Seria IV: DISEMINARE/PROMOVARE

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The action plan for the conservation of the brown bear *(Ursus arctos arctos)* in Romania

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-PDF online version-

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1. INTRODUCTION

In compliance with the provisions of Government Ordinance no 57/2007 regarding the status of natural protected areas, conservation of natural habitats, wildlife and flora, art. 31, paragraph (4) with the purpose of protection and conservation of brown bear, there has been drafted the national action plan for the brown bear called:" The action plan for the conservation of the brown bear (*Ursus arctos arctos*) from Romania", a document containing action and conservation measures, in accordance with the action plans for the brown bear, agreed at international / European level.

The action plan for the conservation of the brown bear (*Ursus arctos arctos*) from Romania is a document revising the Action plan which served as a basis for the measures adopted since 2006 until present by the public authorities responsible with the protection and the management of the brown bear nationally. The document sets out the priority actions for the conservation and management of the bear population at national level; as well as the planning of the measures in terms of time and space.

The revised action plan has been conceived as a concise and operational document in order to implement the management of this species by the responsible institutions/organisations. It assures the application of the provisions of the international convention to which Romania adhered, including guides and recommendations concerning the conservation of the bear population globally and at European level, taking into account the legislation, administration framework and the existent social context in Romania.

The action plan aims to be a flexible document, which may be periodically revised and adapted in order to ensure the achievement of the purpose for which it has been elaborated and to fulfil in a broader context to European objectives. The existence of a clear conservation policy and of objectives within the national management plan can facilitate the coordination of management policies and agreements between neighbouring countries that share the Carpathian brown bear population.

The action plan for the brown bear population in Romania has been realised within the project LIFE FOR BEAR - LIFE13 NAT/RO/001154 -CONSERVATION OF BROWN BEAR POPULATION IN ROMANIA, undertaken by the National Institute for Research and Development in Forestry "Marin Drăcea" - Brașov centre (former I.C.A.S.), as coordinator beneficiary, in partnership with the Ministry of Environment, Carpathian Wildlife Foundation,

Bucegi Natural Park Administration, Local Public Forests Administration Kronstadt R.A., Town Rasnov Forest district as associated beneficiaries.

1.1. The objectives of LIFE FOR BEAR project are:

- Updating the management plan of the brown bear population in Romania within the social and economic development context.
- Improving the conservation status of brown bear population in the conflict area Brașov-Valea Prahovei.
- Optimising the household waste management in order to reduce man-bear conflicts in the area of Brașov-Valea Prahovei.
- Transfering good practice techniques to stakeholders regarding the conservation and the management of brown bear population.
- Improving local and national stakeholders' attitude regarding the conservation of brown bear population and the promotion of Natura 2000 sites.

Photo 1. Team LIFE FOR BEAR - Bear capture from anthropic area and relocation in natural habitat

1.2. The importance of LIFE FOR BEAR project:

The project LIFE FOR BEAR brings, in addition to what has been applied up to now, complex management of the man-bear conflicts, by testing new methods, improving the ones previously applied, respectively optimizing the solutions. The results will lead to finding the most efficient means of reduction of the negative impact of the urban development on bear population, i.e., the improvement of the urban mass education regarding the protection of this species, with maximum effect upon all habitats and species in the area.

The project is based on the formation of teams of specialists in the hunting

field at national level, which may intervene in cases of human-bear conflicts (capture, relocation, bear rescue from unauthorized trap, release from captive areas, and so on).

In order to correlate the actions, the project LIFE FOR BEAR (LIFE13 NAT/RO/001154) collaborated with the projects: WOLF LIFE– (LIFE13NAT/RO/000205 – "Implementation of the best practices for in-situ conservation of Canis lupus species in the Eastern Carpathians", a project that will implement the National action plan for the wolf species (*Canis lupus*) and the LIFE Connect Carpathians project (LIFE12 NAT/UK/001068)". In the western part of Romania, following the implementation of the project "Enhancing landscape connectivity for brown bear and wolf through a regional network of NATURA 2000 sites in Romania - LIFE Connect Carpathians (LIFE12 NAT/UK/001068)" a Regional action plan for bears will be developed, with specific management measures addressed to the ecological corridor Apuseni – Southern Carpathians.

2. PROTECTION STATUS AND CONSERVATION STATUS OF THE BROWN BEAR POPULATION IN ROMANIA

The bear species (*Ursus arctos arctos*) is included in Annex II of the Habitat Directive, i.e., Annex 3 of Government Ordinance no.57/2007, that includes wild fauna and flora of community interest, the conservation of which requires the declaration of Special Areas of Conservation (SAC) forming the Natura 2000 network. The species is listened in Annex IV of the Habitats Directive, respectively Annex 4A of Government Ordinance no. 57/2007, as a species of community interest that requires strict protection. The obligations arising from the Habitats Directive include: maintaining the favourable conservation status for the brown bear population, periodical monitoring and reporting to the European Commission regarding the conservation status of the species.

Also, the species is included in Annex II (Strictly protected fauna species) of the Convention regarding the conservation of wildlife and natural habitats in Europe, adopted in Berne on September 19, 1979, to which Romania acceded by Law no. 13/1993.

In order to ensure the protection regime of wildlife species of hunting interest, taking into account the provisions of EU legislation and international conventions in the field of nature protection, *Law no. 407/2006 on hunting and protection of the hunting fund,* with subsequent amendments and completions, imposes restrictions on hunting activities, the species *Ursus arctos arctos* being included in Annex 2 of this law, as a species of hunting interest for which hunting

is prohibited. In order to reduce human-bear conflicts and control the brown bear population, in Romania, the competent authorities approve derogations from the strict protection measures based on the provisions of art. 16 of the Habitats Directive.

The Red book of vertebrates in Romanian (Botnariuc and Tatole 2005), following the analysis of existent data at that time, based on criteria and categories developed by IUCN (2001), included the brown bear population in Romania in the category of vulnerable species.

The conservation status of all wild mammals in Europe, initiated in 2005, in accordance with IUCN guidelines for the assessment of the conservation status of species at regional level, includes the brown bear species in the non-threatened species (LC) category for each regional level analyzed: the continent of Europe (including the European part of Russia) and the territory of the EU25 (Temple and Terry 2007), respectively.

Currently, globally, after the assessment of the conservation status under the IUCN criteria, the brown bear is listed as non-threatened species (LC - Least Concern) (McLellan and colab., 2008).

According to the provisions of the Habitats Directive, conservation status is considered" favourable" if:

- population dynamic data indicate that the species is maintained in the long-term as a viable element of its natural habitats;
- - the natural range of the species is not reduced and there is no risk of it reducing in the near future;
- - the species has and is very likely to continue to have a sufficiently extensive habitat in order to maintain its population in the long-term.

After the assessment of the conservation status of wild species and natural habitats listed in Annex IV and Annex V of the Habitats Directive in order to report to the Europen Commission based on art.17 of the same, made in 2013 for 2006-2012, the conservation status of the brown bear in Romania is favourable at the level of alpine and continental biogeographical regions in which the species is widespread..

The size of the brown bear population in our country has changed over time due to anthropogenic pressure. During World War II the species was over-hunted and there were less than 1000 individuals left after the war. At the beginning of the 50s, in Romania, there was estimated a number of less than 860 specimens. As a result of the alarming decrease of the bear population, the hunting of this species was restricted by Decree no. 76 / 7.02.1953, being

established a legal hunting season from 1st of March to January 15, hunting of bear cubs was banned throughout the year as was shooting bears in the den, setting a harvest quota and the obligation to obtain an individual hunting license. The bear population in our country grew steadily until 1969, when it reached about 4700 individuals. Beginning with 1969, due to hunting pressure, the bear population began to decline, reaching in 1974 about 3700 specimens. The year 1976 marked the beginning of a new period in bear population management in Romania by introducing Law no. 26/1976 (Anon., 2005). This law stipulated the hunting period, which was reduced to 6 months and divided into two periods (March 15 - May 15 and September 1 - December 31), special units for hunting management were established whose management regime was carried out through special forestry and hunting plans that led to an increase in the bear population particularly due to the large amount of daily food and the increase of feeding periods (Micu, 1998). The result of those protective measures was a substantial increase in the number of bears, reaching a peak of almost 8000 individuals in 1988. The number of bears decreased substantially from 1989 to 1996 due to poaching, illegal use of poisons and very high legal harvest quota. (Anon., 2005). Starting in 2001, the bear population in Romania registered a slight increase in the size of the population every year (Cazacu et al. 2014).

Taking into account the date of Romania's accession to the EU, according to the evaluation from that period, the bear population was estimated at about 6000 individuals, representing about 35-40% of the estimated number at European level (excluding Russia), exceeding the optimal estimated number of 4000 bear specimens supported by the natural habitat under natural conditions which would minimize the social and economic impact (Anon., 2005).

The size of the brown bear population in Romania was estimated in 2016 as being within 6050-6640 individuals, according to the study funded by the central public authority for environmental protection "Study about estimating populations of large carnivores and wild cats in Romania (*Ursus arctos, Canis lupus, Lynx lynx* and *Felis silvestris*) in order to maintain a favourable conservation status and to establish the number of specimens of strictly protected species that can be harvested during the 2016-2017 hunting season."

The largest bear population in Europe is found in the Romanian Carpathians (Ionescu 1999), being a stable population (Straka et al. 2012), spread mostly in the Alpine bioregion (Ionescu 1999). Previous studies carried out on bear specimens in Romania have indicated the presence of a single population (without genetic substructuring) and a high value of genetic diversity. Hence,

the bear population in our country recorded one of the highest values of genetic diversity in the world (Cotovelea et al. 2013).

The existence of a single population with high genetic diversity was found throughout the Romanian Carpathians, a result confirmed by Bayesian analysis. In contrast, the family structure of the habituated bears represents a threat to the population's genetic balance, in the long run there is a danger of appearance of degenerated specimens, as a result of repeated possible inbreeding (Cotovelea 2014).

A threat to the population structure is represented by the habituated bears, that exhibit unnatural behaviour, tolerating the presence of humans in an unusual way (Schwartz et al. .2006).

At the regional level, the bear population in Romania is part of the Carpathian population, one of the ten bear populations in Europe. The brown bear population of the Carpathians is the largest population of this species in Europe (except Russia), being estimated at approximately 7000 individuals out of the total of approx. 18.000 bears and dynamics of the size of this population is stable (Boitani et al. 2015).

