over the world, such as in South-eastern Europe, brown bears are kept in captivity and used for entertainment purposes. Often adult females are killed to obtain their cubs. In Europe, these cubs are obtained for street performances mostly in Albania and the former Yugoslav Federation (Swenson *et al.*, 2000). In Bulgaria these street performance used to be a common sight, but this problem was solved in 2004. This particular case is described at the end of this literature part. In other countries, for example Georgia, a substantial number of brown bears are put in small cages at public places like restaurants and bars to entertain the people (NACRES, 2006).

It is hard to make an overview of estimations on numbers of bears kept by local people in each country, because no evaluative report of this has been written and the bears are often not registered.

The continued capturing of brown bears from the wild for entertainment purposes can have a large impact on the population of wild brown bears in future. Also deprived living conditions and health state of captive bears are important problems to consider.

In the last paragraph of this chapter, several cases of welfare problems of captive brown bears are explained, as well as management strategies that have been performed to handle these problems. Poor living conditions of the bears can be linked to a low living standard of the owners themselves. When trying to solve these problems not only welfare problems of the bears need to be taken into account, but also livelihood of the owners.



## 2.4. Welfare of captive bears

### 2.4.1. Animal responses to captivity

Animals caught from the wild are sensitive to stress as a response to their captivity, such as stereotypic movements. Some extreme specialist species, such as snakes, are more content with their captivity than opportunists, such as the brown bear, that are always exploring. (Seidensticker and Doherty, 1996) In general emotional (psychological) problems, such as frustration and boredom and the stress resulting from them can be recognized as the main welfare problems of captive animals. Next to that, improper food and suffering from pain are important problems to deal with. Other psychological problems can be the frequent mild fear or anxiety when the animals are unable to hide or do not have the necessary flight distance from humans. (Jordan, 2005)

Predator species such as brown bears will limp and are less stoical when kept under inconvenient conditions that are not stimulating natural behaviour. When in pain, these animals rest a lot and lick wounds. Chronic stress can cause seriously damage to health by destructing healthy tissues, which may damage the heart, blood vessels and kidneys. (Jordan, 2005)

In summary, brown bears in captivity may respond in a diverse way to the circumstances in which they are kept. However, there are some generally recognized responses, such as stereotypic movements.

### 2.4.2. Standards related to animal welfare

There is a need for development of standards for determining animal welfare, and in this particular case, welfare of captive brown bears. Research in the field of animal welfare science is crucial. Animal welfare sciences are currently strongly developing.

There are guidelines present for the keeping of brown bears that give many suggestions for the keeping of brown bears. “The Ursid Husbandry Guidelines” highlight the importance of food and cage enrichment for brown bears for a sufficient level of welfare (EEP, 1998). However, these guidelines are meant for zoos, and do not include concrete standards required for the keeping of brown bears by private people, such as minimal space requirements. Many specific welfare standards are missing, so it is hard to recognize good and bad welfare in a scientific way. The basis of existing welfare approaches is shortly reviewed, to be able to conclude what welfare standards should include.

Looking at welfare measures necessary for the development of standards, a diversity of welfare measures exist today in animal welfare sciences. For determining animal welfare, it is important to bear in mind that most of these measures to assess animal welfare are complex. (Hewson, 2003) Different kinds of measures concerning the health, behaviour and physiology are important to consider. ‘Suffering’ of the animals should be prevented in order to reach a sufficient level of animal welfare. Although many people are convinced that animals consciously experience pain like humans do, current research may reveal new facts about this animal welfare issue. (Dawkins, 2006) Recent research has clearly demonstrated the existence of emotions in animals, and has shown that emotions are an integral part of the brain function in all mammals and are not dependent on consciousness arising first (Jordan, 2005).



Three main approaches are generally used (see table 2.). One approach takes the sum of three standards. The other approach just focuses on two standards: the health of the animal and the needs of the animals (Dawkins, 2006). The third approach respects the “Five Freedoms”, which are recommendations provided by the European Commission for animal welfare.

Table 2. Frameworks for the assessment of animal welfare: three different approaches for the assessment of animal welfare are described.

Framework	Comments
Professor David Fraser, University of British Columbia. <ul style="list-style-type: none"> <li>• High degree of biological functioning</li> <li>• Absence of prolonged pain or distress</li> <li>• Positive experiences and opportunities for pleasure</li> </ul>	-As many measures as possible can be taken to assess welfare according to the 3 standards.
Professor Marion Dawkins, University of Oxford (Dawkins, 2006) <ul style="list-style-type: none"> <li>• Are they healthy?</li> <li>• Do they have what they want?</li> </ul>	-Other questions can be fitted under the 2 main questions. It should be kept in mind what animals want in the short term may diminish welfare in the long term.
According to recommendations provided by the European Commission, “Five Freedoms”: <ol style="list-style-type: none"> <li>1. Freedom from discomfort</li> <li>2. Freedom from hunger, thirst, or malnutrition</li> <li>3. Freedom from fear and distress</li> <li>4. Freedom from pain, injury and disease</li> <li>5. Freedom to express natural behaviour (Europa, Animal Health and Welfare, 2006).</li> </ol>	-In European legislation only applied to farm animals (see paragraph 2.5.2.).

Source: Hewson (2003).



### **Basic needs for animal welfare**

Taking into account important frameworks for assessing animal welfare (table 2), the basic needs for animal welfare of captive animals, and especially brown bears can be described.

An assessment on animal welfare can be made by checking if standards are followed up by the owner of the captive animal. A concrete list with measurements is useful to be able to assess the welfare situation of the individual captive animal. The Five Freedoms recommended by the European Commission are applicated below in order to give a view on application of these standards. It must be noted that up till today the Five Freedoms have only been applied to farm animals: see paragraph 2.5.2.

#### **1. Freedom from discomfort: provision of a suitable environment**

This must be consistent with species requirements. Suitable substrates need to be provided for species that in nature dig and root (Jordan, 2005). It must be ensured that the macro niche of the species is present in the design of an enclosure and it is environmentally appropriate for the species (Seidensticker and Doherty, 1996).

#### **2. Freedom from hunger, thirst or malnutrition: provision of food and water**

Food and water are basic needs. The method of food presentation, frequency of feeds, as well as the nutritional balance need to be taken into account. This should be in a manner related to the natural behaviour of the species (Jordan, 2005). For the brown bear this means that the nutritional requirements vary according to the season. A more natural diet in terms of variation in calories can stimulate natural behaviour such as hibernation (EEP, 1998).

#### **3. Freedom from fear and distress: provision of protection**

The enclosure design should allow for as much normal behaviour as possible. Areas for escape from the public or other animals should be provided (Jordan, 2005). For brown bears it is important that they are able to hide themselves and have a large space to move (EEP, 1998).

#### **4. Freedom, from pain, injury and distress: provision of animal healthcare:**

Risk of injury must be minimised by a suitable designed enclosure. Curative and preventive veterinary medicine should be provided. A suitable hygienic environment is important to exclude or control pathogens (Jordan, 2005).

#### **5. Freedom to express natural behaviour: provision of an opportunity to express most normal behaviour**

Captive bears need minimum living standards to guarantee their physical and mental well being (see also “provision of a suitable environment”). When enclosures of brown bears are too small and have no structures, diverse natural behaviours of brown bears are not stimulated. Instead monotonous behaviour is displayed. Spacious enclosures are needed for brown bears to stimulate a variety of different behaviours. Natural ground is essential to promote foraging behaviour, such as the intense olfactory exploration during forward movements followed by the exploration for edible food parts, such as roots and insects. At least partly soft ground and a lot of structures are needed to create a variety of microclimates for the bears. Bears have thermoregulatory needs and perform only related behaviours when different micro-climates occur in an enclosure. (Kolter, 1994) Unfortunately, no exact standards are available for minimum size of enclosures of brown bears. Nevertheless, it is acknowledged that captive bears need a large semi-natural enclosure to display natural behaviour.





## 2.5. International legislation related to wild brown bears

There are several important international treaties (also called conventions) that concern the protection of the brown bear, as well as other bear species. These international treaties are needed, because of the severe threats that bears are suffering world-wide and the need for cooperation among states. The international treaties stimulate or enforce national governments to implement international legislation into their national framework.

### 2.5.1. International agreements

In this paragraph the most important international treaties are described. Whereas current European animal welfare regulations do not provide legislation on welfare issues related to captive brown bears specifically (paragraph 2.5.2.), only the international treaties mentioned in table 3. focussing on protection of wild populations will be explained in this paragraph. These international treaties mainly focus on protection of the species in the wild. Some remarks have to be made. CITES and the Biological Diversity Convention are world-wide treaties. The Bern Convention only applies to European countries, while the EU-directives only apply to European Union member countries (Zedrosser *et al.*, 2001). In table 3. these agreements and their objectives are enlisted.

Table 3. International treaties important for the protection of the brown bear are listed together with their origin, their binding character, main objectives and listings of species.

Treaty	From	Year	Legally binding	Main objectives	List
CITES	UNEP	1973	Yes; contracting parties have to follow up resolutions of the Convention.	Regulate international trade in endangered species.	Species of animals and plants listed in three appendixes according to their degree of threat.
Convention on Biological Diversity	UNEP	1992	Yes; certain rules regarding the use of biodiversity are laid down in the Convention for the contracting parties.	Conservation of biological diversity worldwide, sustainable use of its components and the fair and equitable sharing.	No lists; more room for interpretation how to measure successes.
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)	Council of Europe	1979	Yes; requisite measures have to be taken by contracting parties to preserve the endangered species.	Ensure the conservation of European wildlife and natural habitats by means of co-operation between states.	Endangered species are enlisted in appendixes.
EU-Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitat Directive)	EU	1992	Yes; member states are obliged to implement the Directive into their national framework	Translate the Bern Convention into EU legislation. Conservation of important natural habitats and their flora and fauna.	Species and habitats that need protection are listed in annexes.

Sources: CITES (2006), Biological Diversity Convention (2006), Council of Europe (2006).



## **CITES: Convention on International Trade in Endangered Species of wild fauna and flora (March 3<sup>rd</sup> 1973, Washington)**

This International Convention (United Nations treaty) aims to control international trade in specimens of selected species. This can be achieved by a licensing system which covers import, export, re-export and introduction of species. Only if the appropriate document has been obtained and presented, a specimen of a CITES-listed species may be imported or exported to or from a State party. (CITES, 2006a) The species covered by CITES, are listed in three appendices. The listings in the appendices depend on the degree of protection the species need (see table 4).

Table 4. The three Appendices included in CITES according to protected status of species.

**-Appendix I** includes species that are threatened with extinction. Only in exceptional circumstances trade of specimens of these species is permitted.

**-Appendix II** includes species that are not necessarily threatened with extinction. Trade must be controlled in order to avoid an incompatible utilization compared to their survival.

**-Appendix III** contains species that have a protected status in at least one country. Other CITES parties have to be asked for assistance in controlling the trade.

Source: (CITES, 2006a)

Several articles explain the rules, give further information about procedures, and give explanation about certain exceptions. On average, every two years a meeting of the Conference of the Parties (CoP) is organized in which different (new) resolutions are discussed and determined. After such a meeting, several decisions can get into effect (CITES, 2006a). Due to this procedure of completion and monitoring, CITES, which started as a quite narrow convention, has become a more extensive one.

Up to now, 168 states have accessed the CITES Convention (CITES, 2006a). It is an important worldwide treaty dealing with international trade in valuable natural resources. It should be noted that CITES considers the international trade between states, and therefore does not directly control internal trade in species.

### **Duties of the Parties to the Convention**

States, but also larger unities, such as the European Union, can voluntary become a Party to the CITES agreement. CITES is legally binding, which means Parties to the Convention have to implement regulations according to the Convention. Parties have to adopt their own domestic legislation that implement CITES at the national level. In the Netherlands the CITES rules are implemented in the Flora and Fauna Law.

CITES does not provide exact rules for national laws, rather a framework is provided to be followed up by each Party. Parties to the Convention have to assign Management Authorities that will administer the licensing system. Scientific Authorities have to be assigned that advise these them on trade issues and the status of the species. (CITES, 2006a)



### **Legal status of the brown bear**

The legal status of bear species can be found in their listing in the Appendices. The following subspecies of the brown bear are included in Appendix I: the small brown bear populations of Bhutan, China, Mexico and Mongolia are enlisted (CITES, 2006). The presence of these populations is currently uncertain, because monitoring has been insufficient (Knapp, 2006). In Appendix II all other brown bear populations are enlisted (CITES, 2006).

Within the European Community, trade is regulated under Regulation No. 1332/2005 of August 9<sup>th</sup> 2005, and is an amendment to Regulation No. 338/97 of December 9<sup>th</sup> 1996 on the protection of species of wild fauna and flora. This act is a legal base for implementation of the CITES Convention within the European Union. The brown bear is listed in Annex A of the regulation. This Annex includes all CITES Appendix I species, and some CITES Appendix II and III species, for which the EU has adopted strict domestic measures and some non-CITES species. (European Union, 2006b) This listing of the brown bear in Annex A is comparable to the rules of Appendix I within CITES, but trade in the species is even more strictly controlled. It means that no commercial trade is possible, unless a specific exception is provided by means of an EU-certificate. A scientific commission controls if the transfer of an animal could have harmful effects (Vintges, pers. comm. 2006). This scientific commission of the EU is called the wildlife trade Scientific Review Group (SRG) and can give a Positive or Negative Opinion to countries for the trade of a certain species. A Negative Opinion means that an immediate halt to issuance is given of import permits for all EU Member States and for that species/country combination. (Knapp, 2006) In the past, the SRG has issued a Negative Opinion for Romania (until October 2005), as well as Croatia (October 2003 to December 2004) and Slovenia (January 2003 to May 2004) (UNEP, 2006).

### **Amendments to the Appendices**

During the Tenth Conference of the Parties of CITES, the topic of conservation and trade in bears was issued. One of the discussion points was the transfer of Appendix II populations of the brown bear to Appendix I. Finland was the proponent of the transfer, supported by Bulgaria and Jordan, and applied a proposal to achieve the goal of 'uplisting' the legal status of the species to give a totally protected status to the brown bear. As was stated in this proposal, demarcation between legal and illegal trade in bear products is complicated by the different degrees of national legal protection given to bear taxa, as well as their different status under CITES legislation. A loophole in legislation is easily created by different degrees of protection given to different bear taxa. An example of this ambiguity as stated in the proposal: "if traders are found with gall bladders from Asiatic black bears (endangered and included in Appendix I), they are able to claim that they are derived from brown bears". As the proposal of Finland stated, Appendix I listing of all brown bear species would not only directly benefit brown bears, but also highly endangered bear species whose gallbladders are visually indistinguishable from those of brown bears and are illegally laundered as such. (CITES, 1997) The proposal by Finland to increase protection for all brown bears outside North America, was firmly defeated by the Russian Federation, Romania, and the Czech Republic during the Tenth Conference of the Parties, and the proposal was not implemented in CITES. However, at this Tenth Conference of the Parties, a resolution was adopted which calls on the Parties to "confirm, adopt or improve their national legislation to control the import and export of bear parts and derivatives". (CITES, 2006b) At the Twelfth Conference of the Parties to CITES held in Chile, a consensus decision was promoted by several conservation organizations (Macharashvili and Lortkipanidze, 2004). A document was adopted on trade in bear specimens which encourages Parties to conserve bear populations and combat illegal trade of the species (Decisions 12.27 and 12.28) (CITES, 2006 c).



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## Convention on Biological Diversity (May 5<sup>th</sup> 1992, Rio de Janeiro)

The Biological Diversity Convention, a United Nations treaty, established three goals: “the conservation of biological diversity, the sustainable use of its components, and the fair equitable sharing of benefits from the use of genetic resources” (Biological Diversity Convention, 2006). As an international treaty, the Convention sets overall goals and policies and general obligations, but the responsibility for achieving these goals rests largely with the countries themselves. Rules have to be set by national governments and intergovernmental organizations that guide in the use of natural resources and the protection of biodiversity. Each government that has joined the Convention is obliged to report on what it has completed to implement the accord, and what goals have been reached (Biological Diversity Convention, 2006).

Today, 188 states have ratified the treaty (Biological Diversity Convention, 2006). The great number of parties indicates the influence this treaty might have within the international legal framework.

### **Legal status of the brown bear**

The brown bear is not specifically mentioned in the Biological Diversity Convention (Swenson *et al.*, 2000). The goal of the Convention is to stimulate the translation of their general objectives for conservation into the national and international conservation programmes, also by the European Union. In this way the Convention may influence conservation of the brown bear.

### **“Hard law” against “soft law”**

The Biological Diversity Convention is a legally binding agreement, which means that there are rather precise rules that need to be fulfilled by the parties to the Convention. It is referred to as “hard law”. In contradiction to “soft law” there are certain rules that have to be followed up. When there is a lack of precision in legislation, this is often referred to as “soft law”. Some advantages of “hard law” are that it is enforceable and subject to formal treaty rules, in contrast with “soft law” (Dottinga, pers. comm. 2006). Some discussion is possible about this topic. For example in article 21 of the Convention, it is required for contracting parties not to cause environmental damage “as far as possible and as appropriate as possible”. In this article no clear rules are stated so this article can therefore be labelled as a “soft” part of law.



## **Bern Convention: Convention on the conservation of European wildlife and natural habitats (Sept. 19<sup>th</sup> 1979, Bern, Switzerland)**

Conservation of wild animal species and their natural habitat is the most important goal of the Bern Convention. To realize this goal, the conservation of wild flora and fauna should be taken into consideration by the governments in their national goals and programmes. The Convention states that international co-operation with other states in the field of nature conservation should be established to protect migratory species in particular. With the Bern Convention the Council of Europe aims to achieve a greater unity in between its members. (Bern Convention, 2006a)

The Bern Convention includes several agreements. Different Appendixes subdivide animal and plant species into categories of endangerment (Appendix I, II and III). In Appendix IV of the Convention several specific obligations are enlisted to protect the enlisted species.

The Bern Convention is a binding international legal instrument, which means that contracting Parties have to implement the rules provided by the Convention. The Convention also initiated several ecological networks in which Parties can participate, such as the Pan-European Ecological Network. (Bern Convention, 2006a)

The Bern Convention was opened for signature in 1979 and entered into force in 1982. The Convention is open for signature by the member states of the Council of Europe, non-member states which have participated in its elaboration and by the European Community. It is also open for accession by other non-member states. In total the Council of Europe consists of 46 member states. Until now, the Convention has been signed by 40 member states and 4 non-member states of the Council of Europe. Three bear ranging states that have not signed the Convention include Georgia, Russia and San Marino (Republic of Italy). (Bern Convention, 2006a)

### **Legal status of the brown bear**

The brown bear is included in Appendix II of the Bern Convention and has the status of “strictly protected fauna species”. In the Bern Convention several articles are enlisted that are of importance for the continued survival of these species. The legal status of captive bears is stated in article 6 in chapter 3 of the Convention that states that several actions must be performed to enhance the special conservation of Appendix II species: capture, keeping or killing, disturbance, and trade are forbidden. According to article 6 of the Bern Convention it is stated that:

*“Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species:*

*a) All forms of deliberate **capture and keeping** and deliberate **killing***

*.....*

*e) The possession of and **internal trade** in these animals, alive or dead, including stuffed animals and any readily recognisable part or derivative thereof, where this would contribute to the effectiveness of the provisions of this article.”*

(Bern Convention, 2006b).



One of the key action aims of the Bern Convention is that each contracting country drafts a bear management plan. The European Action Plan for the Conservation of the Brown Bear (Swenson *et al.*, 2000) is an official document of the Bern Convention and the Council of Europe and has to be considered by all member countries. The Large Carnivore Initiative for Europe (LCIE) (an independent working group) assists national governments in the creation of their specific national management plan. An example is the national management plan for the republic of Croatia created in cooperation with the Croatian government (Dečak *et al.*, 2005). The LCIE was launched in 1995 by WWF International to enhance the European vision and approach to the conservation of the five large carnivores in Europe. The LCIE is officially recognized as the group of experts on large carnivores to the Bern Convention and is an IUCN specialist group. The action plans produced by LCIE were adopted by the Bern Convention in 2000 (Species, 2005).