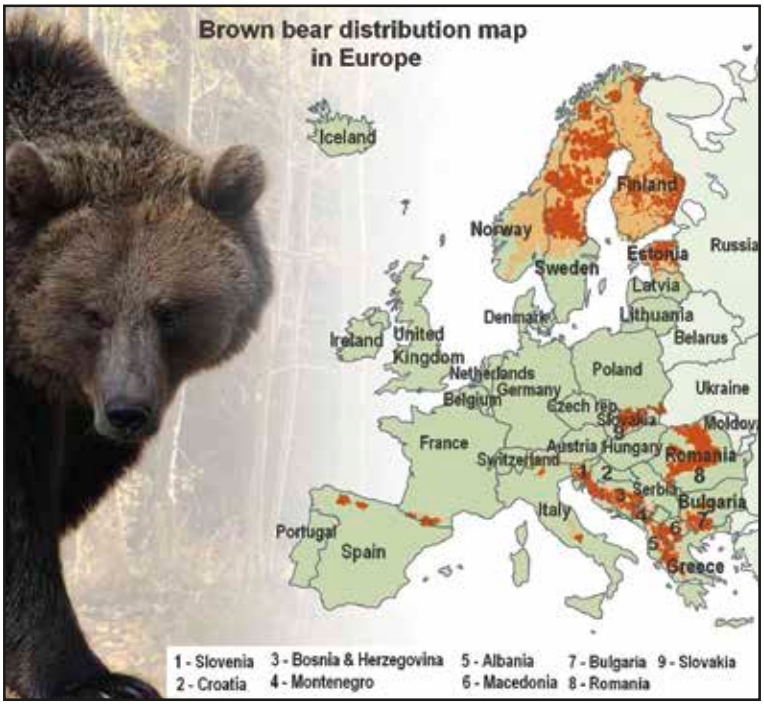

Fig. 1. Brown bear populations distribution in Europe.

The distribution area of the brown bear population in the Carpathians,

at the level of countries whose territory overlaps the distribution area of this population (Romania, Poland, Serbia, Slovakia, but excepting Ukraine due to lack of information) is stable**.**

The distribution of the brown bear population in Romania was higher in the past but was reduced after the Second World War, increasing slowly after the end of the war. According to the literature data, the habitat of the bear species in Romania occupied approximately 28.000 sqm between 1960-1970 (Micu, 1998). As a result of the measures adopted in 1976, with the population increase recorded during the respective period, the area of spread of this species grew up to 65.000 sqm. Noadays. the brown bear population in Romania occupies an area of over 69000 sqm, representing about 30% of the country's surface, at altitudes higher than 600 m, along the entire forested area of the Romanian Carpathians, 93% being located in the mountain area and 7% in the hill area (Anon., 2005).

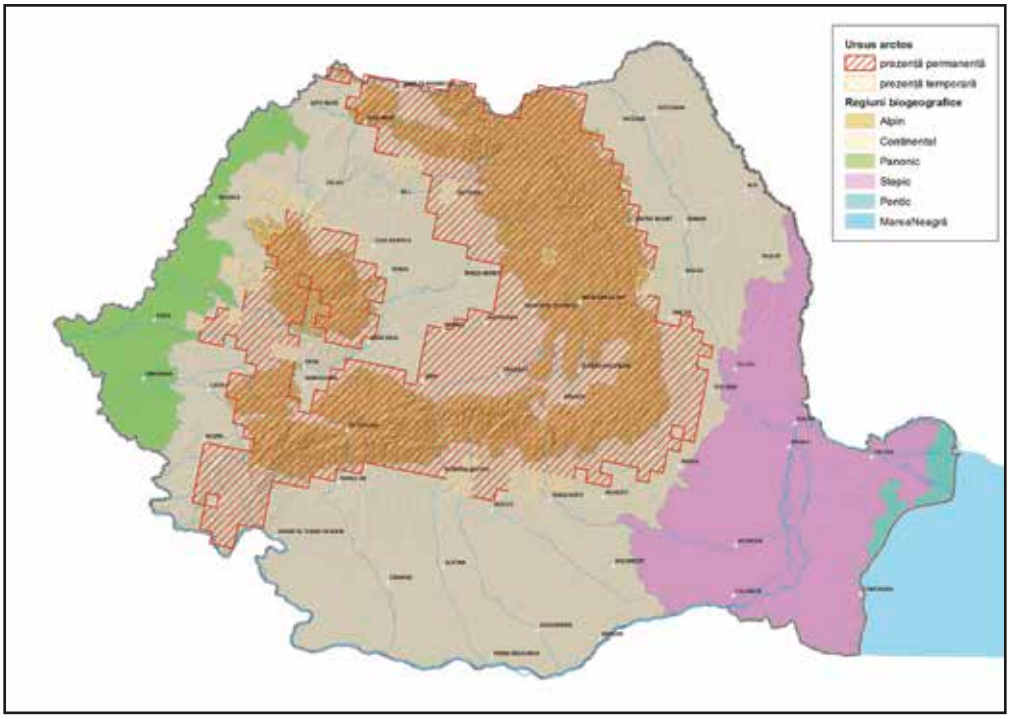

Fig. 2. Distribution of brown bear in Romania (LIFE FOR BEAR 2017).

According to official estimates, the highest density is recorded in the central and northeastern area of the Carpathians, in Covasna, Brașov, Harghita, Bistrița, Buzău, Mureș and Neamț counties. Locally, the highest density of bears was recorded in the Brașov-Valea Prahovei area, in the Bucegi, Postăvaru, Piatra

Mare and Baiului mountains, where the density of bears is between 50-60 specimens / 10,000 ha of habitat. This includes the habituated bears, which enter the public domain (Jurj 2016).

The brown bear's specific habitats are the mixed forests of the hill and mountain area, of great extension, slightly disturbed by the anthropogenic activity, which offer shelter, peace and food, these being indispensable for the survival of the species. The bear is an omnivorous, opportunistic species, with a wide range of biological requirements during its life cycle, which can lead to conflicts with humans. In the context of the continuous alteration of the natural habitat due to the anthropogenic pressures, they tend to use the high-quality habitats as a trophic resource near the human settlements, which leads to the amplification of the human-bear conflict. Within the LIFE13 project NAT / RO / 001154 a critical activity was the national-level analysis of the quality of the brown bear specific habitats, considering that the last assessment based on the habitat suitability key was carried out in 2002, providing the necessary data for identifying the areas which require the implementation of measures for the conservation of the habitats essential to the species.

According to the national report elaborated in 2013 by Romania regarding the evaluation of the conservation status of the species for the period 2006-2012, table no. 1 presents the pressures and threats on the species at the level of the biogeographic regions (alpine and continental), and their importance, established based on the experts' opinion.

At European level, the most relevant threats are: habitat loss due to infrastructure development, disruption, low level of acceptance by some segments of the rural population, reduced capacity of management institutions, intrinsic bio-ecological factors (i.e. small bear population, accidental mortality and illegal persecution. It is expected that many of these threats are expected to become more critical in the future (Boitani et al., 2015). According to the 2012 assessment of the status, management and distribution of large carnivores in Europe (Kaczensky et al., 2013), financed by the European Commission, in the case of the brown bear population of the Carpathians, to the list of relevant threats was added the degradation of the habitat due to human activities (harvesting wood and other plant species), the lack of knowledge regarding the bear population for the entire distribution area of this population.

Table 1. Pressures and threats on the *Ursus arctos* species and their importance in the alpine and continental biogeographical regions of Romania

Code	Name	Degree of importance			
		Alpine biogeoraphical region		Continental biogeographical region	
		Pressure	Threat	Pressure	Threat
B06	**grazing in forest / forested area**	L	L	L	L
D01.02	**roads, highways**	L	L	L	L
D01.04	**railways, TGV**	L	L	L	L
E01.01	**continuous urbanization**	M	M	M	M
E01.03	**dispersed living**	L	L	L	L
E03.01	**storage of household waste / waste from leisure facilities**	L	L	L	L
F03.02.03	**trap capturing, poisoning, poaching**	M	M	M	M
G01.03.02	**the use of off-road motor vehicles**	M	M	M	M
J03.01.01	**reduction of prey availability (including enclosures)**	L	L	L	L
J03.02	**anthropogenic reduction of habitat connectivity**	H	M	H	H
K03.06	**conflict with domestic animals**	M	M	M	M

L –low importance; M – medium importance; H – high importance.

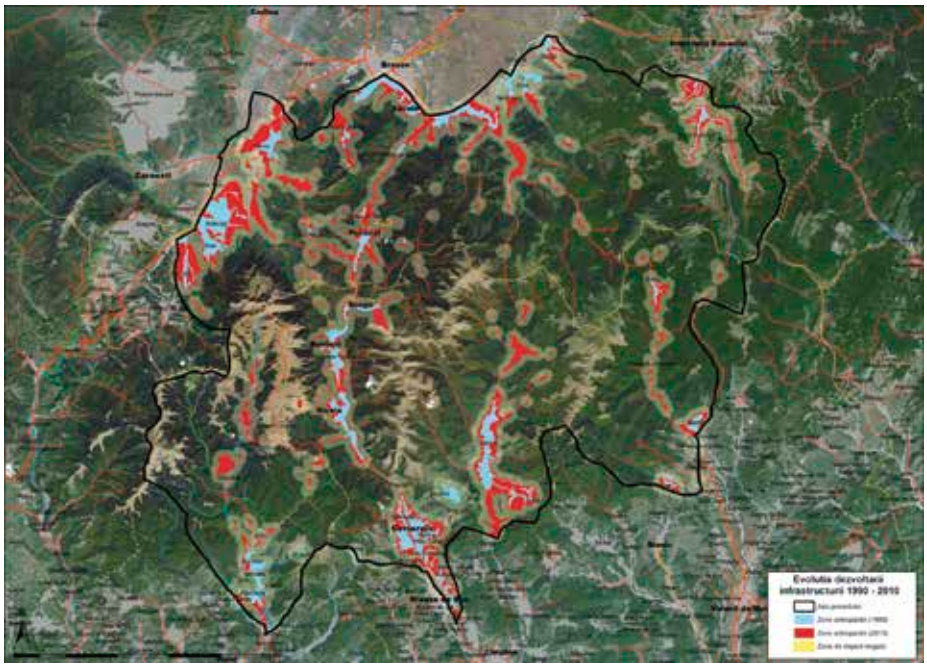

Fig. 3. Loss of natural habitat following antrophogenic activities in Brașov – Valea Prahovei area (Analysis of LIFE FOR BEAR project).

3. STAGE OF IMPLEMENTATION OF MANAGEMENT MEASURES FOR THE BROWN BEAR UNTIL NOW AND PROBLEMS THAT WERE IDENTIFIED

"Management and action plan for the conservation of the brown bear population in Romania", issued in 2005, based on the provisions of the Berne Convention and the recommendations of the "Action plan for the conservation of the brown bear population in Europe" (Swenson and colb., 2000), establishes the management objectives within a framework defined by the international and local legislation, the measures necessary for the conservation of the brown bear population and the specific natural habitats, as well as ensuring human coexistence with this species. "Management and action plan for the conservation of the brown bear population in Romania" is a fundamental document in the decision-making process, establishing guidelines on conservation measures adopted annually by the authorities and organizations responsible for the management of this species.