### **Exceptions**

The Bern Convention permits certain exceptions to contracting states. A state may permit the hunting or culling of populations brown bears according to article 9 and 22 of the Convention “provided that there is no other satisfactory solution and that the exception will not be detrimental to the survival of the population concerned”. Exceptions can be approved under the following conditions: serious damage to crops, livestock, forests, fisheries, water and other forms of property; in the interests of public health and safety; for the purpose of research and education, repopulation or reintroduction. (Bern Convention, 2006b)

When the exception is granted, the state is obliged to inform the Standing Committee of the Convention on which exceptions have been made, the reasons for exceptions and the impact on the population (Bern Convention, 2006a). Exceptions have been made by several European countries: Bulgaria, Czech Republic, Finland, Slovenia, Slovakia, Ukraine, and Turkey. (Council of Europe, 2006)

### **Habitats Directive: Directive on the conservation of natural habitats and of wild fauna and flora (May 21<sup>st</sup>, 1992)**

The EU Habitats Directive deals with the conservation of European flora and fauna and habitats and is the EU translation of the Bern Convention. Next to CITES, this Directive is the most important one for the protection of the brown bear within the European Union. The Habitats Directive aims to contribute to conserving the biological diversity by maintaining the natural habitats and the flora and fauna on the European territory of the EU-countries. The conservation of birds is included in another directive, namely the Birds Directive. The Habitat Directive commits the EU-countries to take necessary conservation measures to protect threatened natural and semi-natural habitats. The EU-countries are obliged to use suitable actions to guarantee the quality of the natural habitats and the habitats of species in (special) protected areas. In addition, no disturbing factors should have an effect on the issued objective of the protected areas. Member countries are obliged to implement the Habitat Directive into national legislation. (Habitats Directive, 2006)



The Habitats Directive has established the structure of a coherent European network of special protection zones, Natura 2000. This network consists of natural habitats stated in Annex I of the Directive as well as special protection areas of the Birds Directive. Important species are mentioned in Annex II of the Habitats Directive. In Annex III the criteria are stated which are important for establishing special protection areas. In Annex IV of the Habitat Directive “animal and plant species of community interest in need of strict protection”, are enlisted. Species included in this Annex IV of the Habitats Directive occurring outside of the Natura 2000 sites, also need protection. The brown bear is included in this Annex and by that is legally protected from capturing, killing and disturbing, also outside of Natura 2000. To avoid confusion between different legislative instruments of the EU, all species mentioned in Annex IV of the Habitats Directive are listed in Annex A of the Council Regulation (EC) 338/97 (EU translation of CITES)(European Union, 2006b). Annex V of the Habitats Directive enlists “animal and plant species of community interest who’s taking in the wild and exploitation may be subject to management measures”. In this last mentioned Annex, bear species are not included.

Working Groups of Member States are established under the Habitats Committee to discuss certain concepts and definitions. These are mostly issues which may have caused implementation problems in member states. Currently the Commission Services are working on a “Guidance document on the strict protection of animal species of community interest provided by the Habitat Directive.” This document is meant to ensure a common understanding of the provisions of the Directive among all interest groups involved in the implementation of the Habitats Directive. (Habitats Directive, 2006)

The Convention is implemented by all member states of the European Union. Current, as well as future member states have to address Natura 2000 sites as well as management plans for the protection of flora and fauna. The European Union consists today out of 25 member States and will be extended to more member States in future. (European Union, 2006a)

### **Exceptions**

According to Article 16 of the Directive countries can deviate from the legal provisions of the strictly protective status of species mentioned in Annex IV, but only under special conditions. The keeping, transport and sale of specimens of Annex IV is prohibited, unless the species are causing serious damage, in particular to livestock, or when it is in interests of public health and safety, for the purpose of research and education and for the purpose of re-introducing the species. (Habitats Directive, 2006)



### 2.5.2. Legislation regarding animal welfare on European level

European legislation related to animal welfare, concerns different groups of animals, dependent on their kind of use by humans. The animal groups that are distinguished in European law are farming animals, animals in zoos, wild animals and animals kept for their fur. There are no specific European Council of EU laws present that concern welfare standards for wild animals kept by private persons.

The Council of Europe developed several European Conventions to control the use of animals by humans. The Conventions focus on the following subjects: protection of animals during international transport, protection of animals kept for farming purposes, protection of animals for slaughter, protection of vertebrate animals used for experimental and other scientific purposes and the protection of pet animals (Council of Europe, 2006). Members of the Council of Europe are expected to follow the rules provided by these Conventions. The European Union has ratified several of these Conventions and developed Council Directives, in which rules are given for protection of animals. These rules are based on the Conventions provided by the European Council. All member states of the European Union are expected to follow these rules (European Commission, 2006).

For over 30 years the European Union has been developing animal welfare legislation. The first community legislation was on farm animal welfare, adopted in 1974, and respects the basic freedoms of an animal which are fundamental principles of animal welfare. The Council Directive 1999/22/EC regulates the keeping of wild animals in zoos. With regard to farm animals, general minimum living standards were developed and set out in Directive 98/58/EC. The member states are expected to give effect to the recommendations. These recommendations have been termed “The Five Freedoms” (see table 2.), which are fundamental principles to protect animal welfare within the European Union. (European Commission, 2006) Today, these recommendations are only applied to keeping of farm animals.

No international requirements are present that describe standards for bears in captivity elsewhere than zoos. The requirements of zoos important for animal welfare are described in Article 3 of Directive 1999/22/EC, which states that zoos have to accommodate the animals in a way that the biological needs of individual animals are answered. The article states that it is important to qualitatively ameliorate the cages, give excellent care to the animals and apply preventive and curative veterinary care and nutrition to the animals (European Commission, 2006). There is no concrete European Convention or EU Directive present that particularly focuses on welfare of wild animals that are kept by private persons. This subject of legislation is missing, so it is up to the states themselves if and how they implement regulations regarding the keeping of wild animals. It will be an improvement for animal welfare legislation when such standards will also be applied to animals in captivity kept in other facilities than zoos.

In Eastern or South-eastern European countries, animal welfare living standards are often not described in national legislation or not actively enforced. For instance in Croatia, until recently no adequate legislation framework did exist regarding animal welfare. According to the Croatian non-governmental organization “Animal Friends”, the situation is changing positively due to creation of a draft proposal for a new animal welfare act, proposed by the welfare organization to the national government (Animal Friends, 2006).





## Literature study

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Positive developments are visible on the European level towards animal welfare issues. Recently, a Community Action Plan on the Protection and Welfare of Animals has been adopted by the European Commission. Within this Action Plan for the period 2006-2010 five main actions for animal welfare are formulated:

1. Upgrading existing minimum standards for animal protection and welfare.
2. Giving a high priority to promoting policy-orientated future research on animal protection and welfare.
3. Introducing standardised animal welfare indicators.
4. Ensuring that animal keepers/ handlers as well as the general public are more involved and informed on current standards of animal protection and welfare.
5. Continue to support and initiate further international initiatives to raise awareness and create a greater consensus on animal welfare  
(Commission of the European Communities, 2006).

In a general sense public attitude is changing positively towards the use and welfare of animals in recent years. In more developed countries, such as in Western Europe, it appears that this change in attitude is ahead of countries in South-eastern Europe. This statement of course is disputable. Already a long time ago, brown bears were extirpated in many Western European countries. Next to that, large impact welfare problems exist, such as bio industry which is a large scale business in Western Europe. Despite of this, change in attitude of governmental bodies as well as the public towards improved animal welfare conditions is visible in most European countries.



## 2.6. National legislation

In Europe, the national legislation framework seems to be of great importance for the conservation of brown bears. As explained before, it is up to the parties of international conventions how to implement the legal provisions. The national framework concerning conservation of brown bears in each country is therefore different. However, member countries of the EU have more obligations towards protection of the brown bear, because they need to implement the rules of the Habitats Directive. The legal status of the brown bear usually also reflects public acceptance of brown bears in the country or their social or financial function.

Three examples of European countries that gave the brown bear a specific legal status are Bulgaria, Romania and Croatia. In Bulgaria, the brown bear has a strictly protected status since 1993. In Romania, the brown bear is a game species as well as a protected species, which means that it is legal to hunt the species for conservation purposes. Also in Croatia, the species is a game species as well as a protected species, but hunting quotas are lower than in Romania. The countries are all candidate parties for the European Union, and therefore have to work on important legal provisions of the European Union, such as the already mentioned Habitats Directive.

### 2.6.1. National legislation in Bulgaria

Bulgaria has ratified all relevant international treaties concerning nature protection. Bulgaria has made reservations for the Bern Convention. In table 5. these international treaties are listed with the date of ratification.

Table 5. International legal provisions in Bulgaria and date of ratification

<p><b>Implemented:</b></p> <ul style="list-style-type: none"> <li>- Convention on Biological Diversity – 12/06/1992</li> <li>- Convention on the Conservation of European wildlife and natural habitats (Bern Convention)– 31/1/1991</li> <li><i>The Republic of Bulgaria makes reservations according to the provisions of Article 9 and paragraph 1 of Article 22 of the Convention, for the brown bear (regarding the means or methods of killing, capture or use)</i></li> <li>- Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) – 16/01/1991</li> </ul> <p><b>Obligated to implement:</b></p> <ul style="list-style-type: none"> <li>- European Community (EC) Regulation No. 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade.</li> <li>- Council Directive 92/ 43/ EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive).</li> </ul>
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Source: Council of Europe (2006), Biological Diversity Convention (2006), CITES (2006).



### **International legislation**

The Bulgarian government has adopted international conventions and agreements such as CITES and the Bern Convention. These conventions are of importance for the protection of the brown bear. Bulgaria has a reservation for the brown bear under the Bern Convention with respect to certain means or methods of killing, capture, or other exploitation. Bulgaria is obliged to implement the EU Habitats Directive, because the country is in a transition phase towards accession to the European Union.

### **National legal status of brown bears**

Until 1993, the brown bear was considered as a game species in Bulgaria. Since 1993, the brown bear was given a protected status in Bulgaria (Knapp, 2006). Hunting is not allowed apart from “blood thirsty bears”, which refers to dangerous bears or bears causing serious damage. In Bulgaria the brown bear is enlisted in the Bulgarian Biodiversity Act that was adopted on August 9<sup>th</sup> in 2002. This normative act aims to unify Bulgaria’s nature conservation legislation with the European legislation and is part of the National Biological Diversity Conservation Strategy. This Act changed the status of the brown bear to a totally protected species. (Wisard project information, 2006)

Since 1993, only problem bears were killed legally in Bulgaria for which a hunting permit has been granted. According to experts, illegal kills of brown bears still occur each year, estimated at a level of 20 to 30 bears a year. With the change in legislation matters since 1993, the authority to grant permits to shoot problem bears changed from the Ministry of Agriculture and Forestry to the Ministry of Environment and Waters. (Knapp, 2006) Currently a management plan is being prepared by the government, with the aid from various NGO’s (Alertis, 2006b).



### 2.6.2. National legislation in Romania

Romania has ratified all relevant international treaties concerning nature protecting and bear protection. In table 6. these international treaties are listed with the date of ratification.

Table 6. International legal provisions in Romania and date of ratification

<p><b>Implemented:</b></p> <ul style="list-style-type: none"> <li>- Convention on Biological Diversity – 17/08/1994</li> <li>- Convention on the Conservation of European wildlife and natural habitats (Bern Convention)– 18/5/1993</li> <li>- Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) – 18/08/1994</li> </ul> <p><b>Obligated to implement:</b></p> <ul style="list-style-type: none"> <li>- European Community (EC) Regulation No. 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade.</li> <li>- Council Directive 92/ 43/ EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive).</li> </ul>
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Source: Council of Europe (2006), Biological Diversity Convention (2006), CITES (2006).

#### International legislation

Romania became a CITES Party in 1994. Romania has a high export level of trophy items to European Union countries, as well as other countries. In 2003, an amount of 146 brown bear trophy items have been reported by CITES to be exported to other countries (Knapp, 2006). All important international treaties concerning the brown bear are ratified in Romania. Due to the planned accession to the EU, Romania has to implement the Habitats Directive. Strict rules for protection of the brown bear have to be followed up.

#### National legal status of brown bear

The brown bear is a protected species as well as a game species in Romania. In 2002, a national action plan was established on the management of important game species, including the brown bear. *The Management and Action Plan for the Bear population in Romania* was created by the Ministry of Agriculture, Forestry and Rural Development and the Ministry of Environment and Water management (Knapp, 2006).

According to some experts, the current population is thought to be above the optimum and a harvesting quota is needed to control the damages caused by the bears. These opinions are shared by the International Council for Game and Wildlife Conservation and the Federation of Associations for Hunting and Conservation of the EU. On the other hand, there are concerns by NGO's and other experts that the population figures are not accurate and that harvesting quotas in the country are too high. It is also concluded in the European Action Plan that hunting causes population declines in Romania (Swenson *et al.*, 2000). Concerns have arisen due to lack of scientific information on the status of the bear population in Romania (Knapp, 2006).



### 2.6.3. National legislation in Croatia

Croatia has ratified all relevant international treaties concerning nature protecting. Croatia has made a reservation within the Bern Convention. In table 7. the international treaties are listed with the date of ratification.

Table 7. International legal provisions in Croatia and date of ratification

<p><b>Implemented:</b></p> <ul style="list-style-type: none"> <li>- Convention on Biological Diversity – 07/10/1996</li> <li>- Convention on the Conservation of European wildlife and natural habitats (Bern Convention)– 3/5/2000 <i>The Republic of Croatia makes reservations according to the provisions of Article 9 and paragraph 1 of Article 22 of the Convention, for the brown bear (regarding the means or methods of killing, capture or use)</i></li> <li>- Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) –14/03/2000</li> </ul> <p><b>Obligated to implement:</b></p> <ul style="list-style-type: none"> <li>- European Community (EC) Regulation No. 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade.</li> <li>- Council Directive 92/ 43/ EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive).</li> </ul>
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Source: Council of Europe (2006), Biological Diversity Convention (2006), CITES (2006).

#### International legislation

After the declared independence in 1991 from Yugoslavia, Croatia became a party to CITES in 2000. The Bern Convention was ratified in Croatia in the year 2000 (Council of Europe, 2006). Future plans for accession to the EU, obliges Croatia to implement the Habitats Directive into the national framework.

#### National legal status of the brown bear

In national law, brown bears are listed as a game species in Croatia under the Croatian Hunting Act, but the species is also listed as a 'protected species' by the Law on Nature protection (Dečak *et al.*, 2005). Croatia has a reservation for the brown bear under the Bern Convention regarding certain means or methods of killing, capture, or other exploitation (Council of Europe, 2006).

Since 2005, a management plan exists for conservation purposes of the population of brown bears in Croatia. In this management plan hunting 10 to 15 % of the total estimated number of bears is planned for the future. Bear hunting is planned at the start of each hunting year. Sustainable hunting quotas are referred to the estimated population number, population structure and management goals (Dečak *et al.*, 2005). In the past, legal hunting of bears has not threatened the population of brown bears in the country, but poaching is still present. The national management plan states that the current bear management in Croatia is not sufficient. There is a lack of cooperation and control on bear management.



## 2.7. Law enforcement

Law enforcement is an important principle for the effectiveness of international treaties, but can be a weak part of international law. It is also an important subject to consider in national law. Legal enforcement is often not included in treaties, so it is up to the countries how they implement legislation into their national framework. The implementation of international legislation into national frameworks is often not satisfactory performed. Many treaties, such as the Bern Convention, are poorly enforced by contracting parties into national law (Zedrosser *et al.*, 2001).

The failing of enforcement in the national legislation framework can also be a problem. For example in Georgia, located in South-eastern Europe, law enforcement is insufficiently implemented. The brown bear is enlisted as a National Red List species and has a protected status according to the Georgian Law on Wild Fauna Protection of 1996. Still, the species is under threat by poaching pressure and illegal keeping of the species. The main causes of this failure probably are the lack of resources and overall capacity of the Inspectorates to perform law enforcement (Shavgulidze, pers. comm. 2006). But also a difference in culture and the national legislation framework may be a source of the problem.

### **Solving problems in law enforcement: examples**

As explained in paragraph 2.5.1., the Habitats Directive commits the EU-countries to take necessary conservation measures to protect threatened natural and semi-natural habitats. Every EU-country is obliged to identify important habitats and species according to the Annexes of the Directive. Article 6 of the Directive commits EU-countries to manage Natura 2000 sites properly. Other articles of the Directive oblige countries to protect species. When a country does not implement these rules, de European Commission can bring the state to the court of justice.

CITES considers law enforcement principles carefully as well. This treaty deals with important legal issues that need to be controlled internationally, but also on a national scale. Compliance measures are important to control the national implementation of CITES. In 2000, a Legislation and Compliance Unit was established to strengthen the compliance and enforcement issues of the Convention (Yeater, 2004). According to Yeater, Chief of this unit from the CITES Secretariat, the ultimate goal from the CITES compliance and enforcement measures is to improve the implementation, and with that the effectiveness of the Convention. To achieve this, implementation of CITES into the national wildlife management policies and programs are important. 'Indicators' for compliance and enforcement focus on five key programmes: the National Legislation Project, permit confirmation, annual and biennial reports, the review of significant trade, and reports on enforcement matters. Next to that, additional measures are included that concern for example the setting of export quotas and internal trade control (Yeater, 2004).

When Parties are found to be in non-compliance with CITES, for instance when no domestic measures exist to enforce the Convention, Parties are induced to compliance through consultations and advice or assistance. When significant levels of trade in a certain species are found to occur, recommendations can be made by CITES to temporary suspend trade in the species (Yeater, 2004). When irregular trade is detected, CITES urges for example customs, TRAFFIC and foreign CITES agencies to act against the trade (Vintges, pers. comm. 2006). In recent meetings of parties to the CITES Convention, problems with law enforcement have been discussed. New resolutions have been adopted recently, that try to solve the problems (CITES, 2006).



## 2.8. Management strategies performed by NGO's to handle welfare problems of captive bears

*In this paragraph executed management strategies performed by NGO's are described. All these NGO's had the aim to solve welfare problems related to captive brown bears. Some frequently used strategies regarding the captive bears and their owners are explained.*

### Frequently used strategies

Confiscation of bears is in many cases thought of as the most appropriate (or humane) way of making an end to welfare problems related to captive brown bears. However, the placement of confiscated animals is an urgent problem in many countries. The demand for information and advice on this topic has increased in recent years.

The placement of bears in a sanctuary is a strategy that gives benefits because of the possibilities to ameliorate living conditions of the bears in the most advantageous way. Moreover, confiscated animals can become subject of research, training and teaching programs, which are potential benefits for conservation. However, there are also negative aspects concerning the establishment of a sanctuary. The whole process can be time-consuming, and the care for the bears is expensive. In many countries space, finances and expertise are not readily available. (IUCN, 2002)

Re-introduction programs to release captive brown bears again in the wild are several times performed in the past. In this study this strategy is not advised as a suitable one for finding a solution to placement of most captive brown bears. Usually, captive bears are habituated to people, and have not (or insufficiently) learned how to find food themselves. Habituation to people can mean that bears start to visit villages to find food, and may lead to man-bear conflicts, which is an unfavourable situation. (Kolter and Van Dijk, 2005)

When it reveals that the owners of the captive bears depend on the bears socially or economically, the strategy to create a social program that helps to rehabilitate them is important to consider. By the creation of alternative jobs, the chance of repetition of keeping bears is diminished.

Several examples of the above mentioned main strategies, as well as other performed strategies, can give an idea on the way they have been implemented by NGO's in the past. Examples of these strategies to solve welfare problems of captive brown bears in Europe are discussed in this paragraph. Also strategies to handle welfare problems of sloth bears in India are discussed, because of the large scale of the problems and the innovative strategies that are used to manage them. It must be noted that the described projects are all (financially) supported by Alertis, fund for bear and nature conservation.



### 2.8.1. Projects in India regarding welfare of bears

#### Background

In India, the use of dancing bears by local people is believed to have started centuries ago. The lowest social class in the country, the so called 'Kalandar tribe', is a nomadic gypsy tribe that is involved with bear dancing from the times of Mughal emperors. According to the Kalandars, the history of the dancing bears dates back to the 16<sup>th</sup> century, the emperor time in India. They were the royal entertainers in the palaces in the Mughal area in the past. Once the emperor time was gone by, the Kalandars started with the performance of bear dancing for the general public. (Seshamani and Satyanurayan, 1997)

#### Welfare problems

The bears are brutally treated from the day they are captured as young cubs from the wild. The nose of the young bears is pierced and a rope is taken through the nose, so the bears are forced to dance. It is relatively common to see several scars of such piercing in the nose of the dancing bears. Teeth are often removed (Seshamani and Satyanurayan, 1997). According to an Indian non-governmental organization working on solving the problems, these are only some examples of the cruelty that the dancing bears suffer every day (Wildlife S.O.S., 2004 a.).

#### Species and origin of the bears

In many cases the sloth bear (*Melursus ursinus*) is used by the Kalandar people. The sloth bear is one of the four species of bears that can be found in India. Sloth bears are relatively small bears (height 70-80 cm in standing position). Their long snout, its good sucking power in combination with strong claws, makes them able to suck and dig up ants, beetles, and termite nests (Wildlife S.O.S., 2004 b).

#### The owners of the bears

The Kalandar tribe in India belongs today to the lowest income group of the country. The government of India has included the Kalandar people in the category of "other backward tribes", along with the Adivasis, forest tribals, and other communities that make their living from the forest and its resources or work with animals. This may imply that the government has recognized their deprived status, but the situation is until now not improved by planning any schemes of housing or land ownership. The government did not help in providing this community with employment or even the basic necessities of clean water, simple medical aid and primary education. Historically the Kalandar people were wandering gypsies, usually making money from performing animals. Today, still some Kalandars have a nomadic life style. Others 'roam' around their settlements and often make a living from the work with bears as entertainer. Owning a bear continues to be a source of pride and income for the Kalandar tribe. (Seshamani and Satyanurayan, 1997)

#### Impact on wild populations

The dancing bear problem in India is large scaled. Today, still an estimated number of 800 dancing bears are present on the streets in India, according to the NGO Wildlife S.O.S. (Wildlife S.O.S., 2006). In 1996, a study on the socio economic status of the Kalandar tribe and the health, management and training of the captive bears that they held, exposed new facts. It was prevailed that the bears used by the Kalandar tribe were not bred in captivity, but were poached from the wild each year. Taken from the wild, the young cubs (3 to 6 weeks old) are sold at underground markets. The small cubs are usually sold for around 50 US Dollars.





The young bears generally end up at a Kalandar family who will train it under cruel conditions to become a dancing bear. (Seshamani and Satyanurayan, 1997)

The number of wild sloth bears has decreased rapidly over the last decades. It is believed by NGO's that population numbers have decreased from 20,000 sloth bears in the wild in India to no more than 3- 4,000 sloth bears that remain in their natural surroundings today (Wildlife S.O.S., 2004 b). The population is severely declining due to poaching of the cubs and adults for commercial purposes. The most important threat is the poaching of live bear cubs for bear dancing in India. Next to that, a large number of adult bears is poached for trade on their body parts for traditional Chinese medicine. Another reason of the decline of the population is habitat destruction and man-bear conflicts (Wildlife S.O.S., 2006).

Bear dancing in the country is officially banned by the National Wildlife Protection act of 1972. However, the problem is difficult to solve because of various socio-economic and political factors. In table 8. several stakeholders that are working on the problems are enlisted.

Table 8. Overview of organizations working on welfare problems of captive bears in India. According to the parties working on them, the main strategies are numbered and mentioned within brackets ( 1., 2. and 3.)

NGO's	Governmental bodies	Funding parties
<p><b>ZOO Outreach Organization (1)</b> A conservation, research, education and welfare NGO.</p> <p><b>Wildlife SOS (2,3)</b> The aim of Wildlife SOS is to tackle the problem of illegal trade, and to confiscate and take care of the dancing bears.</p>	<p>Indian National Government (2,3)</p> <p>Uttar Pradesh Forest Department: Regional Forest Department (2,3)</p>	<p><b>One of the Funding parties of ZOO Outreach (1,2,3)</b> Alertis (Netherlands)</p> <p><b>Funding parties of Wildlife S.O.S (2,3)</b> WSPA (UK) International Animal Rescue (UK, USA) Free The Bears Fund (Australia) Care for the Wild International (UK) One Voice (France) Alertis (the Netherlands)</p>

**Strategies worked out by Alertis and partner organizations**

A contribution is made to the protection of the bears by educating children and informing the public in general. Also the establishment of a bear sanctuary and the generation of alternative incomes for the owners should contribute to this goal.

**Strategy 1. Education**

An educational project has been set up by ZOO Outreach Organization, which was developed since 1998. The aim of this project is to make schoolchildren familiar with the four bear species in their country and the threats they are facing. The project should also contribute to protection of the sloth bear by education and informing the public in general (ZOO Outreach, 2006).



### **Implementation**

In 2002, ZOO Outreach Organization developed a tool kit for the education of people in schools, musea and zoo's. This toolkit consists of educational material and material such as games, t-shirts, stickers and posters. An information package gives an explanation on the threats facing the brown bear, the sloth bear, the Asiatic black bear (*Ursus thibetanus*) as well as the Malasian honey bear (*Helarctos Malayanus*) (Alertis, 2004). Alertis still financially supports ZOO Outreach Organization with the continued existence of their educational program.

### **Strategy 2. Establishment of a bear sanctuary**

The organization Wildlife S.O.S. is working on the continued existence of a bear sanctuary. At the moment this organization develops a plan for education of the public and the establishment of a visitors centre. One of the most important aims of this project is to make the confiscation of bears possible by creating the necessary accommodation for them.

### **Implementation**

The Uttar Pradesh Forest Department has established together with Wildlife S.O.S India's first bear rescue sanctuary 'Agra bear rescue facility' in 2000. Today more than 180 sloth bears are located in this facility and will remain for the rest of their lives in this sanctuary (Wildlife S.O.S., 2006).

### **Strategy 3. Rehabilitation of the Kalandar people**

A rehabilitation programme is set up by Wildlife S.O.S. for creating alternative employment for the Kalandar people. An alternative income is important to reduce their dependency on the sloth bears and other wildlife that they poach and use for their livelihood. (Wildlife S.O.S., 2006)

### **Implementation**

A study was made by Wildlife S.O.S. on the needs of the Kalandar people as well as their preferences for alternative employment. With this study, the needs of the people become clearer. After confiscating the bear, the Kalandar signs an agreement with Wildlife S.O.S. that ensures the former owner will not use any wild animal in the future. The people are provided with help to find another source of income, so the bears are not needed anymore. An impact assessment provides regular update about the rehabilitation programme. Also an education programme is implemented. (Wildlife S.O.S., 2006)

### **Success of the strategies**

The education project of ZOO Outreach Organization has reached mainly schoolchildren. It is unknown how successful this project has been in spreading the conservation message to protect bears in India so far.

Wildlife S.O.S. has achieved concrete successes for captive bears with their projects. They confiscated almost 200 dancing bears that are now located in the established bear rescue sanctuary. The accommodations are well, but an expansion of the bear sanctuary is needed, which is expensive. In the mean time they have also successfully set up a rehabilitation programme for the Kalandar people. More than fifty Kalandars surrendered their bears and have chosen for rehabilitation. There are many examples of Kalandar people who have found alternative employment with help from Wildlife S.O.S. (Wildlife S.O.S., 2006)



### 2.8.2. Projects in Bulgaria regarding welfare of bears

#### Background

Until recent years, a large number of brown bears was exploited as dancing bears in Bulgaria. In 1998, about 25 to 30 bears were used for dancing performances. The dancing bear population was interpreted to be five percent of the total bear population of the wild (estimated at 600 bears). This percentage could be considered as a threat for the wild population, next to other threats to the brown bear (Van Dijk, 1998)<sup>1</sup>.

For years it has been illegal to trade bears or keep dancing bears in Bulgaria, but the lack of legal enforcement made it difficult to tackle the problem. The possibilities for control on the illegal trade in bears were lacking as well as the existence of penalties (Alertis, 2004).

Next to the above mentioned problems, several human-bear conflicts were reported throughout the country. Many herdsmen had problems regarding bears in the wild that attacked their herds of sheep. Due to this fact, a negative attitude towards bears was easily created.

The future of the brown bear population of Bulgaria is not ensured, like many other populations in Europe. It is unclear whether the population of bears in the country is decreasing or increasing. A management plan is needed for sound conservation of the species. Until a few years ago not much research had been performed on bear distribution in Bulgaria and human attitude. Much of the data needed to develop an action plan for the conservation of the species is still missing.

Table 9.: Overview of organizations working on welfare problems of captive bears in Bulgaria. According to the parties working on them, the main strategies are numbered and mentioned within brackets ( 1., 2. and 3.)

NGO's:	Governmental bodies:	Funding parties:
<p><b>Balkani Wildlife Society (BWS)(1,3)</b> A non-governmental nature protection organization working for the public benefit on study, conservation and restoration of flora and fauna of natural ecosystems.</p> <p><b>Semperviva (1,2)</b> A non-governmental organization that works in close cooperation with BWS.</p>	<p>Ministry of Agriculture (1,2,3) and Forestry</p> <p>Ministry of Environment and Waters (1,2,3)</p> <p>National Park Directorates (3)</p> <p>Nature Park Directorates (3)</p> <p>Regional Forestry Administrations (3)</p>	<p>Vier Pfoeten Brigit Bardot Foundation (1)</p> <p>Dutch government: Ministry of Agriculture, Nature and Foodsafety (Min. LNV) (3)</p> <p>Alertis (1,2,3)</p>

<sup>1</sup> The estimates were given by the Forestry departments and the Ministry of Environment and Waters.



### **Strategy 1. Registration of dancing bears, confiscation and accommodation**

The Bulgarian organization Balkani Wildlife Society (BWS) has set up a strategy for the registration of captive brown bears. Confiscation of the bears and the establishment of a bear sanctuary to accommodate them were made possible through fund-raising. The aim of the project was to solve the dancing bear problem and give a halt to illegal trade in brown bears. In this way the dancing bear problem would not be able to continue in future. The establishment of the bear sanctuary in Belitza gives accommodation to the confiscated bears. The sanctuary is an opportunity to raise awareness on the mistreatment of wild animals, especially of captive bears. It can also raise public awareness on wild bear populations and their habitat as well as promote the relationship between men and bears (Huber, 2004a).

#### **Implementation**

In order to reach a solution for the dancing bear problem, different steps needed to be taken. Since 1999, Balkani Wildlife Society (BWS) registered captive bears in cooperation with Alertis. The Ministry of Environment and Waters signed a special order for allowing these parties to register bears in captivity since 2000. From that year on, BWS has visited the bears regularly and has provided veterinary care. Since the summer of 2000 a national law for confiscation of the dancing bears was made. The law came into force on the 18<sup>th</sup> of July 2000 (Baars, 2001).

Since the autumn of 2002 the brown bear is a protected species according to the Bulgarian Biodiversity Act (Yordanova, 2003). The Austrian animal welfare organization Vier Pforten established a bear sanctuary, where the last remaining dancing bears were accommodated. In June 2004, the bear sanctuary was opened in Belitza. At the time of opening 13 bears were accommodated in Belitza, since than the maximum capacity of 25 bears was reached (Huber, 2004a). Today, the sanctuary attracts many tourists. BWS still performs here activities of control on the welfare situation of remaining captive bears, especially on bears that are badly accommodated in circuses (Yordanova, 2003).

### **Strategy 2. Diminish man-bear conflicts**

A completely different strategy is a strategy to reduce human-bear conflicts and by that increase the human attitude towards wild brown bears. A reintroduction program of special Karakachan dogs in Bulgaria for the protection of sheep and cows for wolf and bear attacks was started. This program is performed by the Bulgarian organizations Semperviva and Balkani Wildlife Society. Aim of the project is to prevent and reduce the negative interactions between men and bears by reducing the chance that bears come close to herds of sheep. Special dogs can scare the bears that come to close to the herds, in this way killings were prevented. (Alertis, 2004)

#### **Implementation**

The reintroduction program of the dogs started in 1997. Between 1997 and 2000 Semperviva and Balkani Wildlife Society have introduced 30 puppies to interested herdsman. Next to the placement, the organizations also give special training to the herdsman. Since 2002, Alertis supports the project for protection of the brown bear. With financial support another 10 puppies were placed in herds in different mountainous areas in Bulgaria. Also in the following years puppies were placed and the dogs that were placed earlier were checked for their health and overall behaviour. (Alertis, 2004)



### **Strategy 3. Development of a management policy for the brown bear in Bulgaria**

The Bulgarian government has to produce a management plan for the brown bear according to National and European legislation. This is recommended by “*the Action plan for the conservation of the Brown Bear (Ursus arctos) in Europe*” (Swenson *et al.*, 2000). The importance of such Action Plans for large carnivores at a Pan-European level is underlined by the Council of Europe through its Bern Convention’s Standing Committee (Sylvén and Urquhart, 2000). The project for the development of a management plan for Bulgaria is being developed by Alertis, together with the Bulgarian NGO Balkani Wildlife Society.

#### **Implementation**

A working group is formed, consisting of all the interest groups. This group is working on preparations of the management plan. For the preparations data are needed on the current distribution of the brown bear and the human attitude towards bears in Bulgaria. These data are derived from fieldwork and are worked out in a database, required to write a sound brown bear management plan. (Alertis, 2006b)

#### **Success of the strategies**

The dancing bear problem in Bulgaria has almost completely been solved, which was made possible by a better registration system (microchip system), an agreement with the ministry for a better control, as well as the establishment of a bear sanctuary where the bears could be accommodated. By now, with a few exceptions, no dancing bears are exploited in the country. This success has been achieved by a good cooperation between Alertis and her partner organizations. (Yordanova, 2003)

There also have been some difficulties during the management process. The Ministry of Environment and Water did not inform the respective Regional Inspectorates in time regarding the starting date of the project. This led to confusion and caused a delay in the initially time-schedules. The Ministerial order has not been published in a state newspaper. It was therefore hard to convince the owners of dancing bears it was obligatory to mark their bears. Ignorance of law and opposition on part of the owners made the purchase of the bears difficult. The existence of different bear passports also brought confusion to the owners. (Yordanova, 2001)

The reintroduction project of the Karakachan dogs has proven to be very successful. Despite of many attacks by bears and wolves, no sheep were killed between 1997 and 2000. In the same area without presence of the dogs, many sheep were killed in the same period. (Alertis, 2004)

The project for the development of a national management plan for Bulgaria has contributed to an important position of Balkani Wildlife Society in nature conservation issues. Because of the project, they have been formally appointed by the government to produce the national management plan. It is the first time that an independent NGO is considered to be a serious partner for the government. It seems that this project was planned at the right time for success: close to the admittance date of Bulgaria into the EU. Although the project has not finished yet, no problems in implementing the project plan has occurred. All interest groups work closely together on developing the management plan. The continuation of the project is guaranteed, because Alertis was able to obtain a new grant provided by the Dutch government. (Alertis, 2006b)



### 2.8.3. Projects in Croatia regarding welfare of bears

#### Background

The population of brown bears in Croatia is roughly estimated to a number of 400 to 800 individuals, due to lack of a precise measurement system (Dečak *et al.*, 2005). A large threat to the survival of the brown bear is illegal hunting (poaching). Also many bears die due to traffic. Year round, a number of 60 bears on average are being hunted and an equal number of bears die because of other reasons (Personal note by Ivan Crnkovic, Alertis 2005, non official numbers).

Due to these threats many young bears loose their mother. The young bears are not able to survive on their own, and without interference they usually die from starvation. Some of these young bears are taken care of by local people, such as a local organization in Croatia.

A comparable situation as Bulgaria can be seen in Croatia: not much research has been done to estimate brown bear distribution, and implementation of a management plan is needed. Also Croatia has future plans to access the European Union and is obliged to collaborate on a management plan for the brown bear.

Table 10.: Overview of organizations working on the problems in Croatia

Organizations:	Governmental bodies:	Funding parties:
<p><b>Velebitska Udruga Kuterevo (VUK) (1)</b> A small national organization working on the protection of (young) brown bears.</p>	<p>Ministry of Agriculture, Forestry and Water Management (2)</p>	<p>Alertis (1,2)</p>
<p><b>Large Carnivore Initiative of Europe (LCIE)(2)</b> The goal of this institute is to maintain and restore viable populations of large carnivores across Europe.</p>	<p>Department for Hunting Ministry of Culture, Department for Nature Protection (2)</p>	<p>EURONATUR (2)</p>

#### Strategy 1. Rehabilitation of young bears

A small organization in Croatia named VUK (Velebitska Udruga Kuterevo) aims to rehabilitate young bears in a natural situation. The project entails the maintenance a small scaled bear sanctuary for young orphaned bears 'Refugiu Ursorum Kuterevo' in Croatia. Educating the visitors is one of the most important aims. Also the management of the surrounding area is an important aim, emphasizing on a well established cooperation between foresters, hunters and village people. (Alertis, 2005)

#### Implementation

In 1999 the organization VUK was established, represented by people from the village as well as Ivan Crnkovic (initiator) and Djuro Huber (scientific advisor) (Alertis, 2005). The aim of VUK is to take care of orphaned bears. A bear sanctuary should make people aware of the problems and build awareness. The people in the village want to develop small-scaled (eco)tourism to be able to reach this goal. The initiator of the project aims to make visitors aware of the close link of the sanctuary for young bears and the natural habitat.



### **Strategy 2. Management plan for brown bears in Croatia**

The Ministry of Agriculture, Forestry and Water Management of Croatia, has created a brown bear management plan for the republic of Croatia together with the Department for Hunting and the Ministry of Culture, Department for Nature Protection (Dečak *et al.*, 2005).

#### **Aim of the management plan**

The management plan is the first document that gives guidelines for the protection of the brown bear in Croatia. The plan aims to be the basis for changes and improvements to existing legal frameworks that regulate protection of biodiversity, hunting and other important sectors. The aim is to bring together different interests such as ecological, economical, as well as social aspects, such as care for the safety of people. (Dečak *et al.*, 2005)

#### **Implementation**

The management plan is an active document that can be expanded when needed. The plan is based on ecological and scientific knowledge and is placed within present frameworks (legislative, administrative, cultural, economical and social frameworks) that are present in Croatia. It should give guidance in the decision-making process of experts but also other interest groups. International conventions, plans related to brown bear conservation and protection worldwide are taken into account. Yearly monitoring will be based on the management plan. (Dečak *et al.*, 2005)

#### **Success of the strategies**

In 2002 the bear sanctuary 'Refugiu Ursorum Kuterevo' was established and since then a few orphaned bears were taken care of. In 2005 many people visited the sanctuary: as many as 20,000 visitors came to the sanctuary. The visitors did not have to pay an entrance fee; the sanctuary depends on voluntary support. VUK argues that as long as the sanctuary stays small, there will be no negative financial consequences from the Government. The people from the village also argue that if the sanctuary would generate more money, the hunters in the region could feel threatened. (Alertis, 2005) Due to this problem, the continued existence of the sanctuary is not guaranteed. Advice is needed for the management of the sanctuary in future.

The success of the management plan has to become clear in the future. It seems that such a management plan will be a useful guideline for management experts, but also for representatives for all other interest groups, such as Croatian citizens, but also citizens of neighbouring countries as well as Europe and the world (Dečak *et al.*, 2005).



## 2.9. Concluding remarks

The literature study described several topics important for management of welfare problems of captive brown bears in Europe. Estimates on population numbers of wild brown bear populations in Europe are many times uncertain. The rough estimations often make it hard to define if populations can be labelled as viable populations or not. Threats to wild brown bear populations and current (inter)national legislation were discussed as well. Enforcement of already existing treaties, such as effective implementation into national law, should be controlled more strictly in future. Next to that, the legal status of brown bears kept by private persons is not described specifically into legal frameworks and needs consideration. A number of subjects need emphasis in legislation, most importantly the development of specific international welfare living standards for captive brown bears and law enforcement.

Several projects exist in Europe that have the aim to ameliorate welfare living conditions of captive brown bears, and find a sustainable solution for the welfare problems. When problems are complex, it is not easy for NGO's and governmental bodies to find such solutions, and management strategies that are needed. The manual developed in this report aims to give advice how to investigate main problems and detect suitable strategies. It gives advice for the management process, especially for the first steps of management.

The need for advice from parties concerning management of captive brown bears highlights the importance of a manual for guidance. Up to today, no manual has been developed that guides parties in the management process of handling welfare problems of captive brown bears. In this study a manual is developed to give an answer to this need (chapter 3). It can be used as a guideline for primarily NGO's to find suitable management strategies to handle welfare problems of captive brown bears.

An example of a current running project is the captive bear project in Georgia, South-eastern Europe. In chapter 4 this case study is described. Because of complexity of the problems, there is a need for advice on management subjects in the country. The developed manual is applied on the case study, to test its usefulness.





## **PART II. MANUAL**

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### **3. Manual for the management of welfare problems of captive brown bears (*Ursus arctos*)**

#### **3.1. Introduction**

*This manual aims to serve as a guideline for non-governmental organizations as well as governmental bodies that are working on welfare problems related to captive brown bears. The manual gives suggestions on how to investigate and assess welfare problems of captive brown bears, as well as subjects that are closely linked. Next to that, possible strategies that can be used to handle welfare problems will be given in order to guide in a management design. It must be noted that this manual is meant for general use: it should be applicable to many cases. Therefore this manual is not a cookbook-like collection of management options, but it aims to guide in the most important steps that need to be taken in the first phases of management.*

#### **3.2. The management process: different steps**

A variety of approaches can be used, when making resource management decisions. These approaches can involve different levels of political concern, historical priority, priority on data analyses and evaluation. Stakeholders that manage welfare problems of captive brown bears, such as non-governmental organizations, have been using such a variety of approaches in the past. As described in the literature part, the management of the captive brown bear problem in Bulgaria prioritized data analyses and political concern, while in India the social concern (livelihood of the owners) was regarded as a more important subject.

Every organization employs a specific repertoire of management. A non-governmental organization focuses on specific aims of the organization itself, the implementation of management strategies and the evaluation process. Their actions often aim to influence governmental bodies. However, governmental bodies have developed their own management process as well. Every organization or governmental body has its own goals as well as specific management process.

Despite of these differences in characterization, the general management process consists of several important steps. The most important steps to be taken within the management process are as follows:

- Definition of the problems and aims.
- Analysis of the problems. An assessment of the problems should be included in which the most important problems become clear.
- Survey of options.
- The management design. Strategies/ actions to be taken are formulated.
- The implementation of the management design.
- Monitoring of the implementation and the results.
- Evaluation of the results to review management outcomes.



During the management process adjustments need to be made constantly to be able to develop the most suitable management strategy. The most obvious example of this constant process of adaptation is the interaction between design and implementation of the management plan. In figure 1. a schematic overview is given of the whole management process.