Although this management plan has not been approved by a normative act, the necessary measures for species management are included in the national legislation.

Depending on the interest group they are part of, the stakeholders have expressed their opinions, often through media and presenting extreme and impactful situations, ranging from the total ban on hunting (in the case of NGOs conservationists) until the complete elimination of the bear specimens from specific areas, the modification of the legislation to remove the bear from the list of strictly protected species and to allow their hunting and the reducing of the population size to the optimal number estimated based on the reliability level (managers of wildlife management units, local political factors).

The management measures approved by the central public authority for environmental protection during this period were based on the provisions of the "Management and action plan for the conservation of the brown bear population in Romania". The document was elaborated in 2005, so as to meet the obligations assumed by accession to the EU and international conventions in the field of nature protection, but also in order to respond to the social and economic reality in Romania.

The basic principles of the action plan, starting from the considerations that the optimal size of the brown bear population, from an ecological, social and economic point of view, is about 4.000 individuals, and the specific habitats cover an area of approximately 69.000 km² at the national level, are the following:

- Maintaining a viable brown bear population in a sustainable manner that fulfills the ecological role in all ecosystems that provide adequate conditions for the species' existence;
- Maintaining a normal structure from an ecological point of view of the brown bear population;
- Monitoring the dynamics of the brown bear population in order to establish the necessary management measures;

Table 2. The implementation stage of the Action plan for the brown bear population in Romania during 2005-2018

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTATION TERMS	IMPLEMENTATION STAGE
POPULATION ESTIMATION					
Basic methods for estimating bear population	Assessing the number of bears through: (1) tracks measurement and avoidance of the double recording by eliminating from counting the tracks of equal dimensions (1cm tolerance); (2) the method of identifying the reproductive units; (3) direct observations at the feeding sites. - shall be conducted in spring - detailed training on the use of methods will be carried out. - the assesment between the wildlife management units shall be correlated - the assessment from 2010 will be published on the website of the Ministry of the Environment - there will be structured the population by age and sex classes - the coordination of the actions will be carried out with more specialized personnel - the evaluation methodology	Ministry of Environment The National Agency for Invironmental Protection National Institute for Research and Development in Forestry Managers of wildlife management units / administrators of protected natural areas	Budget of the Ministry of Environment Managers of wildlife management units/ administrators of protected natural areas	Each spring	The Ministry of Environment funded annually evaluation studies of the brown bear population analysing the data obtained from the assessment carried out by the managers of the wildlife management units, centralised by the National Agency for Environmental Protection, data collected from the field using basic methods, according to the methodology send by the Ministry of Environment. During these studies, training of the managers of the wildlife management units was carried out regarding the application of the evaluation methods provided in the guide drafted in 2011. In 2013, through the project OP ENV Axis 4, also the monitoring methodology was drafted in order to assess the conservation status and the fulfillment of the reporting obligations according to art. 17 of the Habitats Directive.

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTA-TION TERMS	IMPLEMENTATION STAGE
IMPLEMENTATION MANNER					
Complementary estimation methods	- marking, marks restoration, mounting of GPS transmitters to determine the size of the territories and the overlaps between them - genetic analysis - analysis of the natural structure of the population Experimenting alternative methods of estimation and their implementation	Interested organisations and institutions	Projects and other sources		The complementary methods were applied only at regional or local level, through LIFE projects, OP ENV) taking into account the costs of large-scale implementation thereof. At national level, the National Institute for Research and Development in Forestry collects samples from individuals caught under the derrogations granted by the Ministry of Environment in order to conduct genetic analysis.
NGO involvement in the estimation process	- timely notification of interested NGOs	MMP		Permanent	Implicarea NGO în procesul de estimare este deficitară în anumite zone, datorită comunicării defectuoase sau chiar lipsei comunicării la nivel local cu gestionarii fondurilor de vânătoare.

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTATION TERMS	IMPLEMENTATION STAGE
CONSERVATION OF THE HABITATS AND SPECIES					
Priority scientific studies	- the habitate usage and the capacity to support habitats, the habitats' fragmentation and the identification of connectivity areas of them - design / implementation of ecological networks - size of territories and overlaps - the ecological characteristics of the populations (birth, mortality, annual increase, etc.) - favorable conservation status - analysis of the genetic structure of the population	Interested institutions	Projects and funding programmes	Interested institutions	Projects and funding programmes.
Avoiding the fragmentation of the habitats	- all activities with potential negative impact on the habitats used by bears will be carried out under the control and with the approval of the Ministry of Environment	Ministry of Environment	The beneficiary of the activity	Permanent	The national legislation regarding the evaluation of the impact of some activities on the habitats of the species has been supplemented / improved.
Actions to mitigate the negative effects of the highway	- bridges, tunnels and viaducts - other measures included in the design of highways - identifying the "fragmentation hot-spots"	Ministry of Environment Beneficiaries	The beneficiary of the works		Highway projects have been modified by the beneficiary of the work following the results of the studies carried out, consultations and involvement of scientific institutions and NGOs for reducing the impact on the bear population.

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTATION TERMS	IMPLEMENTATION STAGE
CONSERVATION OF THE HABITATS AND SPECIES...					
Special protection areas (SCI) for large carnivores	- creation of a database regarding the projects - elaboration and approval of management plans that will include special protection measures in the SCIs declared for the bear	Ministry of Environment and the National agency for environmental Protection	Projects		A number of 90 SCIs, with a surface of 19.144 km², out of a total of 383 SCIs are appointed for this species. The projects funded by OP ENV Axis 4 resulted in the creation of the management plans, most of them being under approval at this moment.
Additional food management	- the food supply distance should be at least 2 km from localities and at different locations - the food is supplied to reduce conflicts, to help and protect the species (according to hunting management plans). - the supplied food must be compatible with the natural diet - veterinary certification of complementary supplied food offered	Managers of wild-life management units/ administrators of protected natural areas	Managers of wildlife management units / administrators of protected natural areas	Permanent	Complementary food supply was conducted under Order 478 as of October 16, 2002 regarding the approval of the Norms for drawing up the specialized studies for the sustainable management of the hunting and of the Instructions for applying the Norms for the preparation of the specialized studies for the sustainable management of the hunting.
Integrating the forestry and wildlife management	- consulting the managers of the wildlife management units and the managers of the protected natural areas when elaborating the forestry work plans - introduction of fruit trees / shrubs	Ministry of Environment		Permanent	The wildlife management plans and the forestry work plans are harmonised with the protected natural areas management plans

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTATION TERMS	IMPLEMENTATION STAGE
CONSERVATION OF THE HABITATS AND SPECIES...					
Legislation harmonisation	- continuous process based on previous studies	Ministry of Environment		Permanent	The environmental legislation was amended but there are still aspects that are not correlated with the provisions of the existing legislation in other areas.
PREVENTION AND REDUCTION OF THE CONFLICTS					
Education of the local population	- editing of materials, presentations, public conferences - launching of interactive educational programs	Ministry of Environment Managers of the wildlife management units NGOs Administrators of protected natural areas	Projects	Permanent	Projects funded by LIFE, OP ENV conducted regionally or locally.
Waste management	- special containers that do not allow outside access - daily collection of waste in localities with high potential for man-bear conflicts	Local authorities National agency for environmental Protection and National Environmental Guard	Projects and local budgets	Permanent	Containers and the daily collection of waste were provided at local level within some projects.

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTA-TION TERMS	IMPLEMENTATION STAGE
PREVENTION AND REDUCTION OF THE CONFLICTS					
Relocation of problem individuals		Ministry of Environment, Managers of the wildlife management units, ONGs	Managers of the wildlife management units		The measure was applied annually, within the limits set by national law.
Regulation of human activity in areas with man-bear interaction	- banning tourism based on garbage bears - prohibition of human activities (feeding, dog hunting) that encourage the habituation of the bear and alter its natural behavior - Prohibition of motor sports (ATV, motorcycling, enduro, motorized sleds)	Local authorities		Permanent	Measures established punctually / locally through decisions of local authorities or by regulations for protected natural areas in certain areas.
Study of the types of conflicts and drawing up the measures and procedures for prevention	- the registration of conflicts – reporting before the Territorial Inspection of Forestry and Wildlife and to the Agency for Environmental Protection - carrying out an annual analysis - a set of preventive measures for the interested institutions	Ministry of Environment	Budget, Managers of the wildlife management units, projects		The Ministry of Environment funded yearly studies on the damages registered on the basis of the data collected by The Agency for Environmental Protection and the decisions of the Territorial Inspection of Forestry and Wildlife in order to grant compensations under GO no. 1679/2008. By means of other funding sources (LIFE) there have been conducted local studies regarding the types of conflicts, the factors which favor damages production and prevention measures.

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTATION TERMS	IMPLEMENTATION STAGE
PREVENTION AND REDUCTION OF THE CONFLICTS					
Informing the public opinion and the involvement of NGOs		Central authorities, education institutions, NGOs, etc.			Projects funded by LIFE, OP ENV carried out at local or regional level have provided financial support for organizing meetings with stakeholders and editing materials for the informing of the public opinion.
Implementing the prevention measures	- priority financial resources for prevention actions - actions to prevent damage caused by the bear - code of good practices for preventing conflicts with large carnivores	Ministry of Environment, Managers of the wildlife management units		Permanent	The implementation at local level of some preventive measures but the funding was provided through projects
Damages compensation	- the compensation is made only where the implementation of the preventive measures has been found, according to the legislation in force - measures to implement the legislation	Ministry of Environment, Managers of the wildlife management units	Budget Ministry of Environment	Permanent	Only compensation of damages on agricultural / forestry crops and domestic animals according to GO no. 1679/2008, but the legislation in force does not establish the obligation of the owners of agricultural / forestry and domestic animals to implement preventive measures for the award of damages produced by strictly protected species. There is no legislation and a functional system to compensate the damages caused by the brown bear species to material goods and human injuries.