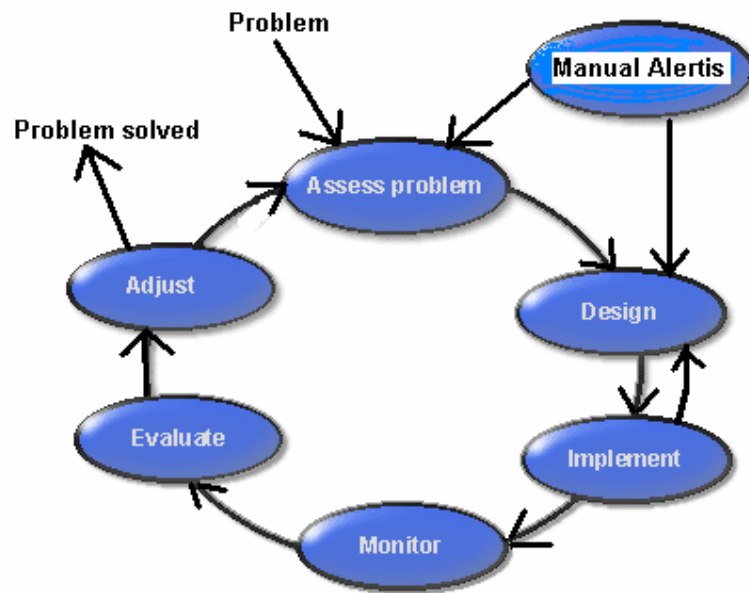


Figure 1. : Schematic overview of the cycle of the management process and the position of the manual.

### 3.2.1. Role of the manual in the management process

The manual developed in this report guides through the first steps of the management process: analysis and assessment of the problems and the management design. It is meant as a guideline for non-governmental organization(s) as well as governmental bodies facing problems regarding the management of welfare problems related to captive brown bears. It is assumed that problems regarding the welfare situation of captive bears are present in the country, and parties aim to solve these problems entirely. The use of such a manual by non-governmental organizations can be efficient and effective, because information from many sources is gathered and information can more actively be exchanged between groups.

The first part of the manual indicated as ‘survey’, gives suggestions for the analysis and assessment of the problems. The second part of the manual ‘strategies’, aims to give advices for the management design and implementation of the strategies. In figure 1., a general management cycle is shown with the position of the manual.

It should be noted that the manual itself only gives advice for these specific management steps. As explained before every organization has its own way of managing a problem, though it will be advisable for an organization to review its own management process and learn from projects performed in the past.



### 3.2.2. Traditional versus adaptive management

The management design and implementation phase of management are often the most complex processes and need to be considered carefully. Decision-making approaches are important to be considered (Johnson, 1999). These approaches can make clear the way in which management decisions can be made.

An adaptive management approach seems most suitable for management of welfare problems related to captive brown bears. In general, these problems are complex and many interest groups are involved. Participation of interest groups is important for a successful design of the management and an effective implementation process. It should be kept in mind that generated knowledge from operative or past management programs can be useful for the management process.

In the achievement of solutions for complex problems, traditional decision-making approaches have been fairly successful in addressing relatively straightforward problems. However, when more interest groups increase their demand on a certain system, the successes may be put in danger (Johnson, 1999). In the traditional approach there is no requirement to learn or adapt, because it often emphasizes the way things have been done in the past. This is often used as a reason to manage them that way in the future. This traditional approach is comparable to the so-called blueprint approach, which can be described as a set of definite choices of worldviews and power relations. It is based on strategic planning. (Pimbert and Pretty, 1997)

On the other hand, adaptive management implies working toward consensus of all the relevant stakeholders and has the flexibility to do things differently if past management did not work (Lee, 1993). This adaptive approach can also be labelled as a process approach, which is focussed on participation (Pimbert and Pretty, 1997).

In summary, adaptive management encompasses a learning process and is adaptive to the specific circumstance. It is important to see that management policies are experiments; we have to learn from them (Lee, 1993). The overall goal of adaptive management is to develop an optimal management capacity. It tries to incorporate the views as well as knowledge of all interest groups. Adaptive management tries to understand the potential trade-offs among interest groups under different management plans. Innovative approaches and “win-win” situations should whenever possible be generated.

In order to achieve this ideal situation, a management plan is usually developed by the stakeholders that will help to meet management goals. The management plan is implemented along with a monitoring plan, to analyze new data and revise management plans. (Johnson, 1999)

This management approach gives many advantages, but it requires considerable time and money to organize workshops for interest groups, develop models, and monitor the effects of management. However, it is important to realize that this approach can lead to more effective management of complex problems, and can in this way be cheaper in the long term. (Johnson, 1999)



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### 3.2.3. Welfare problems and their assessment

In the survey included in the first part of the manual, welfare problems of captive brown bears are the main subject. Although these problems have focus, strongly related problems such as deprived livelihood of the owners or failure of legal enforcement are listed too. As explained in the literature part, illegal hunting (poaching) is an important problem to address for interrelation with captive bear problems in most cases. Welfare problems related to brown bears have to be seen in a much broader context than solely the welfare situation of the individual brown bear. The total population of brown bears in the wild needs to be considered and all important interest groups need to be included to achieve consensus in the management of the welfare problems in future.

The manual created in this report is applicable to many cases. Specific welfare problems in each country can have a different degree of importance dependent on organizations working on them and general public opinion. It is up to non-governmental organizations and governmental bodies to define problems that are most important to handle.

In paragraph 3.4. all problems that may reveal from the survey are listed together with suitable strategies, to facilitate an assessment of the problems. Within the adaptive management context used in this report, assessment of these problems is important to determine which problems are most urgent. After this assessment, management strategies that are most suitable can become clear (paragraph 3.5.).



### 3.3. Survey: welfare problems of captive brown bears

*This first part of the manual, survey of welfare problems of captive brown bears, consists of a step-by-step questionnaire, in which information from different stakeholders is needed. The questions are accompanied by suggestions, which are highlighted in the text boxes at the end of each subject. In the survey it is indicated whether the questions concern individual bears, the total population of brown bears, or certain human interest groups. Participation of these groups and the empowerment of them are important elements throughout the process of creating a management plan (Hofer and Promberg, 1998).*

*The questionnaire is accompanied by suggestions that aim to facilitate the realization of the survey. The questions may reveal problems, which are stated in table 11. in the next paragraph. An assessment of these problems aims to facilitate the next step: development of a strategy to handle the problems.*

#### 3.3.1. Outline of the survey

The first part of the manual consists of seven main subjects:

1. An investigation on the current **legal status of the brown bear and law enforcement** in the country can make clear problems that may be present in the legislation framework. The information generated can reveal what possibilities there are for implementing a strategy concerning legislation.
2. Information about **status of wild populations/ illegal trade** should make clear what the relationship is between the captive bear problem and the situation of bears in the wild.
3. An investigation on **the current situation of captive brown bears** is important for gathering information about the magnitude of the problems and can generate necessary information about condition and history of the bears.
4. The next questions focus on **the owners of the captive brown bears**. In past projects supported by Alertis, it became clear that without support of the owners and knowledge about their interests no real improvements could be achieved in the situation of the captive bears. Therefore it is important to consider the owners' situation carefully.
5. A survey on **public awareness and opinion** should reveal the magnitude of public awareness about captive bears.
6. Specific questions about **groups working on the problems**, aiming to improve welfare status of captive brown bears, are important to be dealt with. In this part all groups working on similar problems should be enlisted.
7. Finally, if confiscation of brown bears is found to be a suitable strategy, a survey on **feasibility of confiscating brown bears and their possible placement** can make clear if this strategy is achievable in future.

*NB: This manual can always be supplemented with more information that becomes available in future.*



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## Manual part 1. Survey: welfare problems of captive bears

*This first part of the manual consists of different subjects that have proven to be of importance in many cases according to the literature study. Each topic is split up in sub-topics, together with several questions to be answered.*

### 1. Legal status and law enforcement

This first subject of the survey deals with legal issues concerning the legal status of wild brown bears as well as captive bears. Important stakeholders include ministries as well as (international) non-governmental organizations that can provide information on legal subjects.

#### **Legal status of brown bears in general in the country:**

- 1.1. What legal status do brown bears have in the country?
  - 1.1.a. Is the bear in the country a protected species/ game species/ or does the species have another legal status?
  
- 1.2. What international treaties concerning the legal status of brown bears are adopted in the country?
  - 1.2.a. Are the treaties effectively implemented in national legislation?
  
- 1.3. Are there any management plans present that concern the legal status and protection of (captive) brown bears?
  - 1.3.a. What legislation is the basis of this management plan?
  
- 1.4. What legislations can be improved in order to enhance the conservation status of the brown bears?

#### **Presence of a legal framework concerning the welfare status of captive brown bears:**

- 1.5. What national legislations that concern the welfare situation of captive bears do exist in the country? Give a description of them and of usefulness.



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**Future plans for implementation of legislation concerning the status of the brown bear:**

- 1.6. How can the political situation regarding nature conservation and animal welfare in the country be described?
- 1.7. What are concrete plans for implementations of new laws or adjustments to legislation, relevant for captive brown bears or illegal trade and poaching?

**Effectiveness of law enforcement in the country:**

- 1.8. Who are legally responsible for law enforcement necessary for control on any captive brown bear problem?
- 1.9. What are activities of state agencies that have been undertaken in the past to enhance law enforcement regarding the captive brown bear problem?

**Suggestions:**

-Problems that are important to consider in the management process are enlisted in table 11 (problems 1 to 3).

-Information about legal issues is needed from **governmental bodies** (national or regional government) as well as from international commissions and environmental organizations.





## 2. Status of wild populations

The captive brown bear problem may have a close link to illegal capture. Often cubs are taken from the wild. This type of poaching can have an impact on wild brown bear populations, because the mother bears are killed. The following questions concern the population of captive bears as well as the wild population.

### Effects of captive brown bear problems on wild populations:

- 2.1. How many bears are captured from the wild in order to use them for the purpose of entertainment of people?
- 2.2. What are the methods used for capturing wild brown bears?
- 2.3. What effects have been reported of capturing brown bears from the wild on the wild brown bear population?
  - 2.3.a. How reliable are these estimates?
  - 2.3.b. If bears are caught in the wild, are numbers going up or down?

### (Illegal) trade in captive brown bears and poaching:

- 2.4. What is known about (inter)national trade in brown bears in the country?
  - 2.4.a. Are animals legally available for sale in the country?
  - 2.4.b. What is the monetary value of the bears in question?
- 2.5. What national legislations are taken into force to control the illegal trade and poaching of brown bears?

### Suggestions:

-Problems that are important to consider in the management process are enlisted in table 11 (problems 4 to 5).

-**Information** needs to be obtained from the responsible ministries, game wardens, foresters and from the CITES database or other environmental organizations working on the problems.

-Contact a **CITES office** to report when any new information is found about illegal issues.



### **3. Current situation of captive bears**

This subject focuses on the group of captive brown bears that is located in the country. Information is needed from the situation of individual captive bears, to be able to answer the questions.

#### **The number of captive brown bears in the country:**

- 3.1. What is the estimated number of captive bears in the country?
  
- 3.2. Is there a registration system present?
  - 3.2.a. How well does the registration method work?

#### **Location of captive brown bears:**

- 3.3. Where are the captive bears located?
  
- 3.4. Are the captive bears located close to trade markets?
  - 3.4.a. Where are these trade markets?

*N.B.: The following questions need to be answered per individual bear*

#### **History of the individual captive brown bear:**

- 3.5. Is the bear bred in captivity or caught in the wild?
  - 3.5.a. If caught in the wild, was this within the country or abroad? Give exact location.
  
- 3.6. Are there documents available that clarify legal ownership of the captive bear (CITES or other official documents)?

#### **Health status of the individual bear:**

- 3.7. Does a first (veterinary) screening show that the bear is physical healthy?
  - 3.7.a. What are health problems/ diseases of the bear?
  - 3.7.b. What kind of injuries does the bear have?
  
- 3.8. Is the bear psychologically healthy?
  - 3.8.a. Is the captive bear displaying stereotype behaviour/ other signs of distress?
  - 3.8.b. Is the captive bear displaying lethargy/ limp behaviour?



**Needs of the captive brown bear:**

- 3.9. Does the enclosure meet the requirements of brown bears?
- 3.9.a. How large is the enclosure? Is it large enough to stimulate natural behaviour?
- 3.9.b. Is there any type of enrichment offered to the bear in the enclosure such as straw, trees or climbing frames, stimulation of foraging and feeding behaviour?
- 3.9.c. Is there a place for the bear to 'hide' / 'to be not seen'?
- 3.9.d. What diet is given to the bear?
- 3.9.e. Is there enough fresh water available?
- 3.9.f. Is there any shade available?
- 3.9.g. How often is the cage cleaned?

**Age and sex of the captive brown bear:**

- 3.10. What is the sex of the captive brown bear (male/female)?
- 3.11. What is the age of the captive brown bear?

**Safety situation of the cage:**

- 3.12. Has the owner of the captive bears taken security rules for the public into account?
- 3.12.a. What is the distance of the cage to the public?
- 3.12.b. Is the public able to touch the bear?
- 3.13. Were there incidents in the past when the captive bear has injured spectators?
- 3.14. Is the cage providing a safe environment for the captive bear or are there chances for injury?

**Suggestions:**

-Problems that are important to consider in the management process are enlisted in table 11 (problems 6 to 8).

-**Advertisements** in (regional) newspapers can serve as a tool to inform people about the problems and may ask for known locations.

-Contacting tourists through **flyers** handed out at airports and distributed to tourist agencies, can also request people to help with finding locations.

-A team that consists of at least a **(native) person and a specialized veterinarian**, appointed to visit the bears and the owners, is of importance to generate information on the history and health status of the bears in captivity.

-All answers on the questions should be registered in a **data base** according to the strategy "*Establishment of a bear registration system*". See annex 2. for a working document.



#### 4. Situation of the owner of the captive bear

Details from the owners of all known captive bears that are located in the country are needed in order to create an overview of the locations of captive brown bears as well as for their socio-economic importance.

##### Details of the owner of the bear:

- 4.1. Who is the owner of the bear and what are his contact details?
  
- 4.2. Where was the bear bought in the past?
  - 4.2.a. From who was the bear bought?
  - 4.2.b. Was the bear caught from the wild? Give the exact location.

##### The social and economic function of the captive bear:

- 4.3. What social group is the owner part of?
  
- 4.4. For what reason(s) is the bear kept?
  
- 4.5. Is the owner financially dependent on the captive bear?
  - 4.5.a. Does having a bear represent any commercial value and does it exceed its living expenses?
  - 4.5.b. Is the owner supportive to earn an alternative income?

##### Suggestions:

-A problem that can be important to consider in the management process is enlisted in table 11 (problem 9).

-A (native) person, appointed to visit the owners, is of importance to generate information.

-A **social survey** can investigate the interests of the owners as well as their dependence on the bears more thoroughly.

-All answers on the questions should be registered in a data base according to the strategy "*Establish a bear registration system*". See annex 2.



## 5. Groups working on welfare problems

Usually, several stakeholders are working on welfare problems related to captive animals. They may have different focal points or have different opinions about possible solutions. However, cooperation between non-governmental and governmental bodies should be looked at, in order to work efficiently and achieve in an effective way solutions to problems.

### Organizations working on welfare problems:

*N.B.: The working document listed in annex 1. can be used to create an **overview** of the groups working on the problems and their problem perspectives.*

- 5.1. Which organizations are working on welfare problems related to captive brown bears? Specify the level (regional/local, national, international)
- 5.2. Since when are they working on the problems?
- 5.3. What are their goals?
- 5.4. What issues do they agree upon? What issues do they disagree upon?
- 5.5. Which groups work together on what issues?
- 5.6. What strategies or activities have been initiated by which groups?
- 5.7. What positive and negative results have been achieved so far?
  - 5.7.a. What were successful and failing strategies?
  - 5.7.b. What difficulties have been encountered?
- 5.8. What cooperation possibilities are there between different interest groups?

### Suggestions:

-A problem that can be important to consider in the management process is enlisted in table 11 (problem 10).

-A planned **meeting for interest groups** that aim to cooperate should make clear the activities performed in the past and future aims. A detailed report of the meeting including the aims, results to be obtained etc. should be written.

-In a meeting in a later phase, draft **strategies and action plans** should be discussed and further developed.



## 6. Public awareness and opinion

Public awareness and opinion about the situation of captive brown bears and problems, are important subjects to deal with. A positive public attitude is needed in order to achieve a long term solution for existing welfare problems. When in future people refrain from visiting sites where captive bears are kept, positive developments may be achieved.

### Public awareness of welfare problems of captive bears:

- 6.1. Is the general public aware of any welfare problems related to captive brown bears in their country?
  - 6.1.a. What indicates public awareness?
  
- 6.2. Is the general public aware of the suffering of the animals and the (illegal) status of the practice?
  - 6.2.a. What indicates public awareness?
  
- 6.3. Do people intentionally go to places where captive bears are kept (petrol stations, restaurants etc.)?
  - 6.3.a. What indicates these intentional visits?
  
- 6.4. How do people behave when visiting such a place?

### Public opinion about brown bear conservation:

- 6.5. What is the public's (general) opinion towards brown bears:
  - a. in the wild?
  - b. in captivity?

#### Suggestions:

-A problem that can be important to consider in the management process is enlisted in table 11 (problem 11).

-A social survey that investigates the opinion of local people is useful.

The performed investigation in Bulgaria or Croatia may be used (Balkani Wildlife Society, 2005; Dečak *et al.*, 2005).



## 7. Feasibility of confiscating and accommodating captive bears

Often it is not clear in advance if it is feasible to confiscate the captive brown bears and accommodate them in another place, such as a zoo, bear sanctuary etc. A survey on the feasibility is needed to show what the possibilities are.

### Chances for successful confiscation of captive brown bears:

- 7.1. Does the law provide in confiscating captive brown bears?
  - 7.1.a. If yes, describe the law and relevant articles
- 7.2. If confiscation is legally admitted, how many captive brown bears have been confiscated in the country in the past?
- 7.3. Were fees paid as a compensation for the confiscation of captive brown bears in the past?

### Availability of space that offers benefits for the captive bears for the short and longer term:

- 7.4. Which options are available in the country for placement of confiscated brown bears (public or private facilities, sanctuary to be build in future)?
- 7.5. Which options are available for placement abroad?
- 7.6. When several options exist, what option is most optimal for bears in captivity as well as the population as a whole?

### Suggestions:

-A problem that can be important to consider in the management process is enlisted in table 11 (problem 12).

-Ask experts for advice on specific information on the establishment of bear sanctuaries.

Examples:

- Zoological Society/ EAZA Bear TAG ([www.eaza.net](http://www.eaza.net))
- Experts from the IUCN Species Survival Commission ([www.iucn.org/themes/ssc/](http://www.iucn.org/themes/ssc/))
- Bear Specialist Group ([www.bearbiology.com](http://www.bearbiology.com))
- NGO's working on similar projects, such as Alertis ([www.alertis.nl](http://www.alertis.nl))



### 3.4. Assessment of the problems

*When having collected sufficient information to answer the questions of the survey, it is important to know what problems have priority. An assessment of these problems is needed to show their importance for the management process. This assessment is specifically needed for the design of a strategy to manage the problems. Specific strategies will be described in the next paragraph.*

An overview of the problems is given in table 11, which aims to facilitate an assessment. In the first column main problems are enlisted, in the second suitable strategies, and in the third column stakeholders that may be involved. According to the answers given in the survey, the importance of the problems for the management process should be validated by weighting the presence of the problems.

An example of weighing that can be used is provided in the case study in chapter 4. This weighing can be provided by estimating the importance of the problems. The weighing can consist of a simple division of the problems into the categories very important problems (++), important problems (+), more or less important problems (+/-) or not important problems (-) (see table 11.). This division should be discussed with relevant stakeholders.





Table 11.: List of specific problems, strategies to solve them and the main stakeholders that are involved.

Specific problem	Strategies	Stakeholders
1. National legislation is not effective or not present.	1. Adjustments to national legislation.	-National government and Parliament -NGO's
2. International obligations are not effective or not adopted.	1. Adjustments to national legislation.	-National government -International commissions/NGO's
3. No effective law enforcement.	2. Law enforcement.	-Responsible governmental bodies -NGO's
4. Negative effects on wild populations.	1. Adjustments to national legislation. 2. Law enforcement.	-Responsible ministry, -game wardens and foresters -CITES and NGO's
5. Existence of (illegal) trade of brown bears.	1. Adjustments to national legislation. 2. Law enforcement.	-National government -CITES/ NGO's
6. Possible closeness/ connection to (illegal) trade.	1. Adjustments to national legislation. 2. Law enforcement.	-National government -CITES/ NGO's
7. No (good working) registration system present.	4. Establishing a bear registration system.	-Governmental bodies -CITES/ NGO's
8. Condition of enclosure is insufficient/ existence of unhealthy captive brown bears	5. Improving living conditions of the captive bears. 8. Confiscation of brown bears. 9. Establishing a bear sanctuary for the short and longer term / 10. Placement of bears elsewhere.	-Owners of the bears -NGO's
9. Owners are (financially) dependent on the captive bears.	6. Informing and rehabilitating the owners.	-Responsible governmental bodies -NGO's
10. Cooperation is lacking/ Capacity problems	3. Support and cooperation needed.	-Responsible ministry -NGO's
11. Public awareness is not present.	7. Public information strategy.	-National government -NGO's
12. Absence of a (bear) sanctuary.	9. Establishing a bear sanctuary for the short and longer term / 10. Placement of bears elsewhere.	-National government -Local government -NGO's
13. Other problems	Depends on problems	Depends on problems



### 3.5. Strategies to solve welfare problems of captive bears

*This second part of the manual describes elements of strategies to manage welfare problems related to captive brown bears. First a list will be given with the most important problems that need to be solved. General aims and prior conditions are given that are important to keep in mind while developing a suitable strategy to handle welfare problems related to captive brown bears. International Conventions as well as the “IUCN Guidelines for the Placement of Confiscated Animals” are considered.*

*With this second part of the manual a number of possible strategies is given that fits within these general aims and prior conditions. The strategies are interrelated to the first part of the manual: the survey of the problems. The strategies are also based on lessons that have been learned in the past.*

#### 3.5.1. General problems

Important lessons can be learned from operative or past performed management strategies that aim to solve welfare problems with captive brown bears. A variety of management options have proven to be successful in several cases. In the most successful cases, the approach of the management strategy has been from a resource management perspective. Ecological, but also economical, social and political factors should be considered within the decision-making process. For example in several cases in literature it revealed that owners depend for their livelihood on captive bears. An obvious strategy to solve this problem is the creation of alternative income for the owners of the bears, to make a sustainable solution for the problem possible. In several cases efforts should be made to diminish illegal hunting and illegal trade and to enhance public awareness about the problems. The twelve problems mentioned in table 11. can be categorized in seven main problems. The literature study revealed that main problems that need to be handled in most cases are:

1. **Legal status of captive brown bears/ wild populations.** The legal status of bears in the country is often not clearly embedded in national legislation or is lacking.
2. **Law enforcement.** Law enforcement, necessary for effective implementation of legislation, is insufficient or lacking.
3. **Cooperation is lacking/ problems with capacity are present.** Capacity of NGO's is insufficient to be able to deal with the problems themselves.
4. **Living conditions of the captive brown bears.** The animals are usually subject to impoverished living circumstances. Finding an alternative placement for the bears in question is often time-consuming or even not feasible in the short period.
5. **Livelihood of the owners of the captive brown bears.** The owners of the bears may need an alternative income when the bears will be confiscated. The absence of willingness of the owners can be a difficult problem.
6. **Finding suitable placement/ establishing a bear sanctuary.** This process can be time consuming and costly. Support is needed from governmental bodies, NGO's and experts.
7. **Public awareness and opinion.** Often the general public is not aware of the welfare problems. Next to that, some groups may not be willing to change their attitude.



### 3.5.2. Specific problems

Next to the above mentioned general problems, specific problems in the particular country can be of importance for the development of a strategy to handle welfare problems related to captive brown bears. National policy and ecological and socio-economic situation of the country need to be taken into account throughout the management process. Table 11. should help to detect these specific problems. For example social, economical or political problems specific for the country can impose a strong impact on the implementation of the strategic part of the management. These specific problems also have to be considered to make the management work effectively. The survey and the evaluation part can help to determine these specific problems.

### 3.5.3. General aims

The general aim to solve welfare problems of captive bears is to find a sustainable solution that maximizes the welfare situation of the captive brown bears, as well as the conservation status of wild brown bear populations. This aim is in accordance with international guidelines. The term sustainable is used in the following context: *by managing the species in a sustainable way the species will not be threatened in future, yet the management will optimize benefits to both the environment and human needs. This is an important conservation tool when trying to find solutions for the increasing human pressure on nature* (IUCN SUSG, 2006). This not only means that solutions for the welfare problems concerning captive bears are important, but that also a solution should be found for people that are directly involved.

The Parties to the CITES Convention have created and adopted guidelines for disposal of confiscated live specimens of species included in the appendices (resolution Conference of the Parties 10.7) (CITES, 2006). The guidelines of IUCN complement those drawn up by CITES (IUCN, 2002). According to the *IUCN Guidelines for the placement of confiscated animals* (2002), the ultimate decision on placement of animals must achieve three main goals. This decision has to fit within the conservation context of the species. The three main goals are enlisted in table 12.

Although the abovementioned guidelines are relevant for confiscated animals, they are implemented in this manual in a broader context. This manual embraces the management of the population of captive bears of any particular case.

Table 12.: Main goals of the “IUCN Guidelines for the placement of confiscated animals” (IUCN, 2002).

1. The **conservation value** of the captive as well as the wild population should be maximized, without endangering the health, behavioural repertoire, genetic characteristics and conservation status of the animals.
2. Further **illegal trade or hunt for the species will be discouraged.**
3. A **humane solution** has to be provided, whether this involves employing euthanasia on the animals or maintaining the animals in captivity (IUCN, 2002).



The list of possible strategies presented in this manual to handle welfare problems of captive brown bears, are attempted to fit within the above mentioned guidelines of the IUCN as much as possible. The aims described in the IUCN guidelines are general ones that fit within the international framework of species conservation. It should be noted that the goals for animal welfare present in the national framework of the specific country can differ from the main goals described above.

Re-introduction of captive bears back into nature is not suggested as a general aim in this study. Many experts have the opinion that bears that are habituated to people can come in conflict with humans. According to Kolter and Van Dijk (2005) these conflicts can be a likely consequence of re-introduction, once bears are fed by humans or gain ready access to human foods or domestic livestock under the wrong conditions.

#### **3.5.4. Prior conditions for the development of a strategy**

When trying to achieve the above mentioned goals, a complexity of problems is encountered. The situation of captive brown bears, bears in the wild, as well as livelihood of the people should be improved in a sustainable manner. Current and future developments (such as dynamic political factors) need to be taken into account and illegal hunting and trade have to be counteracted. In this way the chance of continuation of the situation will be diminished. The potential to encourage undesired trade with transfer of bears should be considered. As described by the IUCN guidelines (2002), the payment of fees to owners can be problematic, because it may create a public perception that poaching is awarded.

A prior condition is that the above mentioned problems are addressed very carefully in the management process, to diminish negative impacts on the conservation value (impact on wild populations) of the brown bear. Another prior condition is that continued suffering of the individual animal should be prevented and diminished. If the circumstances under which the bears are kept are very poor and immediate placement of the bears elsewhere is not possible, efforts should be made to improve living conditions of the bears in the first way. Giving first aid to captive bears should have priority. A long term solution for the welfare of existing captive bears should be made possible, such as the establishment of a bear sanctuary.

Most important is to develop such a strategy that bears are only kept in captivity if certain conditions are met. These conditions should be strictly embedded in international standards for keeping animals and enforced in a determined and effective manner into national law. In this way private people will refrain from keeping bears in future.



## Manual part 2. Strategies to solve welfare problems of captive bears

*This second part of the manual consists of several strategies, categorized in different subjects. Each strategy consists of management actions which can be implemented by NGO's, working together with governmental bodies on specific welfare problems of captive brown bears. Which actions are most suitable to be implemented will depend on the specific situation.*

### Strategy 1. Adjustments to national legislation

The information that is generated with the survey may reveal that national legislation needs to be adjusted. National law may not be described concretely enough, or international obligations are not translated into national legislation. When it is revealed that such problems are present, the following actions should be considered.

#### Action 1. Improve national legislation

Try to adjust legislation to the specific problems that occur in the country where welfare problems are present. The importance of national legislation needs to be discussed with the national government and the Parliament. Try to get clear which governmental body takes the responsibility for legislation and is able to take action.

#### Action 2. Explore possibilities for implementation of international treaties

Find out which international treaties are adopted by the state and in what way they are implemented in national legislation. Look for possibilities for further and more effective implementation into national legislation and discuss them with the national government and Parliament. Also explore the possibilities for the adoption of other suitable international treaties.

#### Suggestions:

-An **action plan** should be created together with the national government in which future implementations into national legislation or future adoption of treaties are described.

-A **memorandum of understanding** can be proposed to the responsible governmental parties. This memorandum should describe exactly what needs to be done in order to achieve improvements of national legislation. It also states who are contact persons and makes a link to an action plan.

-Regular **meetings** with responsible governmental bodies should make clear the duties of all parties involved. A memorandum of understanding can be made in order to achieve this goal.

-Look at suitable regulations in legislation in other **European countries**.

-Ask the **IUCN Species Survival Commission/ Council of Europe/ International Bear Association** for advice on legislation topics.



## Strategy 2. Law enforcement

To prevent further illegal practices in future, law enforcement is an important subject to address. Cooperation with responsible governmental bodies, as well as other non-governmental organizations will be essential in order to achieve this goal. If no effective measures are taken to make national legislation work, or when these measures are not present at all in the legal framework, the following actions need to be considered.

### Action 1. Implement stricter controls

Try to achieve strict law enforcement in order to reach the goals described in national legislation and/or management plans. Stimulate responsible parties in order to achieve this goal. Assign a memorandum of understanding together with the responsible parties in which concrete actions are described, in order to improve law enforcement. An example of law enforcement is the stricter administration of punishments.

### Action 2. Responsibilities

Make sure that a governmental body/ organization or a certain person will receive an explicit inspection function to control law enforcement.

### Action 2. Establish an anti-poaching unit

The establishment of an anti-poaching unit can help to combat illegal practices, such as the illegal hunting of the brown bear. Strong cooperation with for example environmental inspectorates is essential.

#### Suggestion:

-Approach **political parties** to approach the **Parliament** and ask questions about illegal activities.

-An example of an **anti-poaching unit** is the team created by Wildlife S.O.S. in India or “the Red Wolf team”, an anti-poaching patrol team in Russia ([www.phoenix.vl.ru/zoom/redwolf.htm](http://www.phoenix.vl.ru/zoom/redwolf.htm)).

-Illegal activities can be brought in the **news**. Try to reach the press in order to perceive public awareness on this subject. Contact local new papers, magazines or television stations.



### Strategy 3. Support and cooperation needed

When it becomes apparent that there is only a single organization working on the problem, collaboration is lacking, there is financial shortage, or governmental bodies do not support the necessary actions, the following actions should be considered for a successful performance of the strategies.

#### Action 1. Cooperate with (international) NGO's and experts

Try to find assistance in the identification, care and screening of the captive brown bears. For the development and performance of important strategies, such as the establishment of a bear sanctuary and the development of an information campaign, support is needed. Try to find financial aid as well as consultancy for assistance in the management process.

#### Action 2. Cooperate with governmental bodies

Ask for support at responsible governmental bodies for the specific actions that need to be taken. Try to make these actions clear with a letter for support from the responsible body and make it public through a (news) state paper. Consensus with the responsible governmental department is important for support on actions that are ready to be accomplished by the project team, such as the registration and confiscation of captive brown bears.

#### Suggestions:

-**Fund-raising activities** should be initiated (see: Promberger, 2001).

-**International foundations/ organizations** such as IFAW, WSPA, WWF, IUCN, IBA, Alertis can be asked for support and advice.

-Important **international governmental programmes** may give assistance in financial terms: UNEP, European Union, the World Bank, other governmental bodies. Most programmes require fairly large investments (months of preparations) (Promberger, 2001).

-A **workshop** with all parties involved should be organized to exchange ideas and to strive for cooperation.



## Strategy 4. Establishing a bear registration system

When the problem arises that there are no data present on the number of captive brown bears and their situation, this strategy is an important subject to address. The following actions give some indication how to set up a bear registration system.

### **Action 1. Register captive brown bears by a microchip system**

Use a microchip system for the registration of captive brown bears. With this registration system illegal trade is prevented, because the animals can be detected everywhere and important information of the bear can be checked. In this way a better control over the trade and traffic of brown bears specimens in captivity can be achieved (Yordanova, 2001).

### **Action 2. Establish a project team to mark the captive brown bears**

Train a project team to perform the registration procedure of the captive brown bears. A veterinarian is needed to determine the health situation of the captive brown bears. During the registration important data about the health of the bears have to be collected. An example of a health check list can be found in annex 2.

### **Action 3. Establish a data base system**

Develop a data base system for registration of all data concerning the captive brown bears and their owners. Also information about the health situation should be included (see strategy 5). This database can be completed during the process of registration.

#### **Suggestion:**

-An example of a database used in previous projects is the database system set up in Bulgaria (Yordanova, 2001). The kind of data that is needed for such a data base system is shown in annex 2.





## Strategy 5. Improving living conditions of captive bears

If the evaluation of the survey indicates that living conditions and overall welfare (physical and psychological health) of the captive bears are poor, the following actions should be accomplished.

### Action 1. Improve the living conditions of the captive brown bear

When it is not possible to confiscate the captive brown bear in the short or longer term, living conditions should be improved by offering the owner help in terms of goods (food) and advice. When absent, offer the captive bear shade, provide supplementary food and water and give the owners suggestions and support. When living conditions have not improved within a certain time limit, owners should be stressed to make adjustments within a certain time limit. Responsible parties should control this regularly.

### Action 2. Regular check the brown bear's health situation by a veterinarian

The captive brown bears should be visited regularly to check their health situation. The owner should be informed about the procedure. A health check should be made after sedation to evaluate the health status of the individual bear. See annex 2. for an example of a database, including a health check list, as used in the previous dancing bear project in Bulgaria (Yordanova, 2001).

#### Suggestions:

- Cooperate with farmers/ large supermarkets or surrounding human settlements** for the delivery of vegetables/ fruit needed to feed the bears.
- Offer **environment enrichment** to the bears: straw and leafy branches for example.
- Regularly **check the situation** of the bear to make sure that the situation has improved.



## Strategy 6. Informing and rehabilitating the owners

The survey may reveal that the owners of the bears are dependent socially and/or financially on the bears. By educating them about the problems and about actions they can take to improve the living conditions of the brown bears, improvements can be achieved in the short term. When owners are dependent financially, improvements in the situation for the longer term can be achieved by a social program. Such a social program should prevent that people will buy a new bear in future. This program should enhance the conservation of bears in the wild, the captive brown bears as well as the livelihood of people.

### Action 1. Inform the owners to improve the living conditions of the bear

Educate current owners about the actions to be taken and consequences for them to diminish the chance of conflicts in future. Try to make them aware that when they will not improve the living conditions of the brown bears (with financial aid) they will be treated according to prevailing law.

### Action 2. Pay no fees as a compensation for the confiscation of the captive bears

In the past, payment of large fees in case of confiscation has turned out not to be a sustainable solution. Pay only a small compensation for the costs made or the income that is lost by taking the captive brown bear away. The establishment of a social program needs focus when bears are financially important.

### Action 3. Establish a social program

Stimulate rehabilitation of the owners by the generation of new jobs. Help in financial terms and advice needs to be provided to the owners to motivate them in changing their livelihood. Successful projects such as the rehabilitation program in India can be used as an example.

#### Suggestions:

-A **contract** should be signed by the owner and the contracting party that the owner will not keep wild brown bears in future and will not be involved in illegal trade. In India this method has been proven to be successful, because several people have changed their livelihood successfully (Wildlife S.O.S., 2006).

-Examples of **alternative incomes** can be: selling handicrafts, creating work in the ecotourism sector, and providing work in an education centre.

-**Monitoring and evaluation** of the social program should make clear the successfulness of the program and the needs for further development.



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## Strategy 7. Public information strategy

A social survey may indicate that the public is not (enough) informed about the problems concerning captive brown bears. Public awareness needs to be stimulated in order to increase conservation goals. The following actions are of importance.

### **Action 2. Plan for educating local people**

An information campaign should be created to inform young people, interest groups as well as the general public about wildlife and nature conservation issues and more specific, the human threats to brown bears. Take into account natural fears of people for bears. Educational material can be spread throughout schools or public places. It is important to reach the future generation and educate them about the practices. When reaching the owners of captive bears, take into account their motives for keeping the bears and cultural habits.

### **Action 3. Plan for a national and international media campaign**

To reach the general public, media campaigns are tools to reach a large public. A thing to be taken into account is that once the project gets well known, this campaign can become time-consuming (Promberger, 2001).

### **Action 4. Information campaign for tourists**

An information campaign for people abroad/ tourists should be established when the problem concerns this specific interest group. Flyers can be distributed at airports, tourist agencies and train stations etc. to make visitors aware of the problems and also to report any encounters of captive brown bears.

#### **Suggestion:**

-Cooperation with **educational centres/ organizations and schools** is important for generating support and for the exchange of information.



## Strategy 8. Confiscation of bears

When confiscation turns out to be a suitable and realizable strategy, according to the aim of the project itself as well as the general aims of improving the welfare and conservation status of brown bears, the following actions are important.

### Action 1. Documents needed for confiscation:

Transfer of ownership may raise complicated legal issues (IUCN, 2002). Specific legal and administrative procedures concerning transfer of ownership should be clear for all parties involved. Make sure that there is a sound legal status of brown bears present. Documents needed should be designed and received. The national government or CITES, in case of international transfer, should be asked for advice on legal subjects.

### Action 2. Do not pay the owners

Payment of any fees as part of transfer of ownership must be considered carefully. The purpose of confiscation should be kept in mind: further illegal trade or hunting of the species has to be discouraged by penalizing and deterring the practices. Preferably bears should not be paid for.

### Action 3. Account for the costs

Costs need to be accounted for the personnel that is needed during confiscation as well as costs for cages that have to be arranged. Next to that, transportation costs need to be accounted and costs of the paperwork and official documents that are needed.

#### Suggestions:

-The responsible **governmental bodies should be informed** about the actions of confiscation. Official agreements need to be made in which the duties are described.

-Sale or transfer of ownership may stimulate the demand for these animals (IUCN, 2002). An option to prevent this is to **inform the general public about legal aspects**, such as penalties, through a state newspaper.



## Strategy 9. Establishing a bear sanctuary for the short and longer term

When it is feasible to establish a bear sanctuary in order to place the captive bears in an improved enclosure in the country itself, the following options are of importance.

### Action 1. Plan the sanctuary

Information is needed about the possible future location of the sanctuary. Discuss plans with the local government and collect information about legislation needed. Account costs for the long-term presence of the sanctuary.

### Action 2. Establish contact with all necessary interest groups:

Try to cooperate with local communities, landowners, municipalities, and national as well as regional government in order to find an amicable solution on how and where to establish a bear sanctuary.

### Action 3. Organize responsible people/ working powers

Appoint permanent staff who can realize and continue with the (co)existence of a bear sanctuary. People in the field of animal/nature conservation can be appointed, but also jobs can be created for the former owners of the bears (see suggestions social program).

### Action 4. Raise funds

Make sure that sufficient finances will be collected by fund-raising initiatives.

### Action 5. Establish the sanctuary

Establishment of the sanctuary should be carefully planned and organized.

#### Suggestions:

-**Professionals** in establishing bear sanctuaries should be asked for advice and information about requirements, costs etc.

-Recommendations and information on the **requirements of a bear sanctuary** can be found in the EEP Ursid Husbandry Guidelines (1998), as well as in an informative CD-Rom about large bear enclosures recently published by Alertis.

-Identify a **check list** on what permissions are needed and what legal obstacles exist.

-**Regular meetings** with all parties involved, in which plans are discussed, should make clear the exact plans. Try to generate ideas about **sustainable solutions** for a bear sanctuary:

- Combining a bear sanctuary with educational purposes.
- Creating a bear sanctuary in an already existing zoo.
- Generating jobs for local people/ former owners of the bears.



## Strategy 10. Placement of captive bears elsewhere

If there is shortage of support or finances to establish a bear sanctuary in the country even with support from different parties (strategy 3.), placement of some of the captive bears elsewhere should be considered when these bears have been confiscated.

### Action 1. Contact other sanctuaries:

Establish contact with sanctuaries to look for possibilities to transport confiscated brown bears to a sanctuary abroad. Make sure that CITES can provide necessary documents that are needed for this transfer.

### Action 2. Rights and duties of the involved parties:

Make clear the rights and duties of all parties involved when bears are planned to be placed elsewhere. Think in terms of obligations such as transfer of ownership, or changes in the use of the animals (IUCN, 2002).

#### Suggestions:

- Information about possibilities for placement can be asked at the **International Bear Association, EAZA Bear Tag, or NGO's**, that exchange information between sanctuaries over the world.
- An agreement/ document should be created and signed in order to achieve the **rights and duties** of all parties working on the transfer.
- A financial overview** should be made.
- A zoo might help in the **transportation procedure** of captive brown bears to a sanctuary or zoo abroad.



### 3.6. Implementation of the strategies

*To effectively reach the goals of improving the welfare situation of captive brown bears as well as the conservation status of wild populations, a management plan needs to be created which includes a clear management strategy. Several international treaties underline the importance of a management plan for the conservation of the brown bear, such as the European Bern Convention as well as the Habitats Directive.*

#### 3.6.1. Usefulness of this manual

The manual developed in this chapter, can be used to find suitable management strategies for management of welfare problems related to captive bears. It can form the baseline for the formulation of concrete actions in an action plan, which identifies definite actions for parties involved. All important parties should work together on development of this action plan.