NAME OF THE ACTION	IMPLEMENTATION MANNER	RESPONSIBLE INSTITUTIONS	FINANCIAL RESOURCES	IMPLEMENTA-TION TERMS	IMPLEMENTATION STAGE
POPULATION SIZE CONTROL					
Granting of exemptions	- annual report on the damage recorded and the effects of the exemptions applied - establishing the maximum level of intervention following a scientific study	Ministry of Environment			The Ministry of Environment has funded annual studies on the effects of applying ex-emptions on the size of the bear population and establishing the maximum number for intervention
Data and biological samples collection	- standardization by specialized sheets - unitary methodology for sample collection - ensuring conservation - analysis of samples	Managers of the wildlife management units Ministry of Environment			The Ministry of Environment through the National agency for Environmental Protection transmitted to the managers annually the methodology for the evaluation of the headcount, the collection records for the data in the field for each wildlife management unit and manager, the format of the report on the action taken based on the waivers granted and the obligation to collect biological samples from the captured / collected individuals that are established by the Order.
Ensuring the transparency on the harvest rate, headcount etc.	- on the website or on request - data is public	Ministry of Environment			The Ministry of Environment published on the site reports of some evaluation studies but not annually and responded to the requests received on the nationally evaluated headcount, the number of collected individuals..

4. REVISING THE "ACTION PLAN FOR THE BROWN BEAR POPULATION IN ROMANIA" AS AN INTEGRANT PART OF THE "MANAGEMENT PLAN FOR THE CONSERVATION OF THE BROWN BEAR POPULATION IN ROMANIA"

The general objective proposed for the elaboration of the future management plan is the conservation of the brown bear population in Romania, maintaining the size of the bear population at a level that will ensure a good coexistence with the human population.

In order to achieve the general objective by implementing the conservation objectives of the management plan, the "Action plan for the conservation of the brown bear population (*Ursus arctos arctos*) in Romania" was drawn up.

4.1. Objectives of the "Action plan for the conservation of the brown bear population *(Ursus arctos arctos)* in Romania"

The long-term maintenance of the brown bear population and its habitat in favourable conservation state, in coexistence with humans, is the general objective at national level.

The action plan for the conservation of the brown bear population (*Ursus arctos arctos*) in Romania represents an implementation-oriented document, addressed to the responsible authorities and organizations involved in the management of the species at national level. This document sets out specific measures for each action, as well as the implementation framework (time period, funding sources and the authority / organization responsible for implementing the measure).

The action plan for the conservation of the bear population in Romania ensures a prioritization of conservation measures and coordination of the actions of the factors involved in the conservation and management of the species, in order to achive the conservation objectives.

The conservation objectives of the brown bear species in Romania are:

- Ensuring the distribution area and population size in order to maintain the favourable conservation status of the brown bear species
- Maintaining the connectivity of the brown bear population in the Carpathian region
- Prevention, damage control and resolution of human-bear conflicts
- Education, information and communication regarding the brown bear species and its management

- Improvement of the legal and institutional framework regarding bear species management

The basic principles of the action plan, based on the considerations that the optimal size of the brown bear population, from an ecological, social and economic point of view, is about 4.000 individuals and the specific habitats cover an area of approximately 69.000 km² at the national level, are the following::

- Maintaining a viable brown bear population sustainably, fulfilling the ecological role in all ecosystems that provide adequate conditions for the species' existence;
- Maintaining a normal structure of the brown bear population from an ecological point of view;
- Monitoring the dynamics of the brown bear population in order to establish the necessary management measures;

At European level, the document identifying key actions for large carnivorous populations in Europe (Boitani et al., 2015) over the next five years was published in January 2015, in order to improve the conservation status of these populations. This document provides the responsible authorities and stakeholders in the countries of the region with strategic planning for the relevant actions to be implemented in the respective period. In the elaboration of the action plan for the conservation of the bear population in Romania, the general actions for the large carnivore species in Europe and the necessary actions at the level of the brown bear population in the Carpathians region established by this document were analyzed.

The action plan for the conservation of the bear population in Romania takes into account the specific situation of our country, ensuring a prioritization of the actions and the coordination of the factors involved in the conservation and management of the bear population in Romania, for:

providing reliable data as scientific support in the decision-making process,

- maintaining a stable bear population,
- protection of specific natural habitats and their quality,
- maintaining natural behaviour and avoiding habituation/conditioning of bear individuals,
- conflict prevention and reduction,
- ensuring ecological connectivity in the species distribution area at national and regional level,
- informing and raising awareness of the local population,
- involvement of stakeholders in decision-making,
- improving the legislation and ensuring the implementation and compliance

with the legal provisions,
- integrating the conservation measures of the bear population into other sectors of activity,
- increasing the institutional capacity and cooperation of the responsible authorities/institutions.

The coordination of all parties involved in the implementation of the measures established by the action plan for the conservation of the brown bear population in Romania is essential for achieving the set objectives. This responsibility rests with the central public authority for environmental protection, which together with the central public authority responsible for hunting, must ensure the completion/modification of the legislative framework as well as the tools needed to implement the action plan.

Also, the approval of the action plan by the competent authority according to the law requires the application of these measures in other sectors of activity so as to ensure the reduction of pressure and threats on the brown bear population and the specific habitats, as well as the reduction of conflicts.

4.2. Drafting the action plan

In order to set the base of the action plan, several working meetings were held within the project team "Conservation of the brown bear population (*Ursus arctos*) in Romania" LIFE 13 NAT / RO / 001154 (LIFE FOR BEAR) and four working meetings. with specialists at national level who formed a "working group". The meetings were held in the context of the C1 activity of the project, namely "Review of the action plan for the conservation of the brown bear population in Romania", an activity that aimed to develop a revised action plan, analyzing the results and ensuring the transfer of good project practices to national and regional level with reference to the brown bear population in Romania, as well as ensuring an intense consultation with the factors involved, including decision makers, at national, regional and local level.

Between 05– 06.11.2015, the first meeting of the working group took place in Șimon/Bran, Brașov county. On 20.12.2017, the second meeting of the working group took place at the National Institute for Research and Development in Forestry Marin Drăcea – Brașov Centre, between 15-16.03.2019, the third meeting took place at the Faculty of Forestry and Forest Exploitation from Brașov Municipality, and on 29.03.2018, the fourth meeting of the working group was organized at the National Institute for Research and Development in Forestry Marin Drăcea – Brașov Centre. Throughout the work meetings, approx 50 persons, representatives of institutions and NGOs collaborated to the

development of the action plan. (Enclosed the attendance sheets).

In this context, the working group established within this activity, was formed of experts in the field of wildlife and experts in the field of conservation at national level, forest management unit managers, wildlife management unit managers, both in the project area and representative managers at national level (RNP ROMSILVA, AGVPS), representatives of central and local public authorities for environmental protection and hunting, representatives of central and territorial public authorities with control powers in the field of environmental protection (National Environment Guard) and hunting (Forest Guard), representatives of local administrations, administrators of protected natural areas (Piatra Craiului National Park and Apuseni and Bucegi Natural Parks), Non-Governmental Organisations.

This document was drawn up after the four meetings of the same work group, the results and the transfer of good practices of the projects carried out at national and regional level with reference to the brown bear population in Romania, the stage of implementation of the actions established by the first action plan, the problems identified at local, regional or national level.

The following issues were addressed during the meetings:

- Assessment of the difficulties identified in the conservation and management of the brown bear at national level;
- Discussions regarding the existing management practices in the case of the bear and their impact on the conservation efforts;
- Collecting public results from other similar international projects ;
- Discussing good international practices with reference to species management;
- Identifying the main pressures and threats on the brown bear species, in order to establish the conservation and management objectives of the species;
- Establishing the structure of the brown bear species action plan at national level;
- Establishing the functioning of the working group during the project; steps for carrying out the action;
- Identifying the objectives and actions specific to the action plan
- Determining the measures to achieve the objectives of the action plan;
- Analyzing the identified measures;
- Harmonization of conservation interests with economic and social ones for brown bear management in Romania;
- Establishing the manner of implementation of the measures in terms of implementation periods, responsibilities, terms, emergencies and needs.

Photo. 2. Meeting of the working group in Șimon / Bran 05-06.11.2015.

Photo. 3. Meeting of the work group on 15-16.03.2018 in Brașov/The Faculty of Forestry and Forest Engineering.

Thus, it was mentioned the need to set the objective that the national action plan wants to consider as a starting point related to the species population at the national level (population size, distribution), as well as the need to be realistic in establishing these objectives, taking into account the current situation - according to the studies on the population size evaluated for the bear in Romania, the obligations assumed by the country regarding the protection of the species and the need for measures to ensure sustainable management.

The main difficulties encountered by the involved stake holders present at the meeting were listed, as well as the proposals to solve them, concluding the need for an action plan that takes into account the anthropogenic factor and the need for coexistence between the human population and the bear species. It was also raised the need to have a structure of the Action Plan, starting from the Key Actions for large carnivores at European level realized in 2015

Photo 4. Meeting of the working group on 29.03.2018 at the National Institute for Research and Development in Forestry - Brașov.

The problems identified based on the analysis of the views expressed within the working group were classified into several categories, as follows:

- Lack of or poor knowledge::

(1) lack of databases on the results of studies and monitoring activities at the national level,

(2) lack of or poor scientific knowledge on the biology, ecology of the species, habitat quality,

- Lack of institutional capacity:

(1) lack or insufficient coordination and communication between the responsible institutions and the sectors involved in species management in the region,

(2) lack or insufficient implementation of the existent legislation.

- Reduction or degradation, fragmentation of the habitat
- Mortality caused by humans (accidental, poaching, hunting)
- Disturbance of the species
- Pollution
- Acceptance begins to decline from the local population.

The pressures and threats on the brown bear species were the basis for establishing the conservation objectives of the species at national level and the actions in the Action Plan for the conservation of the brown bear population in Romania.

The working groups identified the most critical problems related to the management of the brown bear species and found the best solutions for maintaining favourable conservation status of the brown bear population in Romania were found, with the agreement of the majority of the participants. The first two meetings of the working group were coordinated by the representatives of the National Institute for Research and Development in Forestry "Marin Dracea". In contrast, the last meeting's discussions were coordinated by the representatives of the Ministry of Environment. All the recommendations and the results of the discussions, after being harmonized according to the conservation, social and economic needs of the species, were integrated into the "Action Plan for the Conservation of the brown bear Population in Romania".

5. ACTIONS REQUIRED TO MAINTAIN THE FAVORABLE CONSERVATION STATUS OF THE BROWN BEAR POPULATION IN ROMANIA

The main actions to achieve the objectives of the action plan are P

Objective 1. Ensuring the distribution area and the size of the population in order to maintain the favourable conservation status of the brown bear species

A1.1. Conservation of brown bear habitat in Romania

A.1.2. Control of the development of anthropized areas

A.1.3. Monitoring the brown bear population at national level

A.1.4. Ensuring the optimal level of the brown bear population

A1.5. Hunting as a management measure for the brown bear species in Romania

Objective 2. Maintaining the connectivity of the brown bear population in the Carpathian region

A.2.1. Ensuring the connectivity of the brown bear population in Romania

A.2.2. Ensuring the connectivity of the brown bear population in the Carpathian Region

A.2.3. Relocation and / or reintroduction of brown bear individuals

Objective 3 Prevention, damage control and human-bear conflict management

A.3.1. Operation of accredited specialists to provide technical and scientific support for the management of the brown bear species

A.3.2. Reducing human-bear conflicts by implementing preventive measures to reduce conflicts

A.3.3. Establishing compensation and / or financial support for persons or entities that have been or are affected by the presence of the brown bear species

A.3.4. Reducing the impact of anthropogenic activities and integrating species conservation measures into other sectors of activity

A.3.5. Preventing the conditioning and habituation of bear individuals

Objective 4. Education, information and communication regarding the brown bear species and its management

A.4.1. Education, information and communication regarding the brown bear species and its management

Objective 5. Improving the legal and institutional framework regarding bear species management

A.5.1. Improving institutional capacity

A.5.2. Improving the legal framework and applying the legal provisions

Objective 1. Ensuring the distribution area and population size in order to maintain the favorable conservation status of the brown bear species

ACTION 1.1.	Conservation of brown bear habitat in Romania
Objectives	Ensuring the favorable natural habitat for an optimal level of the brown bear population in Romania, ensuring the travel needs of individuals moving within the population and ensuring the optimal genetic flow within the population; Ensuring the distribution area of the species, as well as the quality of specific natural habitats to satisfy the ecological requirements of the species and the long-term maintenance of a viable brown bear population in Romania..
Motivation	The development and expansion of the inhabited areas, the development and modernization of transport infrastructure, the change of land use and the exploitation of natural resources, are the main activities that lead to the reduction, degradation and fragmentation of the specific habitats. At national level, in the last 10 years, several cases were identified in which permanent presence of individuals of the brown bear species have been resistered outside the historical distribution area reported by Romania, which indicates a dynamic of the species distribution, from various natural and anthropic causes with direct or indirect impact. A number of anthropic activities with an impact on favorable habitats are not properly regulated, so it is necessary to carry out studies and implement management measures, the results of which will contribute to improve existing regulations to reduce the impact of anthropic activities within favorable habitats, so as to ensure their preservation..
Description	**a) Mapping the distribution area of the brown bear species in Romania.** The mapping of the distribution area is based on the mapping of the habitats favorable to the brown bear species, the mapping of the ecological corridors and the mapping of management areas of the brown bear species. **b) Regulating the implementation of the measures proposed and validated by the guides from previously concluded projects, which aim at the conservation and management of the brown bear species and specific habitats.** The regulation implies the development of methodological-technical norms, applicable in establishing the conditions / decisions for granting approvals / agreements / authorizations for plans / projects / activities that affect habitats favorable to the brown bear species, in order to reduce / eliminate: • the impact of the anthropic projects / plans / activities (transport infrastructure, alternative energy production parks, development of residential areas, tourist infrastructure etc.); • the impact of the anthropic activities (tourism, collection of berries / mushrooms, forestry and hunting works, exploitation of natural resources etc.) on the brown bear species, carried out in the natural habitat.

ACTION 1.1.	Conservation of brown bear habitat in Romania
Description...	In this sence, the Ministry of Environment constitutes a commission of specialists, consisting of advisors from the ministry and experts from different functional working groups, with the role of analyzing and selecting information from the guides previously developed, which can be transformed into applicable technical rules. If it is to be found that the information does not cover all areas of impact, then the commission proposes to make other guides, containing the measures necessary to achieve conservative management of the species. Based on these analyses, the Ministry of Environment develops technical norms for the previously elaboratedguides, where appropriate and which are related to the management of the brown bear species. Greater attention will be paid to the cumulative effect of these impacts, so that the conservation objective of the brown bear species is not affected. Measures will be proposed to reduce / eliminate the impact for each of the three presented situations. **c) Regulating the participation of the managers of the wildlife management units in the commissions organized at the environmental protection agencies for analyzing projects / plans / activities with potential impact on the brown bear species, in order to approve them.** • Drawing up internal norms at central level, so as to regulate the involvement of the managers of the wildlife management units in the approval procedure of different plans / projects / studies / activities of the use of natural resources (forestry, agricultural, mineral resources, other natural resources, etc.) and the territory (General Urban Plan, Regional Town Planning), which affects the brown bear species, especially the fauna of hunting interest in general. • Regulating the approval of pastoral arrangements in order to harmonize agro / forestry / pastoral and urban plans with potential impact on brown bear species management. • Regulating the development, approval and implementation of the hunting management plans at wildlife management unit level and their harmonization with the management plans of the protected natural areas, over which they overlap, which have included in the standard form NATURA 2000 the brown bear species. **d) Inducting an impact study on mushroom and berry harvesting activities upon the brown bear population.** • Based on the study carried out at national / regional / county level, these activities will be regulated, so that their impact is minimal on the wildlife in general and on the *Ursus arctos* species in particular - Proposal to amend ORDER no. 410 of April 11, 2008 (for the approval of the Procedure for authorizing the activities of harvesting, capturing and / or purchasing and / or marketing, on the national territory or for export of mine flowers, plant fossils and vertebrate and invertebrate animal fossils, as well as plants and animals from the flora and fauna, respectively, their importation), so that the authorization of harvesting forest accessory products is carried out according to the results of the study.

ACTION 1.1.	Conservation of brown bear habitat in Romania
Description...	**e) Conducting a study to determine the diet of the brown bear species under the current conditions in Romania, in order to evaluate the necessary and available trophic resources.** • The study will be conducted at national level for each county and will also involve managers of wildlife management units. Based on the result of the study, measures will be proposed to improve or supplement trophic resources. • The study should consider the areas where additional / complementary feeding is administered to the brown bear species and areas where it is not. **f) Creation and management of an online database at the level of the Ministry of Environment regarding the conservation of the natural habitat and the management of the brown bear species.** • The database will include favorable habitats, ecological corridors, species management zoning, intra-urban area, national / regional / local infrastructure projects, as well as other data on activities that may affect habitat and species management, results of studies on brown bear population size assessment, quality of specific habitats.. **g) Development of guidelines for assessing the impact of anthropogenic activities on bear populations.** • The guides refer to new constructions (transport, energy, tourism), land use change, extraction activities of natural resources that affect the trophic resource of the species or lead to the deterioration of habitat quality, including their cumulative effect. **h) Carrying out a study on the impact of the use of a new habitat by the brown bear population, in comparison with the use of the traditional habitat, regarding the traditional anthropic activities carried out in these areas.** • The presence of brown bears outside the traditional area is becoming increasingly common, local communities are not accustomed to the presence of the species in the area and have not developed conflict prevention or mitigation systems, fact which can affect the species in the long term by reducing its acceptance in those areas and beyond.
Results	• The surface of the favorable habitat; • Habitat quality maps and habitat fragmentation risk areas; • Technical norms for reducing the impact of some plans / projects / activities on the favorable habitat; • Set of management / conservation measures in NATURA 2000 sites for brown bear species; • Involving managers of wildlife management units in the approval process of plans / projects / activities with potential impact on favorable habitat; • Regulated activities for collecting mushrooms and berries from favorable habitat;

ACTION 1.1.	Conservation of brown bear habitat in Romania
Results...	• Measures to improve the trophic supply needed for the species; • Improvement and preservation of the natural habitat; • Online databases on the conservation of favorable habitat and brown bear species management; • Guides for evaluating the impact of anthropogenic activities on the brown bear population in Romania.
Responsible parties	• Ministry of Environment; • Environmental Protection Agencies, • National Environment Guard, • Forest Guards, Research Institutes / Universities / Organisations involved in the conservation and management of the brown bear species, • Managers of the wildlife management units, • Administrators / Tutors of protected natural areas
Term	5 years
Emergency	1
Benefits	5

ACTION 1.2.	Control of the development of the anthropized areas
Objective	Limiting the development of anthropogenic infrastructure within habitats favorable to the brown bear species.
Motivation	In the last 25 years there has been a process of alteration of the natural habitat in the areas where the urban area has expanded (holiday homes, tourist facilities and permanent residential areas), so that some bear specimens have had to come into direct contact with the people in those areas, inevitably producing direct human-bear conflicts, which can decrease the level of acceptance of the species by the local communities which share the same territory with the brown bear species.

ACTION 1.2.	Control of the development of the anthropized areas
Description	**a) Regulation of urban development in key areas for the brown bear species.** • Good practice guides will be developed with recommendations on land use in the areas frequented by bears, so that they are not affected by the city development. • Identification of compensatory measures for landowners in these areas, who are required to limit the use of the respective lands. • The key areas for the brown bear species are identified according to the legislation in force (natural protected areas where the brown bear species exists, ecological corridors etc.). **b) Regulation of assuming the responsibility for the owners and local authorities, which make / approve permanent constructions in the habitat favorable to the brown bear species, through normative acts.** • Making recommendations for the inclusion in the urban planning regulation of special measures for construction / development, assumed by the owner and the local authority (local council, town hall, county council etc.). The local authority has the obligation to inform the owner about the presence of the bear and the risk of conflicts in the area.
Results	• Good practice guides that include in the form of recommendations a set of measures for the development of the urban area in the bear area; • Compensatory measures for land owners in these areas, which are required to limit the use of the respective lands; • Special measures for construction and landscaping in the habitat favorable to the brown bear, intended to be included in the urban planning regulations. • Preservation of natural habitat. • Preserving the bear's natural behavior. • Reducing direct human-bear conflicts
Responsible parties	• Ministry of Environment; • County councils; • Town halls; • Land Owners; • Environmental Protection Agencies; • the National Environment Guard;
Term	Permanent
Emergency	2
Benefits	5

ACTION 1.3.	Monitoring the brown bear population at national level
Objectives	Determining the size and conservation status of the brown bear population in Romania.
Motivation	The main management decisions for the brown bear species are taken following the knowledge of the conservation status of the population and the population trend at national, regional and local level. Hence, conservative management decisions on the brown bear population must be based on scientific data regarding the size of the population and its state of conservation and its dynamics.
Description	**a) Monitoring the conservation status of the brown bear population. .** The monitoring of the conservation status of the brown bear population will be carried out periodically, every 6 years, at national scale, according to the methodology approved by the central public authority for environmental protection, for the application of the provisions of art. 11 of the Habitats Directive and the elaboration of the country report according to the obligations established by art. 17 of the directive and international and national good practices. Monitoring should target the following categories of data needed to analyze the conservation status (population, habitats, pressures and threats): • The estimation of population size and structure aims at: annual and periodic estimation of the population, birth and mortality rate within the brown bear population, population dynamics, identification of areas with high human-caused mortality, as well as assessment of the health of the bear population; • The evaluation of the quality of the habitats will aim: periodic review of the habitat support capacity, variations of the distribution area (mapping within the distribution area of the following classes: 1) presence and reproduction; 2) presence without reproduction; 3) occasional / accidental presence), mapping of seasonal concentration areas, fragmentation analysis at national level, • Identifying pressures and threats: the classes established for reporting to the European Commission will be used and the areas where pressures and threats can be considered significant for the conservation status will be mapped. It is recommended that this population size monitoring, useful for the assessment of the conservation status, be based on methods grounded on genetic analyzes that can provide information with a high accuracy on population size. Secondarily, depending on the available resources, other objectives can be pursued, such as: establishing the evolutionary potential and genetic viability for early detection of genetic problems (inbreeding) within the bear population at national level; establishing the level of gene flow in the bear population at national level. Standardization and coordinated application of the national monitoring methodology are the key elements for ensuring data quality. The development of a system to ensure the collection of data resulting from applying the monitoring program and other studies on this species is necessary to facilitate access to interested persons, to evaluate the efficiency of the management measures and to make the decisions regarding the revision of the action plan and management of the species.