According to Hofer and Prombergen (1998), participatory planning and empowerment of stakeholders needs emphasize in management. Agreement of these parties on an action plan is important, in order to make management work effectively. An adaptive management approach can make adjustments to policy possible during the management process.

This action plan can be integrated into a national management plan, which considers conservation of the brown bear, including management of captive brown bears. Already existing guidelines such as “Guidelines for developing large carnivore management plans” (Hofer and Prombergen, 1998) and “Action plan for the conservation of the brown bear (*Ursus arctos*) in Europe” (Swenson *et al.*, 2000) can give advices on how to establish such a management plan. In the next chapter, usefulness of the manual is tested by applying it to a case study on captive bears in Georgia.



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## **PART III. CASE STUDY**

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## 4. Case study on captive brown bears in Georgia

*This chapter describes a case study on welfare problems related to captive brown bears in Georgia. Alertis provides funding and gives advices to her partner organization NACRE, who is working on solutions for the problems related to captive brown bears in Georgia. A three-week visit to NACRES in Tbilisi, Georgia, was made to gather information on the background of the current situation, to discuss possible actions for future and to visit several captive brown bears.*

*In paragraph 4.1. the background of the problems is described, followed by the current strategy that is used by NACRES. Paragraph 4.2. explains the methods used in the case study. In paragraph 4.3. the manual is applied to survey the complex problems in Georgia. The problems are assessed in paragraph 4.4. and possible strategies are given in paragraph 4.5. Several recommendations are given for the implementation process of these strategies.*

### 4.1. Background

In Georgia, near petrol stations and roadside restaurants brown bears are imprisoned in small cages. The provision of an adequate diet, fresh water or medical care is questionable. A critical welfare condition for the bears can result from these circumstances. Captive bears are most of the time exploited as a form of entertainment to attract customers. Currently, it is not clear how many bears are kept in this way.

In 1996-1997, after the break-up of the Soviet Union, the NACRES project “Assessment Research for Brown Bears Recovery in Georgia” was initiated. The captive bear problem and also wild population of the brown bear were assessed. The wild brown bear population in Georgia was estimated at 600-650 individuals, while in 1997 twenty-two locations with captive brown bears were reported. For some years, welfare problems related to the keeping of captive bears are recognized by the Ministry of Environment of Georgia. No concrete results have been obtained in solving the welfare problems so far, according to NACRES. (Shavgulidze, 2006)

Until recently, local non-governmental interest groups approached the captive bear problem in a non-structural manner in Georgia. NACRES intended to promote local agencies to act more actively and stimulated cooperation with international supporters, but did not focus on the sources of the problems. This approach has not proven to be very successful, according to NACRES. Recently NACRES decided to change its strategy and established a specialized program (WAP: Wildlife Advocacy Program) to promote protection of wild animals, prevent cruelty, to facilitate new law enforcement and to promote respect for wildlife. (Shavgulidze, 2006)



## Case study

Table 13.: Overview of main organization working on welfare problems of captive bears in Georgia

<b>National organization:</b>	<b>Governmental bodies:</b>	<b>Funding parties:</b>
<p><b>NACRES:</b> NACRES is a non-governmental organization founded in 1989. It aims to safeguard the biodiversity of Georgia and the Southern Caucasus. Conservation activities are initiated based on science, sustainable principles and local participation.</p>	<p><b>-Ministry of Environment, Georgia</b> -Department of Biodiversity Conservation. -Environmental Inspectorates.</p>	<p>-Alertis -Other (international) NGO's, such as WSPA (World Society for the Protection of Animals).</p>

The program carried out by NACRES aims to conduct a comprehensive assessment of the captive bear problem throughout Georgia. Up to today no accurate database is available that contains a complete list of the captured bears in Georgia. This database is needed to develop a comprehensive strategy and action plan that can help solving the captive bear problem in the country. (Shavgulidze, 2006) The complexity of the captive bear issue in Georgia, the lack of available data on the captive bears and the need of involvement of different interest groups, makes it necessary to work out a concrete action plan for solving the problems.

According to NACRES, for the management process a two-phased initiative is needed, which would include next to the comprehensive overall assessment of the captive bear problem, the development of a relevant strategy and action plan for further action. With the assessment, the number of captive bears in the country, as well as location and condition of the bears needs to be determined. Also the owners of the captive bears will be interviewed. This assessment on the captive bear problem should reveal the magnitude of the problems and possible solutions for them. The information will be implemented in a database on captive bears in Georgia. Also feasibility of the establishment of a bear sanctuary will be assessed. Based on the assessment a draft strategy and action plan can be developed. (Shavgulidze, 2006)

When more data are available about the situation and magnitude of captive bears in Georgia, a captive bear workshop is planned to be organized by NACRES to discuss and further develop the strategy and action plan together with the interest groups. Also a public awareness program needs to be established to inform the public about the captive bear problem. (Shavgulidze, 2006) Public awareness is an important subject to address, because it should prevent that the problems will continue in future.

### 4.2. Methods of the case study

This case study aims to be a starting point for a future action plan for management of captive brown bears in Georgia. The manual, described in chapter 3, was applied to the situation of captive brown bears in Georgia. In order to make a first survey on the case study possible, sixteen bears were visited, from which nine kept by private people. The information resulting from these visits was incorporated into the first part of the manual (the survey). Also conversations with the Ministry of Environment were held, as well as discussions with the project leader and the bear specialist of NACRES, in order to collect sufficient information. All this information was integrated together, to be able to answer the questions of the survey (first part of the case study). With this information, an assessment of the problems was made, from which the strategic part became clear (second part of the case study). This strategic part is developed from the manual that was described in chapter 3. Strategies were discussed with NACRES.



### 4.3. Survey: welfare problems of captive bears in Georgia

#### 1. Legal status and law enforcement

##### Legal status of brown bears in the country

##### 1.1. What legal status do brown bears have in the country?

Recently the law system in Georgia has changed very quickly, and is still under development. Two laws are present that include rules for the conservation of brown bears. Recently (April 2006), a new national Red List of endangered species has been adopted in Georgia which covers all threatened species of the country, including the brown bear. This list includes the brown bear as an endangered species. Other laws refer to this Red List, and state that it is illegal to kill or capture wild brown bears. In another law, the Administrative Code of Georgia (2005), it is stated in Article 85(3) that any activity causing damage to the Red List species or their habitat and any capturing of a member of such species shall be subject to penalty of 150-650 Lari (which is an equivalent of 56-244 Euros).

The Law on Wild Fauna Protection of 1996, produced by the Ministry of Environment states in Article 6: Status of wildlife of Georgia that: *“The object of wildlife, which represents special environmental, scientific or aesthetic value, also, the species of wild animals, which is included into Georgia’s Red List and Red Book (except for the cases, if this wild animal is either reproduced in captivity or obtained abroad in accordance with the rule, set by the law), can not be the object of private property.”* This means that, according to national law, the brown bear can not be the object of private property, unless the owner can prove that the animal is bred in captivity.

In summary, two national laws are into force in Georgia that include the brown bear as a protected species.

##### 1.2. What international treaties concerning the legal status of brown bears are adopted in the country?

Georgia is a member state country of the Council of Europe since 1997, but is not a member state of the European Union. The country is not a contracting party to the Bern Convention. Georgia signed the Convention on Biological Diversity in 1994. The regulations of CITES, Convention on International Trade in Endangered Species of wild fauna and flora, came on December 12<sup>th</sup>, 1996 into force. The implementation of CITES in national legislation is still under construction.

##### 1.3. Are there any management plans present that concern the legal status and protection of (captive) brown bears?

A National Biodiversity Strategy and Action Plan for Georgia was adopted by the Cabinet of Ministers of Georgia on February 2<sup>nd</sup>, 2005. The production of a National Biodiversity Strategy and Action Plan is an obligation under the Convention on Biological Diversity. The management plan includes key issues such as protection of species and habitats and promotion of sustainable hunting. The protection of brown bears is not explicitly mentioned in the report, but specific problems, important for the survival of the brown bear are included. Some important problems that are mentioned are: the inadequate enforcement of the Law on Wild Fauna Protection (1996) and ineffective control mechanisms for poaching. (NBSAP, 2005) Currently no national management plan is adopted that includes management or advice for the captive bear problem.



**1.4. What legislations can be improved in order to enhance the conservation status of the brown bears?**

The Administrative Code of Georgia (2005) does state that it is illegal to capture a national Red List species, but does not describe whether it is illegal to actually keep such a wild animal, because the activity “causing damage” is not further defined. Rules for the keeping of brown bears should be clearly described.

The Law on Wild Fauna Protection of 1996, states in Article 6 that the brown bear can not be the object of private property, unless the owner can prove that the animal is bred in captivity. According to this article it can be a problem to confiscate a bear, when people can prove that the bear is captive bred. This law does not give any suggestions on law enforcement or penalties that are necessary when rules are not followed up by people.

A comprehensive legal framework is needed in order to make these overlapping laws work effectively. In this legal framework clear penalties as well as enforcement principles should be described.

**Presence of a legal framework for the welfare status of captive brown bears**

**1.5. What national legislations that concern the welfare situation of captive bears do exist in the country? Give a description of them and of usefulness.**

Currently no legislations are present in the national law system of Georgia that include minimal standards for regulations on animal welfare. This is an important subject in national legislation that is missing.

**Future plans for implementation of legislation concerning the status of the brown bear**

**1.6. How can the political situation regarding nature conservation and animal welfare in the country be described? (positive, negative, other)**

The total political situation in Georgia is changing positively, also regarding nature conservation and animal welfare. Since NACRES is working on the problems (since 1996-1997), it is the first time in ten years that the Ministry of Environment shows interests in solving the problem of captive brown bears. However, within the government carrying capacity is insufficient and clearly defined duties of the government regarding the management of captive brown bears are missing.

**1.7. What are concrete plans for implementations of new laws or adjustments to legislation, relevant for captive brown bears or illegal trade and poaching?**

The Ministry has no concrete plans yet on implementation of relevant legislation. However, all parties agree that a comprehensive law system in Georgia is lacking and gaps in legislation are present. Adjustments need to be made to present legislation in order to make it work effectively.

**Effectiveness of law enforcement in the country**

**1.8. Who are legally responsible for law enforcement necessary for control on any captive brown bear problem?**

The newly established Environmental Inspectorates have the responsibility to control poaching and illegal keeping of the bears. They have the right to confiscate illegally captured bears when suitable solutions are available to place the bears.



**1.9. What are activities of state agencies that have been undertaken in the past to enhance law enforcement regarding the captive brown bear problem?**

There is a lack of enforcement mechanisms in the national legislation framework. No concrete activities to combat poaching have been performed by the Inspectorates or other agencies in the past. Currently, the Environmental Inspectorates are mainly working on illegal forest harvest. The current capacity can be a problem for strict control on the captive bear problem.

**2. Status of wild populations**

**Effects of captive brown bear problems on wild populations**

**2.1. How many bears are captured from the wild in order to use them for the purpose of entertainment of people?**

Bears kept by private owners are in most case wild-caught (surely 8 from 9 bears visited) and are therefore not bred in captivity. This means that these bears are illegally kept, since it is not allowed to capture a brown bear in the wild.

**2.2. What are the methods used for capturing wild brown bears?**

There are no data available on this issue, but NACRES has heard some stories on how hunters capture bear cubs in the wild. Mostly poachers kill mother bears in the wild in spring, and catch the defenceless cubs. These cubs are then sold or presented to local people.

**2.3. What effects have been reported of capturing brown bears from the wild on the wild brown bear population?**

No official reports have been produced in the past about the effects of poaching on wild brown bear populations, because this subject has not been measured or controlled at all.

In the 1980's, a tracking method was used by Arabuli (1987) to estimate the bear population in Georgia. According to his results there were approximately 3000 brown bear individuals in the country (Arabuli, 1987). As stated by Kudaktin and Chestin (1993), there were 600 bears in Georgia in the 1980's. Their survey was based on the data from official hunting units (Kudaktin and Chestin, 1993). Both study methods are not precise and can not be taken as rigid estimations. Therefore, it is hard to say which result reflects real population numbers in that time. According to Lortkipanidze (bear specialist of NACRES), most probably Kudaktin's and Chestin's estimate was most correct (pers. comm. Lortkipanidze, 2006). A new estimation with more advanced techniques track measurement methods was made in 1996-1997, which showed that the population consisted of approximately 600-700 individuals.

No strong indications are present for a sharp decrease of the population over the last decades. However, increased poaching pressure and habitat destruction may have a great impact on brown bear populations in Georgia. After the collapse of the Soviet Union in 1991 there was no control on poaching, and the captive bear problem most probably began to take a serious shape (pers. comm. Shavgulidze, 2006).



### **Illegal trade in captive brown bears and poaching**

#### **2.4. What is known about (inter)national trade in brown bears in the country?**

Bear cubs are occasionally sold within the country. It is suspected by NACRES that substantial numbers of bears are captured including for selling purposes each year. People who want to buy a brown bear cub go to local hunters and simply make a deal with them. The price may vary between 100 and 200 USD per bear cub. This indication is also tested during the interviews with owners of captive bears (annex 3.)

#### **2.5. What national legislations are taken into force to control the illegal trade and poaching of brown bears?**

The brown bear is included in the Red List of endangered species of Georgia. According to this Red List and the Law on Wild Fauna and Protection, as well as the Administrative Code, it is illegal to capture brown bear from the wild. The lack of law enforcement is a large problem in the country and is due to lack of regulations and enforcement mechanisms (NBSAP, 2005).

### **3. Current situation of captive bears**

The information collected for this part of the manual is derived from several site visits to captive brown bears in the country. In total 16 captive bears were visited, from which 9 bears were kept by local people. The other bears were kept in zoos or zoo like facilities, and are also considered in this part (see annex 3.).

#### **The number of captive brown bears in the country**

##### **3.1. What is the estimated number of captive bears in the country?**

The captive bear assessment made in 1996-1997 revealed that around 30 captive bears were present in Georgia, half of them were located in Tbilisi. The current assessment has to reveal how many bears are kept by owners in Georgia. What is officially known is that at least 22 captive bears are present in Georgia, including the bears from the zoos (data from June 2006).

##### **3.2. Is there a registration system present?**

Up to today, there is no database implemented to register information regarding captive brown bears. Some information is present about age, sex and location of the bears and size of the cage, but this is not complete yet.

#### **Location of captive brown bears**

##### **3.3. Where are the captive bears located?**

According to the study made in 1996-1997, around half of the number of captive bears was located in or around the capital Tbilisi. The remaining part was located along roadways, or around the coastal part of Georgia. Today it is not clear how many bears are located in every part of Georgia. Most bears that were visited during the study were located close to roadside restaurant outside of Tbilisi.



**3.4. Are the captive bears located close to trade markets?**

There is a trade market in the capital where bear cubs are occasionally seen to be sold. This trade market is centrally located in the country and easy to reach.

**History of the individual captive brown bear**

**3.5. Is the bear bred in captivity or caught in the wild?**

Almost all visited bears are thought to be caught in the wild by poachers as a cub. The owners often told that they received the bear cub as a present or bought the cub. One owner told a bear derived from the circus, and it is not clear if this bear was captive bred, or originated from the wild.

**3.6. Are there documents available that clarify legal ownership of the captive bear (CITES or other official documents)?**

No official documents were available for the captive bears that were visited. Only one bear was visited by a veterinarian and had a veterinary document, this document was provided in 2004.

**Health status of the individual bear**

**3.7. Does a first (veterinary) screening show that the bear is physical healthy?**

One young bear that was visited was obviously sick, had a blind eye, and needed veterinary care. Another young bear cub visited had injuries above the eyes. From the other bears no clear signs of injuries or physical illnesses were observed.

**3.8. Is the bear psychologically healthy?**

Almost all captive bears that were visited, showed severe signs of stress. Stereotypical behaviour was observed or other signs of stress were observed, such as boredom (limp behaviour).

**Needs of the captive bears**

**3.9. Does the enclosure meet the requirements of brown bears?**

All bears that were visited were kept in small (20 square meters, bears in the zoo) to very small (3 square meters) enclosures. Especially the bears that were privately owned were kept in very small cages. The average cage of these captive bears was approximately 6 square meters. Cage size was ranging from 3 square meters (smallest cage) to 15 square meters (largest cage).

All cages consisted partly or entirely of bars from steel. In the zoos, the cages had a concrete floor. No types of (food) enrichment were offered to the bears, so foraging and feeding behaviour were not stimulated. Usually the bears were offered a poor diet from leftovers from the restaurant. In almost all cases there was no water available in the cage (in only one cage the bear had constantly water available) and bears were observed to be very thirsty when water was offered. There were no places for the bear to 'hide', except for two cages with a small den. The enclosures were often dirty with the bear's excrements.



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**Age and sex of the captive brown bear**

**3.10. What is the sex of the captive brown bear (male/female)?**

From the 9 bears kept by private persons that were visited, 6 bears were male and 3 bears were female. The captive bears visited in zoos also consisted of more males than females: 5 males and 2 females. This means that the total percentage of visited captive bears that was male was higher (70 %) than the visited female bears (30 %).

**3.11. What is the age of the captive brown bear?**

Most bears were quite young. The average age of the 9 captive bears that were visited was 3,8 years, and the age was ranging from 4 months (youngest bear) to 9 years (oldest bear). No bear was found that was older than 9 years. It should be noted that these data are not precise, because it is not known if the owner gave the exact age. It can be that bears living under these circumstances do not live longer than 10 years.

**Safety situation of the cage**

**3.12. Has the owner of the captive bears taken security rules for the public into account?**

None of the cages were safe for the public. Only one owner had placed a simple wooden fence around the cage, but it seemed that this was not effective because children climbed over it. The public was able to come close and even touch all of the captive bears.

**3.13. Were there incidents in the past when the captive bear has injured spectators?**

There is a story known at NACRES, about a spectator that was injured by a captive bear.

**3.14. Is the cage providing a safe environment for the captive bear, or are there chances for injury?**

Most cages were not safe for the captive bears. The bars of the cages contained sharp pieces of metal. One of the bears had bruises above the eyes because of this. Chances of injury were high.





## 4. Situation of the owners of the captive bears

### Details of the owner of the bear

#### 4.1. Who is the owner of the bear and what are his contact details?

These details will be collected by NACRES for completing the data base (see annex 3).

#### 4.2. Where was the bear bought in the past?

It is suspected that most of the people make a deal with local hunters to obtain a bear cub. Bears that were visited usually were derived from an area nearby. Most of the owners told they obtained the cub as a 'present'. It is also thought that many cubs are bought at a market. On the central animal market in Tbilisi, NACRES has spotted several bear cubs that were sold.

### The social and economic function of the bear

#### 4.3. What social group is the owner part of?

Usually the owners of the captive bears are restaurant keepers, dependent on their own little business. One place where many captive bears were present very close to each other was along a road where many little restaurants were located. Many of the restaurant keepers owned a bear, and most of them were even neighbours.

It appears that people in Georgia replicate each other in many ways when it comes to selling goods or owning things. For example in one street, local people sell only bread, and in another street only hammocks. The same was observed for the described street where almost all restaurant keepers owned a bear (in total five places were sighted).

#### 4.4. For what reason(s) is the bear kept?

No obvious signs for dependence on the bears were detected. The owners that were visited were not earning directly money with the bears. Almost no visitors were spotted near the bear cages. It should be mentioned that the visits were made during weekdays. It should be checked how many people visit the bears in weekends. Interviews with the owners are needed to receive more information on exact motivations of keeping a bear.

The main purpose why bear cubs are bought by local people seems to be to attract customers: roadside restaurants/ petrol stations keep captive bears, also it is known that some street photographers near a coastal place use bear cubs to attract customers. Next to that, some people want to have an unusual pet. It seems that most owners feel a certain pride to keep a large wild animal such as a bear, but a social survey needs to collect information on this topic. It is not known if the practise has a long history. Probably the real problem started after the break-up of the Soviet Union, when there was a lack of control from the government on poaching. In this way the keeping of bears could have been a logical effect of poaching.

#### 4.5. Is the owner financially dependent on the captive bear?

Different than expected, for the bears that were visited, it was seen that no direct income was generated by the captive bears. The bears stayed in their cage and during weekdays not many people showed interest to the bears. A problem is that visitors keep coming to the restaurants and are probably not aware that they stimulate the practise by coming to restaurants for food and drinks.



## 5. Groups working on the welfare problems

### Organizations working on welfare problems

#### 5.1. Which organizations are working on welfare problems related to captive brown bears? Specify the level (regional/local, national, international)

In Georgia NACRES is the largest national NGO working on the problems. Currently there are no international organizations directly working on the problem, but in the past WSPA was an important funding organization for the bear assessment of 1996-1997.

Recently, IBF (International Bear Foundation), a small NGO, began to work on closely related subjects. No regional or local organizations are working on the subject. Governmental bodies that are involved in the captive bear subject, include the Ministry of Environment of Georgia and the Department of Biodiversity, as well as the Environmental Inspectorates.

#### 5.2. Since when are they working on the problems?

NACRES started with investigating the captive bear problem in 1996. After this assessment, no clear actions were taken by NGO's or governmental bodies to work on the problems. Alertis is collaborating with NACRES since 2002 in finding solutions for the captive bear problems and is since 2006 funded by Alertis, for working on this specific subject.