ACTION 1.3.	Monitoring the brown bear population at national level
Description...	**b) Intensive monitoring** Intensive monitoring will be carried out periodically, at least every 10 years, at national level, in accordance with good international and national practices, through genetic studies for which data will be collected from wildlife management units and protected natural areas. The intensive monitoring implies: Monitorizarea intensivă presupune: • monitoring the population size and establishing the minimum number of individuals at national, regional and county level, • establishing the evolutionary potential and the genetic viability, • early detection of genetic problems (inbreeading) within the bear population at national level, • establishing the level of gene flow within the bear population at national level. The collection of data from the field is carried out following the elaboration of some protocols for collecting samples in collaboration with the managers of the wildlife management units and yearly collection of samples from shot specimens, captured individuals and / or non-invasive sample collection. **c) Permanent monitoring** Permanent monitoring will be performed annually, at county, regional and national level, with data collected from wildlife management units and protected natural areas, with the objective of providing the following data / information: • estimating the size, structure, density of the brown bear population in Romania; • determining the permanent, seasonal and accidental distribution at national level of the brown bear population; • monitoring the functionality of the ecological corridors / critical points; • identifing the areas where there are high human-caused mortalities; • identifing the areas with high level of conflict, • assessing the damage caused by the bear and the causes of its production. Permanent monitoring must be supplemented by: • protocols for collecting data on the presence of the species and invasive genetic samples, updated periodically; • annual collection by the managers of the wildlife management units and other authorized bodies (protected area administrations, projects etc.) of the invasive genetic samples, from all the individuals collected / captured / injured and handed over to the CITES scientific authority in the wildlife field. Monitorizarea permanentă a populației de urs brun în România se bazează pe Permanent monitoring of the brown bear population in Romania is based on the annual estimation of the number of bears at county and national level, realized with data collected from the wildlife management units using the following methods: • **in the spring:** (1) Assessment protocol for the number of bears by direct observation and by means of cameras with motion sensors in the movement / passage areas and in the feeding points. It is recommended to use the bear monitoring methodologies

ACTION 1.3.	Monitoring the brown bear population at national level
Description...	(based on the collection of traces and photo captures) proposed in the "Guide for estimating the brown bear population" developed within the LIFEURSUS project - LIFE08NAT / RO / 000500. In order to eliminate / reduce the counting and the multiple accounting of the same brown bear individuals recorded on the cameras of neighboring wildlife management units, a software for identifying the bear individuals will be developed and used. (2) Assessment protocol by recording and measuring tracks to avoid double / multiple records by eliminating tracks of equal size from counting; (3) Identification of reproductive units; • **during summer-autumn :** (1) Assessment protocol for the number of bears by direct observation and using cameras with motion sensors in the areas of movement / passage and in the areas where damages and conflict occur. In order to eliminate / reduce the counting and multiple accounting of the same brown bear individuals recorded on the cameras of neighboring wildlife management units, a software for identifying the bear individuals will be developed and used. (2) Assessment protocol by recording the reproductive units, when the cubs from the current year and the previous year can be observed. The evaluation is carried out over a period of one calendar year, starting in spring and concluding in autumn. The detailed procedure for determining the size of the brown bear population at national level will be distributed annually by the central public authority for environmental protection (Ministry of Environment) to territorial structures (Environmental Protection Agencies), which will coordinate the monitoring of the brown bear population at the county level. All the data reflecting the presence of brown bear species in the wildlife management units will be integrated in a study to estimate the headcounts at national level (on relevant ecological areas / categories of management areas) and determining the maximum level of intervention for the brown bear population The proposals of the wildlife management units' managers for a maximum intervention threshold will be based on the level of damages and conflicts registered, the situation of the actual numbers estimated in the previous year compared with the optimal ones, the trends and the structure of the population. With the centralization of the data on the county, proposals will be made for a maximum level for intervention on hunting and management funds. At the same time, the managers will justify their proposals. Following the result of the permanent / annual monitoring, the central authority for environmental protection (Ministry of Environment) will determine the level and manner of intervention for the brown bear population at national level, in correlation with the results of conservation status monitoring and intensive monitoring, if they were performed until the end of the permanent / annual monitoring. The analysis of the primary data from the wildlife management units' managers in order to carry out the permanent / annual monitoring study will be

ACTION 1.3.	Monitoring the brown bear population at national level
Description...	carried out by institutes / entities / specialized organizations, that have qualified personnel in the field of wildlife and the technical capacity for collecting, analyzing and verifying primary data at national level. The activity will be contracted by the Ministry for Environemnt, for a period that allows the activity to be carried out each year. The monitoring program is adaptive and can be revised as a result of new situations or to supplement the information needed to substantiate the management measures.
Results	• Conservation status of the brown bear population; • Minimum size of individuals of the brown bear population, determined by genetic analysis; • Genetic characterization of the brown bear population; • Yearly estimates and trends of brown bear population size, determined following permanent monitoring; • Annual estimation study regarding the brown bear population in Romania, after which the Ministry of Environment can establish the maximum level of annual / periodic intervention in the brown bear population;
Responsible parties	• The Ministry of Environment; • Environmental Protection Agencies; • Organisations involved in the management of the brown bear species, • Managers of the wildlife management units, • Administrators / Tutors of protected natural areas
Term	• 3 years (periodically at 6 years) - Conservation status of brown bear population; • 3 years (periodicaly at 10 years) - Minimum size of individuals in the brown bear population, determined by genetic analysis a genetic characterization of the population; • permanent (anually) – estimates and trends of brown bear population size, establishing the maximum level of intervention in the population.
Emergency	1
Benefits	5

ACTION 1.4.	Ensuring the optimal headcount of brown bear population
Objective	Maintaining the brown bear population at an optimum level, so that the wildlife management units' managers are directly interested in being involved in conservation measures for the brown bear species, and the local communities not affected by the presence of the species in their area of activity.
Motivation	The optimal headcount is regulated by the Law on hunting and protection of the wildlife management units no. 407/2006, and represents the number of individuals belonging to a species of game fauna, which inhabits a wildlife management unit, in a certain population structure, and ensures the conservation of species, produces minimal damage and presents no risk to the human population. Starting from the definition of the optimal headcount, the implementation of the management measures of the brown bear species is conducted at the level of the wildlife management unit background and it is not regulated to be differentiated on local or regional management areas, in order to ensure the optimal number of the brown bear population in Romania, so different solutions must be found depending on the areas of anthropogenic activity and the natural habitats used by the species.
Description	**a) Determining the optimal number of brown bear population in Romania.** The optimal headcount will be determined periodically, every 10 years, depending on the support capacity of favorable habitats, to which is also added the contribution represented by additional food supply where it is practiced, and the degree of acceptance of the human population. measured objectively at community level based on nationally accepted standards, so that the optimal brown bear population has a normal structure by sex and age class, acceptable in terms of balance with the populations of other hunting species and the damage caused to humans; **b) Determining the areas of brown bear population management at national level in order to ensure the optimal number of brown bear population.** In order to ensure and maintain the favorable conservation status of the species, a differentiated population management will be carried out, so as to ensure breeding cores, movement areas in the natural area (ecological corridors), natural resettlement areas, quiet areas and feeding areas, taking into account the following principles: • conservation of the favorable habitat for the species, • public health and safety interests, • strategic objectives for local / regional development, • damage prevention and reduction, • ensuring an optimal population of the brown bear population through measures to restore the trophic supply, where appropriate and by controlling the size of the population. The zoning of the management will be done periodically (10 years) and

ACTION 1.4.	Ensuring the optimal headcount of brown bear population
Description...	represents a management tool designed to ensure the favorable conservation status of the brown bear species in Romania. The zoning of the management of the brown bear species will be based on conservation objectives and established criteria so as not to affect the favorable conservation status of the brown bear population in Romania. The criteria for zoning the management of the brown bear species must include ecological and socio-economic aspects, which should substantiate the setting of objectives and the choice of measures. . Taken into account that the process of designating some areas requires a high level of information and a participatory approach in order to reduce social conflicts, it is appropriate to set conservation / management objectives and criteria for establishing conservation / management areas. The objectives and the criteria necessary to establish conservation / management areas must take into account population size, habitat status / quality, optimal headcounts, historical wildlife management units, existing protected areas, ecological corridors, concentration areas, conflict areas, strategic development objectives of Romania. As a principle, it is necessary to define some categories of areas considering different conservation Objectives to be achieved through packages of measures that may include hunting as a management activity. **The zoning of the management for the brown bear species at national level**, will be performed through a normative act (Ministerial Order), issued based on the Results obtained following a scientific study. The brown bear population management areas will be established by conducting a national / regional study and should include the following zoning: **(1) Key areas for conservation** In these areas, the main measures should aim at maintaining the habitat conditions, reducing disturbance and minimizing human activities with a potential direct impact on the brown bear species. The key conservation areas will be established so as to include the following categories: • protected areas at national level: national parks and integral protection areas in natural parks. In these areas, the hunting management is carried out by the administration of the natural areas, and the hunting is not allowed, except under special conditions, with the agreement of the scientific council, in accordance with the legislation in force. • quiet areas within wildlife management units – In such areas, hunting management is carried out by the wildlife management unit's manager and hunting is not allowed, in accordance with the legislation in force. • special conservation areas, which have a management plan approved in accordance with the environmental legislation in force (Natura 2000 sites, ecological corridors, areas with special sectoral status - virgin forests). • areas with favorable habitats for the winter sleep period (mainly for females). These areas are determined by a scientific study, together with the wildlife management units' manager. Wildlife management units in these areas or parts of them can be classified as

ACTION 1.4.	Ensuring the optimal headcount of brown bear population
Description...	genome conservation areas and must be appropriately managed, including by providing grants for the wildlife management unit's manager (the amounts should encourage the implementation of conservation measures). Additional feeding may be allowed under specific, clearly defined conditions, associated with conservation objectives. In these areas, interventions in the population can be allowed only under emergency conditions or at risk situations (including to ensure species tolerance in the areas of natural resettlement, ecological corridors-favorable habitat) or under controlled conditions for the restoration of a normal population structure, if results are based on scientific studies, that shows an unbalanced structure by gender. In these areas, granting mechanisms should be provided for the protection methods of households and good practices of habitats. In order to make the conservation measures more efficient in these areas, it is necessary to establish a minimum surface of a habitat body that is composed as an element within the zoning. **(2) Sustainable management areas** These areas will be established so as to include natural habitats favorable for winter dormancy, for breeding, feeding and seasonal movement, as well as corridors of regional and national interest, where the estimated herds are higher than the optimal herds at the level of the wildlife management unit. In these areas, measures are needed to increase the trophic supply in the forest, namely berries and mushrooms, as well as maintaining the population of cervid and wild boar at an optimal level. Adequate forest management will be ensured, given the principle of rotation of forestry works. The following activities are allowed in these areas: • additional feeding in a regulated form and with clearly established objectives, so as not to favor the artificial growth of the herds; • exceptionally, relocations of some bear individuals, which come from the conflict management areas, with the consent of the manager of the wildlife management unit and of the local authorities (town hall, local council), where this action is to take place. • regulation the brown bear population density by hunting actions regulated by the central authority Responsible Party for species management. The maximum level and the intervention manner in the brown bear population through hunting in the sustainable management area, is determined following the annual studies based on permanent / annual monitoring at national level, based on primary presence data collected from the wildlife management units. Hunting can be allowed, within a maximum level of intervention, provided that their establishment is recommended by the Results of scientific studies, their planning is based on criteria communicated to managers and the public, the impact of applying quotas is demonstrated by indicators assumed by stakeholders and the quota allocation process is principled, ecologically and socially based, transparent and does not allow abuses.

ACTION 1.4.	Ensuring the optimal headcount of brown bear population
Description...	In the context of undesirable effects in the sense of endangering conservation objectives, the hunting can be suspended until an improvement is observed. **(3) Conflicts management areas** Conflict management areas represent areas of major risk to the human population, where conflict history indicates a problem with a major social impact and the presence of brown bear individuals is not desired by local communities and / or authorities. These areas include: • residential urban areas, tourist resorts and those in close proximity to them; • partial areas of traditional concentration (areas with orchards and crops used by bears) during the hyperphagia season. In these areas, they must encourage (stimulate) social behaviors appropriate to conflict prevention and discourage the practices that lead to altering the animals' behavior. Damage / conflict prevention methods in this area need to be stimulated for the purchase of animal protection equipment / crops / material goods (electric fences, specialized dogs, anti-bear dumpsters), which are used successfully in all countries where they were implemented. Regulation of complementary feeding for the brown bear species in these areas. It is possible to realize deviation feeding, temporary, outside the conflict risk areas a. Proper management of complementary feeding for other species (wild boar), so that it is done only during mandatory periods through management contracts. In these areas, local authorities must ensure efficient management of household waste, based on the location of anti-bear containers / dumpsters, which will be collected daily or whenever needed, so that bears will no longer be drawn into the city, residential or tourist areas. In such areas, intervention levels are established for the relocation and / or hunting of bear individuals, intended to reduce the population, in order to ensure the safety of local communities. Intervention planning must consider reducing the population base by extracting juvenile individuals or hunting females (without cubs). The level of intervention established annually will be based on the spatial distribution of direct bear-human conflicts, damage, conservation status, monitoring and annual monitoring, at regional or wildlife management unit level. The main indicators pursued will be the reduction of direct bear-human conflicts, the reduction of damages and the maintenance of the population at an optimal level. Sociological studies and analysis will be carried out periodically, in order to evaluate the changes in the public's relationship to the species. Any form of support provided to wildlife managers must be related to the achieving the management objective.

ACTION 1.4.	Ensuring the optimal headcount of brown bear population
Description...	**(4) Marginal areas** Marginal areas are areas where some individuals of brown bear appear in natural habitats or the presence of the bear has an accidental character and where reproduction does not occur. These areas may have ecological value for bears in dispersal, but the population is represented by individuals on the edge or outside the natural range of the species. In these areas the levels of intervention in the population can be granted through relocation actions (if such individuals appear accidentally and do not represent an imminent danger to human health and integrity, the first option to be considered should be relocation) or if necessary, even by hunting (if the individuals endanger human life), established by the Responsible Party authority outside the previously planned quotas. In these areas feeding of any kind of the bears is not allowed. Once the observation for five consecutive years of the females with cubs in natural habitats, with the occasion of zoning revision, the respective area can be included in one of the other three areas. The areas proposed in the brown bear species management zoning, have an informative and explanatory character of the way we consider that the zoning should be approached. The zoning will be finalized following the scientific study, which will perform an ecological analysis and a socio- economic analysis to substantiate the establishment of objectives and the choice of measures. Also, the scientific study must set measures for the management of habitats, bear population and human-bear conflicts, for each management area. **c) Study on determining the impact of the brown bear species on prey species (deer, deer, wild boar), with implications in the wildlife, forestry and agricultural sectors** The study will be carried out periodically (10 years), based on the brown bear conservation objectives and the wildlife management objectives of the prey species, so that its results will help to maintain the favorable conservation status of the brown bear population in Romania and to achieve an adequate hunting management that maintains a prey-predator balance at wildlife management unit / county / region level. Compensation of managers in the absence of intervention quota, where the results of the study show that there is a major impact on the prey species.
Results	• The optimal number of brown bear population under the current conditions in Romania; • Brown bear species management zoning in Romania, obtained from a scientific study at national level and regulated by a normative act • Study on determining the impact of brown bear species on prey species; • Compensation of managers who have wildlife management units, where the brown bear species has a significant impact on the prey species;

ACTION 1.4.	Ensuring the optimal headcount of brown bear population
Responsible parties	• The Ministry of Environment, • Research institutions and organisations in the field of wildlife, • Managers of wildlife management units, conservation organisations.
Term	• 2 years (periodically reviewed every 10 years)
Emergency	1
Benefits	5

ACTION 1.5.	Hunting as a management measure forthe brown bear species in Romania
Objective	Maintaining an optimal brown bear population from an ecological, economic and social point of view, by extracting the population surplus (the difference between the estimated real headcount and the optimal number), from the areas with high densities, through specific regulated hunting actions, in order to achieve the balance in nature and maintain the current favorable conservation status of the brown bear population in Romania; Prevention and reduction of damage and conflicts caused by the brown bear species through controlled headcount number reduction of brown bear from potential conflict areas; Acceptance of the species by all interest groups, which live directly with the brown bear species, so as to ensure a real human-bear coexistence.
Motivation	In the current national context, the conservation status of the brown bear species is favorable, the population trend is increasing, the level of damage and conflicts is increasing, and the acceptance of the species in the rural communi-ties and in some tourist areas of national interest is decreasing. In this context, it is necessary for hunting to be a management tool, which maintains the size of the brown bear population at an optimal numbert, accepted by specialists in the field of wildlife and by rural and urban communities. Due to the continuous process of shrinking the natural habitat of the brown bear species in Romania, there are areas with high densities of bears at national level, which represent a high risk of loss, both for humans and for the species (individuals from the bear population).

ACTION 1.5.	Hunting as a management measure forthe brown bear species in Romania
Motivation...	Effectively, in some areas, the phenomenon of overpopulation of land with bears, together with the degradation of the natural habitat, as well as a possible destruction of the population in some punctual areas, is the main cause of the modification of the specific social behavior and the bear's loss of fear towards man, with direct implications on the level of damage and attacks of some individuals with deviant behavior on the humans. The central public authority for environmental protection can grant derogations from the prohibitions of art. 33 paragraph (1) of GEO no. 57/2007, by order of the head of the authority, with the prior approval of the Romanian Academy, provided that there is no acceptable alternative, and the derogatory measures are not detrimental to maintaining the populations of the respective species in a favorable state of conservation in their natural area, only in certain situations. Exemptions shall not be granted if there is a risk that they may have a significant qualitative or quantitative negative impact on the population of the species subject to the derogation.
Description	**a) Extraction of the population surplus by gender and age classes, through specific hunting actions** The application of this measure will be carried out annually in the hunting seasons established by the legislation in force. The measure is applied in the interest of wildlife protection, conservation of natural habitats and prevention of damage to crops, domestic animals, forests and other property; The extraction of the population surplus is mainly done in the areas of sustainable management (from the point of view of brown bear population management in Romania), namely in the natural habitats where the estimated number and density of the brown bear population are higher than the optimal ones. Following the determination of optimal herds and species management areas, measures will be applied to reduce the high densities of brown bear. The reduction of densities will be achieved by extracting the population surplus by sex and age classes, by specific hunting actions under the supervision and guidance of the specialized hunting staff. • Yearly, with the centralization of data at county level, the managers of the wildlife management units will make maximum intervention proposals for the brown bear species, at the level of the wildlife management unit. The maximum intervention threshold proposal will be based on: the level of damages and conflicts registered; the situation of the real heard compared with the optimal one; the tendency and structure of the population and the reduction of the risk of direct damage and human-bear conflicts. • Each year, a specialized study will be carried out to estimate the number of brown bears at national level, after which the Ministry of Environment approves a maximum level of intervention in the brown bear population. • Establishing, with the necessary precaution, maximum levels of annual intervention in the population, responsible, based on analysis and criteria made by the specialists of some institutions / universities / entities, which have competence • and expertise in this regard.

ACTION 1.5.	Hunting as a management measure forthe brown bear species in Romania
Description...	• The maximum level of intervention in the brown bear population, will be set annually up to the level of the natural increase and even above it (if it is the case and it is justified), thus being able to ensure the extraction of the population surplus. • The maximum level of annual intervention in the brown bear population is achieved as follows: o In the case of harvesting or capturing individuals of the brown bear species from natural environment, at any of the stages of their biological cycle, a number of individuals of the brown bear species are granted, in accordance with the maximum level of intervention, established up to the level of the natural growth, which is distributed to counties and managers of the wildlife management units, based on specialized studies; o in the case of harvesting or capturing for the purpose of relocation, holding, transport, exchanges for the purpose of repopulating or reintroducing individuals of this species harvested / captured from the wild, at any stage of their biological cycle, as well as trade in products obtained from hunted bear individuals, rests at the disposal of the central public authority for environmental protection, which can be granted to the managers of the wildlife management units who have exhausted the maximum number of intervention or those who have not received maximum number of intervention. • The specimens collected under the above conditions may be held and transported from the wildlife management units only with ear tags and accompanied by copies of the hunting authorizations. • Resettlement of hunting seasons so that reports on species management are made annually for all categories of data (quotas, waivers, damages, compensatory payments etc.). The calendar year (which can also include two seasons) should become the reference system and not the season. • Development of some action implementation indicators, monitored by the Ministry of Environment. Permanent monitoring of harvested bears, by collecting biological samples and by drawing up the records established by the authority in this regard and displaying them as well as the summaries on the website of the environmental authorities, for full transparency. **b) Hunting as a measure to prevent conflicts and damage caused by the brown bear species.** The application of this measure will be implemented throughout the year for concrete conflicts situations, analyzed by a commission of specialists, which will include representatives of the Local Agencies for Environmental Protection and / or National Environmental Guard - County Commissariats. The measure shall be applied for: • prevention of major damage to crops, livestock, forests, fisheries and other forms of property; • in the interest of public health and safety • for other reasons of major interest, including social or economic nature and for reasons of paramount importance to the environment.