IBF was founded in 2005, and also tries to find solutions to the problems.

#### 5.3. What are their goals?

All parties have the aim to solve the captive bear problem, but lack of cooperation makes it difficult to work on the problems in an effective way. Now the goal of NACRES is to make a clear assessment of the problems and establish an action plan together with all stakeholders to solve the problems.

#### 5.4. What issues do they agree upon? What issues do they disagree upon?

A workshop in future needs to show what issues they agree upon and what they disagree upon.

#### 5.5. Which groups work together on what issues?

Cooperation exists between the Ministry of Environment, Department of Biodiversity and NACRES. There are plans to involve the Environmental Inspectorates more strongly in future. Until now, the most active attitude towards solving the problems has been initiated from NGO's.

No concrete cooperation between NACRES and other Georgian NGO's is present for working on captive bear problems. IBF is working on similar problems, but there is no communication present between the NGO's about their future aims.

#### 5.6. What strategies or activities have been initiated by which groups?

In 1996-1997 an assessment has been made by NACRES to provide an estimation how many captive bears were located in Georgia. This information is outdated and needs to be assessed again. In the meanwhile no clear activities were initiated by the Ministry of Environment or other governmental bodies. Recently, the Ministry of Environment shows interests to help with working on the captive bear problem.



**5.7. What positive and negative results have been achieved so far?**

No clear results in solving the captive bear problem have been achieved in the past up till now. NACRES has distributed flyers in the past to make people aware of the captive bear problems. No possibilities for building a large bear enclosure or other activities to help the captive bears have been found. In the past, there have been problems in getting governmental bodies active in helping to solve the problems.

**5.8. What cooperation possibilities are there between different interest groups?**

Collaboration between NACRES, the Ministry of Environment, Department of Biodiversity and Environmental Inspectorates is important. There might be future cooperation possibilities between NACRES and WSPA. Also other international organizations such as WWF Caucasus or the recently established IUCN Caucasus Department can be contacted for advice and additional funding.



## 6. Public awareness and opinion

### Public awareness of welfare problems of captive brown bears

#### 6.1. Is the general public aware of any welfare problems related to captive brown bears in their country?

Most people in Georgia know about the presence of captive bears in their country. They have often seen a captive bear(s) themselves. This indicates that they are aware of the presence of captive bears in their country. It is not known in what degree they are aware of the negative welfare situation of these bears.

#### 6.2. Is the general public aware of the suffering of the animals and the (illegal) status of the practice?

It remains a question how many people are aware of the legal status of the brown bear and the high degree of suffering of the animals. When visiting the captive bear, it became obvious that many owners were not aware of the illegal status of the practice. Intentionally, we did not directly ask this to the owners, because we were afraid for consequences for the bears (for example release into the wild). Many owners said they adequately feed and provide water to the bears, but it was obvious this was not the case.

#### 6.3. Do people intentionally go to places where captive bears are kept (petrol stations, restaurants etc.)?

No, probably not. It seems that captive bears are more a kind of status symbol for the owner, than that the bear really attracts more visitors. Visits to the bears in weekends have to show if this is also true for these days. It is not clear how many people are attracted by street photographers that keep bear cubs that are present in the country.

#### 6.4. How do people behave when visiting such a place?

The people we have seen were behaving disturbing: people were yelling and children were throwing candies to the bears. Most visitors were not showing interest in the bears: it seemed as a normal sight to them. Only in Rustavi park (a small zoo-like park) children were visiting the bears for educational purposes: they were making drawings of the bears. During weekdays, at only one private place that was visited, people were sighted looking interested at the bear.

### Public opinion about brown bear conservation

#### 6.5. What is the public's (general) opinion towards brown bears: a. in the wild? b. in captivity?

No national survey has been conducted on this topic.



## 7. Feasibility of confiscating and accommodating captive bears

### Chances for successful confiscation of captive brown bears

#### **7.1. Does the law provide in confiscating captive brown bears?**

Until now, no official permission is available to confiscate a captive bears. According to national law the brown bear is included in the Red List and it is illegal to capture one, as stated in The Administrative Code of Georgia as well as the Law on Wild Fauna Protection. Despite of this fact, law enforcement has been weak in the country. No actions have been taken to enforce the law.

#### **7.2. If confiscation is legally admitted, how many captive brown bears have been confiscated in the country in the past?**

No bears have been confiscated officially in the past. No bear sanctuary is available to relocate the captive bears in Georgia.

#### **7.3. Were fees paid as a compensation for the confiscation of captive brown bears in the past?**

Officially, no bears have been confiscated in the past, so no fees have been paid.

### Availability of space that offers benefits for the captive bears for the short and longer term

#### **7.4. Which options are available in the country for placement of confiscated brown bears (public or private facilities, sanctuary to be build in future)?**

In the past many people have come to NACRES with the question if the organization can do something about the situation of captive bears. In the country there is no bear sanctuary available at the moment. Also for other animals there are no sanctuaries, which is a large problem in general for animal welfare. NACRES has future plans for building a sanctuary to rehabilitate animals, such as brown bears, but also give shelter to other animals. These plans are not concrete yet, but a piece of land has been bought as a start. Recently, the new Director of Tbilisi Zoo works on possibilities for creating a bear sanctuary within the Zoo. The space that is available for a bear sanctuary is not sufficient for receiving more than seven bears. If the plans work out, the placement will only be sufficient for bears from the zoo. However, a small bear sanctuary can be a good starting point for future bear conservation goals. It can serve as an example for other sanctuaries to be established in the country.



**7.5. Which options are available for placement abroad?**

Two captive bears can probably be placed in the bear sanctuary in Rhenen, the Netherlands, in near future. Transport will be difficult in terms of willingness of flight agencies, as well as the money that is needed. It will be possible to obtain a CITES-document through the Dutch Ministry.

For the remaining captive bears other solutions need to be found. Possible placement of bears in other zoos or bear forests abroad should be considered.

**7.6. When several options exist, what option is most optimal for bears in captivity as well as the population in the wild?**

Optimal solutions are dependent on the number of captive bears in the country, which is not clear yet. A complete overview of information on health situation of the bears is needed as well. When bears are found to be chronically ill and suffer a lot, euthanasia must be considered.



#### 4.4. Assessment of the problems

Diverse problems related to the captive bear problem are present in the country, which makes it difficult to find simple solutions. In table 14. the problems are listed, together with their degree of importance, approximated according to the answers of manual part one.

It should be noted that this assessment is made from data that were present from visits to nine captive bears kept by private owners. More data can become available in future. Nevertheless, this assessment can give a view on the situation currently known by NACRES.

Table 14. : Problem description, degree of importance within management (very important ++, important +, more or less important +/-, not important -) and strategies to solve them (numbers refer to strategies explained in the next paragraph).

<b>Problem</b>	<b>Importance (++, +, +/-, -)</b>	<b>Strategy nr.</b>
1. National legislation is not effective or not present.	++	1
2. International obligations are not effective or not adopted.	+	1
3. No effective law enforcement.	++	1
4. Negative effects on wild populations.	++	1
5. Existence of (illegal) trade of brown bears.	-	1
6. No (good working) registration system present.	++	2
7. Possible closeness/ connection to illegal trade.	-	1,2
8. Condition of enclosure is insufficient/ presence of unhealthy bears	++	3
9. Owners are (financially) dependent on the captive bears.	- (photographer not included)	6
10. Cooperation is lacking/ capacity problems	++	5
11. Public awareness is not present.	+	6
12. Absence of a (bear) sanctuary.	++	4
13. Other problems	Involvement of funding parties, advice needed for law system.	5

As shown in table 14., problems related to legislation, law enforcement, registration, situation of the bears, cooperation and possibilities to reasonably shelter the captive bears, are most strongly present in Georgia. Public awareness is also an important subject to handle. These problems need most emphasis within the development of strategies to solve welfare problems related to captive bears. The topics “dependence of owners” and “connection to illegal trade” are left out in the formulation of strategies. These topics are not evidently present in the country, and do not seem consequently urgent for solving the welfare problems related to captive brown bears. From this evaluation the next step becomes apparent: formulation of the strategies and concrete actions to solve the problems.



#### **4.5. Strategies to solve welfare problems of captive bears in Georgia**

According to the survey and assessment of the problems, several problems are important to deal with in the management process. A structured list of strategies will be given (the proposed management design), with different actions for management of the welfare problems related to captive brown bears. These topics of the strategies include: legislation, law enforcement, registration system, short term solutions for welfare, long term solutions for welfare, cooperation and public awareness.

##### **1. Strategy for improvement of legislation and law enforcement**

Within management, focus on sources of the problems will be very important in Georgia. A decade ago the situation of captive bears was investigated, but not much attention was brought to the sources of the problems, such as poaching. A bottom-up approach is needed to reach a sustainable solution for the problems in Georgia.

As explained, bear cubs that end up at in cages are mostly wildcaught, due to poaching practices. Poaching may enhance the captive bear problem; however, the demand for captive bears may stimulate poaching pressure as well. In other words, the keeping of brown bears may give a positive feedback to poaching practices. Continuation of poaching practices makes it hard to stop the keeping of brown bears. More research on the relation between poaching and the keeping of brown bears is needed in order to determine the significant effects of the two problems on each other.

An obvious fact is that effective national legislation regarding the keeping of bears is not implemented into the national law system of Georgia. No legislation is present that considers welfare standards for animals. Also effective law enforcement is lacking to control poaching and the captive bear problem in general. These topics are important to consider for control on the captive bear problem, because it should help to prevent future continuation of the problem. Governmental bodies should be made aware of the necessity of control on poaching. The strategy for improvement of legislation and law enforcement needs a lot of attention from the start and during the whole period of the captive bear project.

Several actions are formulated which are important for improving the law system in Georgia concerning the conservation status of the brown bear.



**List of action – Strategy 1**

**Action 1.** Prepare a letter to the Ministry of Environment to highlight the importance of *adjustments to the national law system*, to make a comprehensive legal framework possible, and to meet international obligations.

**Action 2.** Make a *proposal for amendments to legislation* and communicate this with the legal department of the Ministry of Environment. Possibilities for improvements are:  
-An amendment to current legislation in which is clearly stated that the government has the right to confiscate captive bears whenever options for placement of the bears are available:  
→ See national legislation framework in Bulgaria for examples.  
-Preparation of a new law which defines standards for living conditions for all animal groups that occur in Georgia.

**Action 3.** Prepare a *‘Memorandum of Understanding’* in which is clearly stated what needs to be done in order to achieve improvements of national legislation. This memorandum can be proposed to the Ministry of Environment.

**Action 4.** Stimulate *law enforcement*. Creation of an action plan for concrete actions of the Environmental Inspectorates can be a starting point. Because probably the capacity of the Inspectorates is insufficient to effectively control the problem, this topic should be regarded. Otherwise other possibilities should be looked at, such as creation of an anti-poaching unit. Concrete actions of the Inspectorates should include:  
-*Regular patrol of forests* where poaching practices are expected to occur.  
-*Regular patrol of places where captive bears were sighted.*  
-*Clearly defined penalties* for people who own a newly kept captive brown bear, whenever confiscation possibilities are present.  
-*Destruction of the cage* when the captive bear is confiscated.



## 2. Strategy for registration of captive bears in Georgia

This second strategy concerns registration of the captive bears. A registration system for captive bears is not present in Georgia yet. This system will be necessary to have an overview of how many captive bears are located in Georgia. When this number of captive bears is known, and information on the history of the bears is clear, solutions that are directed to the problem may become clear.

The survey showed that many bears derived directly from the wild. More important information about poaching practises needs to be defined. Strong communication between the different parties (NGO's, governmental bodies, and Environmental Inspectorates) is needed to exchange information. A registration system needs to be set up in order to get a clear view on the magnitude of the problems. Brown bears that are currently kept by local people need to be officially registered in order to get grip on the current situation. In this way people can be checked for registration and new bears can easily be detected. Agreements with governmental bodies should be made in order to achieve the registration and control on the situation of captive bears. A period of an estimated 5 months is needed to register captive brown bears and collect sufficient data.

### List of action- Strategy 2

**Action 1.** Establish a *project team* to find and register the captive brown bears. As many details as possible need to be collected, good communication skills of the project team are important. This project team, which consists of members of NACRES, needs to collaborate closely with the Environmental Inspectorates. Possibilities for future patrol of captive brown bear locations by the Environmental Inspectorates should be discussed.

**Action 2.** Contact *news papers* to place *announcements* on a regular basis, to request people throughout the country to report the project team about locations of captive brown bears. It can also be used to inform people about the problems. Also the airport near Tbilisi can be contacted to provide flyers to inform tourists.

**Action 3.** A (simple) *database system* needs to be used for collecting information on the captive bears (see annex 2).

**Action 4.** A *microchip system* can be used to officially register bears. This chipping system can lead to a better control on the bear problem, because bears can be detected easily.

**Action 5.** Provide (*temporary*) *permissions* for owners that keep officially registered bears. This permission can not be used for any other bear and should make control on the number of captive bears possible. The permission should be handed in as soon as a solution is provided, such as confiscation and transfer to a sanctuary.

**Action 6.** Information exchange should be made possible when different parties are involved in the captive bear problem (for instance locations of captive bears, information about history of the bears). *Establishment of a discussion forum* (website) on the Internet may help in this information exchange. This should be made possible by the project team.



### 3. Strategy for improving living conditions of captive bears in the short term

The third subject is improvement of living conditions of the captive bears in the short term. Before a long term solution for the captive bear becomes available for improvement of living conditions of the bear, it is important to implement actions to improve living conditions as soon as possible. From the survey it became obvious that most bears were deprived from fresh water and adequate food. It is important to provide the bears with necessary care by first-aid.

#### List of action - Strategy 3

**Action 1.** Visit the bears regularly (approximately ones a month) to check if the bears are *adequately fed and provided with fresh water*. Provide environment enrichment (e.g. branches of trees), so the bears have something to do.

**Action 2.** *Discuss the importance of adequate food and water* with the owners. Provide a leaflet with information on the needs of the captive bear.

**Action 3.** Visit the bears regularly to *control their health situation*. A veterinary screening has to reveal more exact data on the health situation of the bear. A visit by a veterinarian is necessary when the bear shows signs of illness. When this illness seems chronically, euthanasia of the bear must be considered in order to prevent severe suffering of the animal. Make shure the owner will not buy or purchase a new bear. Discuss these actions with the Ministry of Environment and ask for permission.

### 4. Strategy for improving living conditions of captive bears in the long term

As soon as it is known how many captive bears are present in the country, a plan for long term solutions to the problems should be made. Currently there is an absence of a long term solution to welfare of the captive brown bears. One of the most suitable options probably is the establishment of a bear sanctuary in Georgia, and/or transport to other sanctuaries. Welfare living conditions of the captive bears in Georgia are intolerable according to latest research and opinions of experts, and can not be improved by the individual owners themselves. As explained in the literature study, brown bears need a large space to display normal behaviour. If a large bear sanctuary is needed, funding parties should be contacted for support. This can take considerable time, but should have the focus. A worked out action plan can help to convince parties of the importance to solve the problems. This action plan could be ready after 7 to 8 months (see paragraph 4.6.).

Most probably placement abroad can not be a solution for the whole problem, because of the magnitude of the problem. Next to placement in bear sanctuary, a solution that must be considered for some captive bears is euthanasia. When the health situation of the captive bear does not permit placement elsewhere, this option should be considered carefully, also with veterinary advice. An important aspect to be well thought-out is the legallity of this action.



## Case study

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The plans for building a small bear sanctuary in Tbilisi Zoo can be a good starting point for bear conservation and can function as a trial for a larger sanctuary. In the meantime fundraising activities have to be initiated for establishing a larger bear sanctuary in the country.

When plans for the establishment of a bear sanctuary are present, but the establishment takes more time, it can be considered to temporarily shelter the bears in another place before releasing them into a permanent sanctuary. All bears should be checked for their health and a decision should be made on whether to give bears a new and proper shelter or euthanize the bear (if this is legal). Of course, all these decisions need to be discussed thoroughly with experts.

### List of action - Strategy 4

**Action 1.** Contact *veterinarians* for advice on the health situation and prospected chances of individual captive brown bears. When no veterinarian is available in Georgia, help from abroad should be asked (zoos, universities).

**Action 2.** Create a *draft plan for the future establishment of a bear sanctuary*. This plan can be used during the captive bear workshop that will be organized by NACRES to generate ideas about the plans from the different parties. Include sustainable solutions, such as combining a sanctuary with educational purposes, eco-tourism or generation of jobs. This can also be used to convince funding parties (see action 3.).

**Action 3.** The abovementioned draft plan for the future establishment of a bear sanctuary can be used to *persuade potential funding parties* to give support. Fund-raising needs a lot of attention within the project in order to collect sufficient funds for a sanctuary in the long term.

Some potential funding parties can be:

-*Nationale Postcode Loterij*, the Netherlands, approached by Alertis.

-*Dancing Star Foundation*. An American foundation supporting bear sanctuaries worldwide.

-*Brigit Bardot Foundation*. This foundation supported the NGO Vier Pfofen in the past with the establishment of a sanctuary in Bulgaria.

-*Vier Pfofen*. This organization worked together with the Brigit Bardot Foundation on the successful establishment of a bear sanctuary in Bulgaria.

-*WSPA*. This international organization gave support for the captive bear assessment in the past, but can be contacted again for possible fundraising.

-*World Bank*. This funding party may provide funding for an educational project coupled to a bear sanctuary.



## 5. Cooperation possibilities

The captive bear problem is complex and is widespread in Georgia. Cooperation with larger organizations and institutes is necessary for small NGO's such as NACRES and Alertis to work on these complex problems. Sufficient capacity is needed to successfully perform selected actions. To strengthen ideas and future actions of NACRES, contacts with international organizations are essential. These contacts are also essential for the generation of sufficient finances to implement certain costly actions.

### List of action - Strategy 5

**Action 1.** Write an *article* for publication in the International Bear News (IBA Newsletter). Reactions on this article can be interesting and helpful within the management process and people working in conservation get familiar with the plans and ideas of NACRES.

**Action 2.** Invite all important parties for a *captive bear workshop*. In this workshop a draft action plan needs to be discussed and future appointments should be made. Think about inviting prospective funding parties. Involve them from the beginning in the project.

**Action 3.** *International organizations or commissions*, such as the IUCN Species Survival Commission should be asked for their opinion about the draft action plan or help during the creation of the action plan. Also think about the International Bear Association, or WWF Caucasus.



## 6. Strategy for increasing public awareness

Public awareness is an important subject to work on. The survey revealed that people continue to visit restaurants where captive bears are being held. A social study should provide more data on public awareness.

Education is an important tool to reach (young) public, and prevent continuation of the problem in future. Media attention can be an important tool to raise awareness among the large public. During the whole captive bear project public awareness needs attention. Media campaigns and education projects at schools can provide public with information about the subject. Alertis can provide help in this process.

### List of action - Strategy 6

**Action 1.** A *social survey* combined with the visits to the captive bears can reveal public awareness on the problems. It can show if the public visiting the captive brown bears is aware of the deprived welfare situation of the captive bears.

**Action 2.** A *media campaign* should be initiated to reach the large public and inform them about the welfare problems related to captive brown bears. It can also be used for fund-raising purposes.

Possible media:

-*National television station*

-*National newspaper* "Georgian Times"

-*Dutch newspaper* (approached by Alertis)

-*Specialized television programmes* such as Animal Planet, Discovery Channel, National Geographic Channel, Alle dieren tellen mee (The Netherlands).

-*Announcements* on billboards or by posters

**Action 3.** A small *education programme* can be set up by NACRES. For example a CD-Rom or booklet can be created in order to inform children (primary, secondary school) on the problems and their causes.



## 4.6. Recommendations for implementation of the proposed design

*The aim of the captive bear project in Georgia is to find a sustainable solution for welfare problems of captive bears in the country. Continuation of the problems in future should be prevented by effective measures.*

### 4.6.1. Action plan

The proposed design of the strategies, described in paragraph 4.5., needs to be implemented by a concrete action plan, on which all important parties should work upon. In this action plan specific goals should be formulated. A definite time-scale needs to be implemented in which actions are described. A definite time-scale is essential for a project, because a sound planning is needed for successful implementation of the action plan. Especially for the starting-up process of management a time-scale is useful. (Prombergen, 2001)

In figure 2. a bar chart is presented with estimated time boundaries for certain actions for the first period of 12 months, to give an idea of the starting period of management. This starting period includes a defined assessment of the problems and creation of an action plan, activities that have already been planned by NACRES. Of course, more time is needed to solve the problems totally, due to complexity and possible persistence of the problems in Georgia. A definite time-scale for the implementation of strategies is possible when more data are available and strategies are adjusted to these data. At a certain moment it should be decided what the best decisions are, based on available expert knowledge. It should be considered that there are many examples where decision makers hide behind “the need for additional knowledge” before actions are taken (Prombergen, 2001). Getting active without sufficient knowledge is also unwanted. Expert knowledge is very important in the decision-making process.

Figure 2.: An example of time boundaries for the first 12 months of the project

Activity/ Month	2006						2007					
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Collect data on the captive bears	■	■	■	■	■							
Develop a captive bear data base		■	■	■	■							
Develop draft captive bear action plan				■	■	■						
Workshop with stakeholders						■			■			■
Finalize action plan							■	■				
Implement strategies with priority: law enforcement, fundraising, short term solutions (needs to be defined)								■	■	■	■	■

Source: deducted from Shavgulidze (2006)



On a larger time-scale than the current project of NACRES, a period of 6 to 10 years can be thought of as a realistic period to give enough attention to implementation of several strategies, dependent on how many captive bears are present. In this way, an overall end can be made to the practice of keeping brown bears in the country. According to other projects, such as the former project in Bulgaria to give a halt to the keeping of dancing bears, this can be a realistic time-scale. In this way, the goal can be to totally ban the keeping of bears under current living circumstances in Georgia in 2015. This goal can be combined within a larger framework, such as an action plan for protection of the brown bear in Georgia, which includes protection of the species as a whole. Possible funding by Ministries abroad (BBI-Matra subsidy from Ministry of LNV in the Netherlands for instance) for such a large project, is than a possibility to consider.

#### **4.6.2. Working group**

Together with all interest groups working on the problems, a first draft of a concrete action plan should be worked upon and discussed. After this first meeting, a working group can be formed and regular meetings can be planned. According to the current project in Bulgaria, in which an action plan for brown bears in Bulgaria is made, this system works very well (Alertis, 2006b). During the meetings specific action need to be formulated and agreed upon, and it should be communicated to a project leader how actions should be worked out. It is important that in Georgia the Ministry of Environment, specifically the Department of Biodiversity, and the Environmental Inspectorates are strongly involved in developing the action plan. Many specific duties need to be performed by these governmental bodies.

#### **Monitoring and evaluation**

Throughout management, results of specific actions should be monitored for their effectiveness. Poaching pressure needs to be monitored by the Regional Inspectorates by regular patrols. Next to that, it is important that the number of captive brown bears, as well as the population of brown bears in the wild is monitored throughout the project. Public awareness can be monitored by national surveys and evaluated at certain interfaces throughout the project. All data should be evaluated carefully, to check if measures were effective.

Adjustments to actions should be made possible by an adaptive management approach. Development of new or adjusted strategies is needed, when new information is collected. Regular meetings with the working groups are needed throughout the management process.





## 5. Discussion and conclusion

*The aim of this study was to develop a manual for management of welfare problems of captive brown bears in Europe. The usefulness of the created manual was tested during a visit to NACRES, partner organization of Alertis that is currently working on captive bear problems in Georgia. In this chapter usefulness of the manual is discussed.*

### **Demarcations**

The developed manual was meant to be principally useful for non-governmental organizations, aiming to improve the welfare situation of captive brown bears. Cooperation between NGO's and governmental bodies was given focus in the manual, because this proved to be important in former projects. This manual needs to be adjusted to be also specifically useful for governmental bodies.

The manual restricts to the situation of captive bears kept by private people. This can be found in several elements included in the manual, such as questions and strategies focussed on the situation of owners. However, as can be seen in the case study, also the situation of bears kept in zoos for instance, is important to consider. In Georgia, the situation of bears in zoos can be considered in the development of strategies as well. An adjusted manual is needed for management of these captive bears.

The case study on captive bears in Georgia was made to test the manual for usefulness. This case study seemed to be a suitable one for testing the manual. Most questions considered in the survey could be answered. Many problems related to the situation of captive bears that were found in literature (paragraph 3.5.1.), were found to occur in Georgia. Some problems that had been found in literature, such as illegal trade and a dependent livelihood of the owners, seemed not to have a high priority in the country. Other subjects, such as law enforcement and cooperation, have proven to be important subjects to handle in the management process in Georgia. The typical political situation of Georgia and history (changes within ministries for example), are subjects that need to be taken into account for this case. Also the situation of the owners is special in this country. The owners seem not to be solely dependent on the bears financially, but also have the bears as a kind of status symbol. Future research needs to provide more information on this topic.

Only one case study was used to test the usefulness of the manual. In other cases than Georgia, the manual may reveal that different problems need focus in the strategic part of management. Every country will have specific problems to be considered within management. This formed the basis on which this manual was developed. As stated by Hofer and Prombergen (1998), management plans need to be adapted to the specific situation of the country. The manual has proven to be suitable for application to the case study of Georgia. Application of the manual to other cases can reveal if the manual is useful for other cases as well.



### **Case study**

The case study on the situation of captive bears in Georgia showed that the manual was a useful tool for receiving a clear view on several complex, interrelated problems in the country. Although it was hard to come up with concrete strategies, the survey of these problems was valuable, because information that was not evident became comprehensive. The survey has shown that the largest interrelated problem to the welfare situation of captive bears in Georgia, is probably not dependence of the owners on captive bears, as was thought of on forehand. Poaching pressure and lack of enforcement by governmental bodies, are most important problems to handle within the management process. The survey revealed that these problems need strong focus in development of definite strategies for an action plan.

From the case study it became obvious that although national legislation concerning conservation of brown bears may be present in a country, this is not always enforced in an effective way. There is a challenge for (international) NGO's to highlight the importance of improved legal frameworks to governmental bodies.

Not all information that was needed for completing the survey, could be collected in such a short period in which the manual was tested (three weeks). More time is needed for achieving this collection. Especially data on the number of captive brown bears is needed to identify suitable strategies. NACRES is currently working on collecting these data. From June 2006, when the case study was finalized, until August 2006, the number of registrated captive bears owned by private persons was extended from nine bears to eighteen (Kutsia pers. comm. 2006). This number will probably increase during the future assessment of NACRES.

A survey on possible funding parties is important to make clear which parties could be involved in the project to supply sufficient finances in future. A social survey has to be performed to collect data on public awareness and intentions from owners of the bears. These data are lacking in Georgia, and have proven to be important in other projects. Furthermore, it is important to concern the manner of approaching the owners.

The application of the manual on the case study in Georgia, made clear that cooperation between different groups is important. In Georgia, the involvement of the Ministry of Environment has shown to be necessary for the management process. During the visit to Georgia, arrangements with governmental bodies proved to be important to receive support. Involvement of these interest groups and good communication skills are necessary to establish close cooperation in future. This involvement is necessary, because without cooperation between NGO's and governmental bodies, confiscation of captive bears will be not a possible strategy to apply.



### **Problems in developing the manual**

The formation of specific questions within the survey was a difficult thing to establish while developing the manual. There was a necessity to keep the manual general and as broad as possible, because of a different character of problems in every country. Due to the wide-ranging manual, some questions or strategies may be more useful in one case than in another.

The lack of concrete standards on animal welfare, made it hard to define evaluative questions on this subject. Because there are no exact (inter)national measures present that describe how large a cage of a captive bear should be for instance, only general questions were possible on this subject. Nevertheless, it must be noted that the situation of captive bears is in most cases unacceptable. It is important that standards on the keeping of brown bears are developed in future, and considered in national law to define the legal status of captive bears.

### **Usefulness of the manual**

The manual made an analysis of most important problems concerning welfare of captive brown bears possible. Most suitable strategies to handle welfare problems became clear. The manual was based on lessons learned from several past or current running projects concerning the welfare situation of captive brown bears. It is important that current and future projects working on improvements of animal welfare, learn from each other, exchange information, and 'use' each others knowledge. As stated by IUCN (2002), there is a growing demand for exchange of information between conservation bodies regarding the management of captive animals. The manual was developed for this purpose, to give advice for management of welfare problems that are still present in some countries. It must be noted that no single plan of strategy is correct as a total guide for action (Hofer and Promberg, 1998). Continual monitoring and evaluation of management is required to make management work effectively.

The application of the manual on the case study showed that communication and cooperation between different parties are useful tools to find sustainable solutions to problems. The case study showed that new information on for example number of captive bears, can lead to more specific or adapted strategies. A lasting outcome of the project is important, therefore constantly adjustments need to be made within management. For that reason, an adaptive management approach was taken during the creation of this manual, which encompasses a learning process and is adaptive to the specific circumstance (Lee, 1993). Adjustments to the manual can at any time be made, when more information becomes available from management by NGO's and/or governmental bodies.

NACRES, who is currently working on the development of an action plan, will use (parts of) the manual for future management, which proves the utility of the manual. NACRES already used two sample forms of the annexes to come up with their own standard form for putting all information into a database. Hence, NACRES already used this instrumental part in practice so far. The organization has the opinion that the first part of the manual (the survey), represents the full picture of what information needs to be gathered in order to plan the suitable strategy of action. For the situation of Georgia, it became obvious that specific questions about value of the bear should be added. The proposed question by NACRES, to question the commercial value of the bears, was as follows: "Does having a bear represent any commercial value and does it exceed its living expenses?". This question was added to the manual (question 4.5.a).



## Discussion and conclusion

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It is important to know if the reason why the owner bought the bear was because he/she wanted to attract more customers, or if there were other reasons. Also it is important to know if this generation of income worked out, or if the owner regrets having bought the bear now. Good communication skills are needed to receive this information from the owner.

Overall, the manual is very helpful according to NACRES. However, it would be useful for a NGO such as NACRES, to add some brief information as annexes featuring the specific practical information on brown bear diets and general health guidelines in the manual in future. This information can be useful for distribution among bear owners during visits.

The effectiveness of the manual for the entire management process, in terms of time and money, needs to be investigated in future. Usefulness of the manual for other NGO's than NACRES needs to be investigated as well.

### **Conclusion**

It can be concluded that the manual created in this study is a useful tool for developing strategies for management of welfare problems related to captive brown bears. The manual is principally useful for NGO's. As investigated in this study, the first part of the manual (survey), can reveal important information on several interrelated problems. The strategic part of the manual makes clear what actions need to be taken in order to come to a sustainable solution. An adaptive management approach can make adjustments to management possible during the whole management process. The case study has shown the utility of the manual for NACRES, working on welfare problems in Georgia. The utility of the manual for NGO's in other countries needs to be investigated in future.

The importance of a bottom-up, or source oriented approach became clear by the case study on captive brown bears in Georgia. Current information available exposed that poaching pressure and law enforcement are important subjects to consider in the strategic part of management of the captive bear problem in Georgia. The case study has shown that cooperation with other parties, such as governmental bodies and funding parties, is essential for successful management of welfare problems of captive brown bears.



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## Annex 1. Overview of different stakeholders

Table 1. Example of a stakeholder analysis in order to create an overview of interest groups involved. In the table important interest groups (stakeholders) are enlisted together with their interests, goals and problem perspectives. Strategies taken by stakeholders can also be included.

Stakeholders	Interests	Goals	Problem perspective	Strategies
National government Parliament Specific bodies (example): -Ministry of Environment -Ministry of.....	-Implementation of national legislation concerning nature and animal protection	-Protection of national flora and fauna.	-Decline of natural habitat. -Disturbance of habitat. -Illegal trade and hunt. -Decline of bear population.	...
International governmental bodies Specific bodies (example): -European Union	- Conservation of biodiversity by maintaining natural habitats and flora and fauna. - Maintenance of all living species.	-Provide framework for legislation.  -Develop international policies on the protection of endangered species.	See problems above.	...
International commissions  -CITES	-Development of international legally binding instruments to control illegal trade in endangered species	-Prevent and diminish illegal trade in protected bear species.	-Difficulties in enforcement of CITES rules. -Measures to control illegal export difficult to define. -National efforts hard to achieve.	...
Environmental NGO's (local and international) Organizations: -IUCN -WWF -etc.	- Conservation of biodiversity/ brown bears	-Preservation of biodiversity.  -Creating public awareness on the problems.	-Decline of natural habitat. -Disturbance of habitat. -Illegal trade and hunt. -Decline of brown bear population.	...



Stakeholders	Interests	Goals	Problem perspective	Strategies
Local people	-Different interests (examples): -Good livelihood -Sustainable environment	-More opportunities for employment. -Availability of natural resources.	-High underemployment rate. -Unsustainable use of resources.	...
Owners of the bears	-Optimal livelihood -Cultural traditions	-Earn money with resources that are available. -More opportunities for employment.	-High underemployment rate. -Education needs.	...
<b>In case of game hunting:</b> Game hunters	-Optimal livelihood -Status	-Earn money with available resources. -Earn status with trophy hunting.	-Legislation needed. -Decrease of bear population.	...
Research institutions	-Generation of new knowledge about welfare, conservation, education, public livelihood issues.	-Derive new facts for science	-Capacity needed: money, resources and working power.	...
Other stakeholders...	...	...	...	...



## Annex 2. List of data needed for a data base

Table 2.: Data needed for establishing a data registration system

Data needed	General information:				Owner of the bear:	Origin of the bear:	Document:	Date of birth/sex:	DNA samples:
	Organization	Surveyor and helpers	Region/ place	Date of survey					
<b>List details</b>  <b>Bear number (individuals) and names</b>					List contact details	Where is bear located? Address, place	Official document available? (CITES) Yes/No?	List details	Take hairs, faeces and blood samples for DNA sampling
<b>1</b>									
<b>2</b>									
<b>3</b>									
<b>4</b>									
<b>5</b>									
<b>6</b>									
<b>7</b>									
<b>8</b>									
<b>9</b>									
<b>10</b>									
<b>Etc.</b>									

(Source: Yordanova, 2001)



Table 3.: Data needed for registration of the health situation from the individual bears

General information:					Specific information:											
Details:					Values:								Length:			
Data needed	Organi- zation	Surveyor and helpers	Region/ place	Date of survey	Blood samples	Hair samples	Wei- ghing	Coronary activity	Body temp.	Eye exam.	Dental exam.	Head	Front paws	Hint paws	Total body	Thorax
Details					Normal / abnorm. values  List details	Normal / abnorm. values	Kg.	Normal/ abnormal values  List details	Degrees Celsius  List details	Normal/ abnormal values  List details	Normal/ abnormal values  List details	Cm.	Cm.	Cm.	Cm.	Cm.
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
Etc.																

(Source: Yordanova, 2001)



### Annex 3. Visits to captive bears in Georgia May/June 2006

Data needed	General information:				Owner of the bear:	Place/ origin of the bear:	Document:	Date of birth/ sex and cage size:	Health situation:
	Organization	Surveyor and helpers	Region/ place	Date					
1 <b>Name not clear</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Kachreti	23/05 /06	-Soso Shishniashvili  -Owner is not at the location often, lives in Tbilisi.	-Roadside restaurant Kachreti, bear is kept next to birdcages.  -Bear was brought as a young cub (by hunters?)	-Hired person said yes (?): not sure	-Approx. 1,5 years -Female  -Cage size: 6 x 2,5 x 2m Dark dirty cage, dirty water. Not obvious for people to find cage.	-Limp appearance (rests a lot). -Bad condition of fur (not shiny, dirty), probably sick. -Small body size for age. -Blind at one eye.
2 <b>Balou</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Sachkhere	25/05 /06	-First restaurant right side of road.  -Old man owns the bear.	-Roadside restaurant, before Sachkhere: <i>Valastukan</i> .  -Bear comes from <b>South Ossetia/ Sachkhere region</b> not clear.	-No  -Bear was bought for <b>100 \$</b> .	-4 years old -Male  -Cage size: 2,2 x 2,2 x 2m Owner gives water from close pump.	-Stereotypic behaviour, stressed appearance.
3 <b>Misho</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Sachkhere	25/05 /06	Second restaurant left side of road.	-Roadside restaurant, before Sachkhere.  -Bear comes from <b>South Ossetia</b> .	-No  -Bear was bought for <b>150 \$</b> .	-3 years old -Male  -Cage size: very small, 1,90 x 1,60 x 1,5 m, not a safe cage.	-Bear was thirsty. -Limp behaviour. -Not a good health condition (fur).





Data needed	General information:				Owner of the bear:	Place/ origin of the bear:	Document:	Date of birth/ sex: cage size:	Health situation:
	Organization	Surveyor and helpers	Region/ place	Date					
<b>4</b> <b>Misha</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Sachkhere	25/05 /06	-Third restaurant left side of road.	-Roadside restaurant, before Sachkhere.  -Bear comes from <b>Guria</b> , was brought as a present.	-No	-4 months old -Male  -Cage size: 2,2 x 2,2 x 2,5m	-Stressed appearance -Bruises above eyes (bear has hurted itself)
<b>5</b> <b>Misha</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Sachkhere	25/05 /06	-Fourth restaurant left side of road  -Owner wants to get rid of the bear.	-Roadside restaurant, before Sachkhere: <i>Mikhos tsvaro</i> .  -Bear comes from <b>surrounding region</b> .	-No  <i>Owner is willing to give bear away.</i>	-2 years old -Male  -Cage size: 3 x 2 x 2m, close to river, some wooden fence before cage.	-No special remarks
<b>6</b> <b>Mango</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Sachkhere	25/05 /06	-Fifth restaurant right side of road	-Roadside restaurant, before Sachkhere: <i>Lomisi</i> .  -Owner received bear from <b>circus</b> .	-No, but veterinary report available (vaccinated for Rabies in 2004).	-4 years old -Female  -Cage size: very small 1,36 x 2,05 x 1,5m, not a safe cage.	-Not a good appearance.  -Small body size for age.
<b>7</b> <b>No name</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen		25/05 /06	-Restaurant at <i>Rikoti Pass</i>	-Roadside restaurant: <i>Edemis Bagi</i> . - <b>Not known</b> where bear is from.	-No	-9 years old -Female  -Cage size: 2,55 x 2,35 x 2m, water available	-No special remarks.
<b>8</b> <b>Misha</b>	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen		25/05 /06	-Restaurant	-Restaurant before river Ksani on way back to Tbilisi. -Bear comes from <b>Svanethi</b> .	-No	-4 years old -Male -Cage size: 2,2 x 4 x 2m, cage was recently expanded.	-No special remarks.



Data needed	General information:				Owner of the bear:	Place/ origin of the bear:	Document:	Date of birth/ sex: cage size:	Health situation:
	Organization	Surveyor and helpers	Region/ place	Date					
9 - List details: Bear nr + names	NACRES Alertis	-Bejan Lortkipanidze -Annemarie Garssen	Rustavi	01/06 /06	-Owner steal factory: Gia Omanadze	-Steal Factory Korgazali	No  <i>Owner is willing to give bear away</i>	-6 years old -Male  Cage size: 3 x 2 x 1,8 m., dirty cage, no fresh water.	-Stressed behaviour.  -Bad teeth.

### Number of captive bears known by NACRES (June 2006):

-9 captive bears visited at private persons

-4 bears Rustavi Zoo

-3 bears in Tbilisi Zoo

-4 bears in Batumi Zoo

Other bears:

-2 bears owned by private persons: region of Tetriskavo and Sachamias Seri (2 years old)

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22 bears known.

Probably more bears in Batumi area, near coast and near other restaurants and petrol stations.



## Visits to captive bears in zoos Georgia

Data needed	General information:				Owner of the bear:	Place/ origin of the bear:	Document:	Date of birth/ sex: cage size:	Health situation:
	Organization	Surveyor and helpers	Region/ place	Date					
<b>10</b>	NACRES Alertis	-Annemarie Garssen	Tbilisi Zoo	17/05 /06	-Director Zoo Zurab Gurielidze	Center of Tbilisi	-	Male	
<b>11</b>	NACRES Alertis	-Annemarie Garssen	Tbilisi Zoo	17/05 /06	-Director Zoo Zurab Gurielidze	Center of Tbilisi	-	Male	
<b>12</b>	NACRES Alertis	-Annemarie Garssen	Tbilisi Zoo	17/05 /06	-Director Zoo Zurab Gurielidze	Center of Tbilisi	-	Female	
<b>13</b> -	NACRES	-Bejan Lortkipanidze -Annemarie Garssen	Rustavi Zoo	01/06 /06	-Director Zoo	-Near center Rustavi	-	-3 years -Male -Approx. 4 x 5 x 3 m., concrete floor, 1 small bath 1.5 x 1 m. Shared with bear 10 and 11.	-Restless behaviour. -No special remarks.
<b>14</b> -	NACRES	-Bejan Lortkipanidze -Annemarie Garssen	Rustavi Zoo	01/06 /06	-Director Zoo	-Near center Rustavi	-	-3 years -Male -Approx. 4 x 5 x 3 m., concrete floor, 1 small bath 1.5 x 1 m. Shared with bear 9 and 11.	-Restless behaviour. -No special remarks.
<b>15</b> -	NACRES	-Bejan Lortkipanidze -Annemarie Garssen	Rustavi Zoo	01/06 /06	-Director Zoo	-Near center Rustavi	-	-4 years -Male (darker than other two) -Approx. 4 x 5 x 3 m., concrete floor, 1 small bath 1.5 x 1 m. Shared with bear 9 and 10.	-Restless behaviour. -No special remarks.
<b>16</b> <b>Gogo-beli</b>	NACRES	-Bejan Lortkipanidze -Annemarie Garssen	Rustavi Zoo	01/06 /06	Director Zoo	-Near center Rustavi	-	-2,5 years old -Female -2 x 6 m., concrete floor, empty cage, no water available.	-Thirsty appearance.