ACTION 1.5.	Hunting as a management measure forthe brown bear species in Romania
Description...	The application of this action will be carried out in \areas where damage and conflicts are recorded repeatedly and will be applied based on clearly established criteria under the monitoring of the regional / local environmental authority. This action can be implemented in particular in conflict management areas, but also occasionally in other areas, in order to prevent human-bear conflicts. The determination of the maximum level of intervention in these cases is done following annual analysis / studies and is applied in the following situations: • if some bear individuals endanger public health and safety, • individuals that are repeatedly found in cities and tourist resorts, • individuals that repeatedly frequents places specially designed for the shelter of domestic animals, endangering their safety and / or service staff, • individuals present near the corpse of the domestic animal killed by them, located outside the natural wildlife habitat of the species. The hunting or capture of brown bear individuals can be done only with the consent of the central public authority for environmental protection, through the Biodiversity Directorate, with prior notifice and the point of view of the territorial agencies for environmental protection and the county commissariats of the National Environmental Guard, based on the documents prepared according to the Government Decision no. 1.679 / 2008 regarding the way of granting the compensations provided by the Law on hunting and protection of the wildlife management units no. 407/2006, as well as the obligations of the managers of the wildlife management units and owners of agricultural, forestry and domestic animals for the prevention of damages, the opinion of the administrator / guardian of the protected natural area, as the case may be, and the evidence that each individual has been monitored and identified for the purpose of harvesting, and the individuals collected under these conditions are deducted from the total number of specimens provided. The maximum number of interventions in this case should be established and managed by the Responsible Party authority, taking into account the number and incidents existing in the previous year and not in relation to the optimal population or surplus population. Harvesting or capturing bear individuals can be carried out only under the supervision of specialized technical staff employed by the wildlife management unit managers, for the wildlife management units that do not have brown bear specimens under management (the species is not found in the game fund file) These specimens can be harvested using “the ambush” method or captured outside hunting seasons. The individuals harvested in the above conditions may only be held and transported only wearing a year tag and accompanied by copies of the hunting authorizations.
Results	• A brown bear population in Romania in a favorable and optimal state of conservation from an ecological, economic and social point of view, kept in balance through hunting, as a coordinated control action from a technical and scientific approach.

ACTION 1.5.	Hunting as a management measure forthe brown bear species in Romania
Results...	• Restoring and maintaining the interest of the wildlife management units' managers to preserve and conserve the brown bear species in their areas of activity. • Restoring and maintaining the acceptance of the bear population by the human population in rural and urban areas where the species is present. • Extraction of a population surplus on social categories of age and gender, by hunting methods that do not endanger humans and the bear. • Yearly implementation by the central public environmental authority of waivers for a maximum level of intervention in the brown bear population, based on a study of estimation and proposal of maximum level of intervention, so that the favorable conservation status of the population shall not be affected, as well as maintaining an optimal population population at national level. • Reducing the losses of brown bear individuals, through poaching actions, following the increase of the interest of the wildlife management units' managers to have the brown bear species on the funds managed by them.
Responsible parties	• The Ministry of Environment; • Ministry for Water and forests; • Wildlife management units' managers; • Research institutions and organisations in the field of wildlife; • County environmental protection agencies.
Term	Annually
Emergency	1
Benefits	5

Objective 2. Maintaining the connectivity of the brown bear population in the Carpathian region

ACTION 2.1.	Ensuring the connectivity of the brown bear population in Romania
Objective	Harmonization with the relevant sectors (transport, water, agriculture, forestry, hunting, development, tourism, exploitation of mineral resources), elaboration of procedures and implementation of specific technical measures to ensure the connectivity of the brown bear population in Romania.

ACTION 2.1.	Ensuring the connectivity of the brown bear population in Romania
Motivation	Romania is going through a process of development of road and rail transport networks, as well as extending tourist or residential areas on the edges or inside the favorable habitat, changing land use, so that the connectivity areas of the favorable habitats for the brown bear species have been threatened. Ecological connectivity changes over time and is influenced by a number of factors, such as infrastructure development or land use change, but also by natural phenomena. As such factors are subject to a permanent process of change, periodic evaluation and ensuring ecological connectivity are absolutely necessary.
Description	**a) Approval of the methodology for identifying, respectively, designating the ecological corridors.** In the last five years, several projects have been implemented regarding the ecological corridors for the brown bear species, in which methodologies have been developed in order to identify and designate the ecological corridors at national, regional and local level. These methodologies were handled to the Ministry of Environment; **b) Validation of regional and local ecological corridors for the brown bear species.** Carrying out technical studies in the validation field and carrying out consultations with stakeholders, so that they are accepted and functional; **c) Designation of ecological corridors for the brown bear, in compliance with Art. 14, Gouvernment Ordinance 57 / 2007;** Following the validation of the ecological corridors, the Ministry of Environment submits the opinion of the Romanian Academy and designates them under Gouvernment Ordinance 57 / 2007. **d) Development and integration of specific management / conservation measures to ensure connectivity in the management plans of the protected natural areas.** Management / conservation measures will be integrated only in the management plans of the protected natural areas with a role in ensuring the conservation of the brown bear species and ecological corridors so as to secure the maintenance of brown bear population connectivity at national, regional and local level; **e) Elaboration of a set of regulations, procedures and technical measures to avoid / reduce / compensate the effect of habitat fragmentation for harmonization with the other relevant sectors (transport, water, agriculture, forestry, hunting, development, tourism, mineral resources exploitation;** **f) Environmental impact assessment, including cumulative, for plans / projects and activities carried out in areas important for connectivity;**

ACTION 2.1.	Ensuring the connectivity of the brown bear population in Romania
Description...	**g) Maintaining and restoring the permeability of linear infrastructure elements in critical areas for connectivity, including as a measure to reduce the risk of traffic accidents / for the safety of persons;** **h) Regular assessment of the structural and functional ecological connectivity of the ecological corridors.** An assessment of the structural and functional ecological connectivity every five years would surprise the changes in the favorable habitat and could intervene with measures to preserve / restore the permeability of the infrastructure that affects the functioning of the corridors; **i) Implementation of adequate land management in areas with the role of ecological corridors.** In some areas of the ecological corridors there is a trend to intensify agriculture, forest exploitation, change the category of land use, merging properties and fencing them over large areas. **j) Development, approval and implementation of regional action plans for the brown bear species in the areas of ecological corridors.** The regional action plans for the brown bear species must respond to the conservation needs of the species, through specific actions on the area, meant to ensure the connectivity at regional level and to prevent the isolation of individuals. **k) Monitoring the functionality of the critical areas within the ecological corridors and adapting management measures, if necessary;**
Results	• Ecological corridors at national, regional and local level identified, validated and designated as ecological corridors for the brown bear species, according to Gouvernment Ordinance 57 / 2007 and mandatory highlighted by the National Agency for Cadastre and Re-al Estate Publicity in the national, zonal and local land use plans and urbanism plans, in the cadastral plans and in the land books, as well as by the central public authority for agriculture, in the computer system for identifying the plots; • A set of technical measures to ensure the connectivity of favorable habitats for the brown bear species, integrated in the management plans of the protected natural areas (Natura 2000), intended for the conservation of the brown bear species; • A set of technical measures for the harmonization of the sectoral management - hunting, agricultural, forestry, exploitation of mineral resources, water management to ensure the maintenance / restoration of the connectivity of favorable habitats; • Regional action plans for the brown bear species; • Hunting, forestry, pastoral and water management management plans containing measures to ensure the connectivity of favorable habitats;

ACTION 2.1.	Ensuring the connectivity of the brown bear population in Romania
Responsible parties	• Ministry of Environment, • Local environmental protection agencies, • Local Public Authorities, • Environmental Guard, • Research institutes and organisations in the field of wildlife, • Managers / tutors of natural protected areas, managers of wildlife management units, • Environmental NGOs
Terms	• 5 years – Ecological corridors validated and designated • 5 years - Sets of technical measures to ensure the connectivity of the brown bear population in Romania; • 5 years – Regional action plans for the bear population in the designated areas of ecological corridor. • At the end of the revision of the pastoral, forestry, hunting, water management arrangements / plansthey will be supplemented with measures to ensure the connectivity of the favorable habitats;
Emergency	2
Benefits	4

ACTION 2.2.	Ensuring the connectivity of the brown bear population in the Carpathian Region
Objective	Identification and reduction of border pressures and threats at that influence the connectivity of the brown bear population in the Carpathians. Collaboration between neighboring countries on ensuring a conservative management of brown bear population in the Carpathian region.
Motivation	In the relevant cross-border areas (between Romania, Ukraine and Serbia) for the conservation of the brown bear species, there are not enough joint brown bear population studies and management projects that could identify the connectivity situation of the bear population connectivity at Carpathian level, with few exceptions, in the Maramures area where there are ecological corridors identified in a cross-border project (open borders for bears in the Carpathians of Romania and Ukraine). There is no protocol for the exchange of scientific information on bear species management at the border level and there is little information about the poaching situation, the species area immediately after Romanian's borders, the connectivity areas, the bear individuals that use both the Romanian territory, as well as Ukraine and Serbia.

ACTION 2.2.	Ensuring the connectivity of the brown bear population in the Carpathian Region
Description	**a) Carrying out joint projects with Ukraine and Serbia regarding the use of border habitats, genetic studies for establishing the number of bears that use the border areas between countries, determining the dispersal of brown bears and genetic exchange in the region;** **b) Joint projects for identifying the pressures and threats at the border level, as well as applying concrete measures to reduce and mitigate them, and in particular for the control, prevention and reduction of poaching;** **c) Development of a collaboration protocol between the environ-mental authorities of the neighboring countries, regulating the ex-change of information and knowledge regarding the brown bear population (population size and structure, genetic structure, distribution etc.) and threats that endanger connectivity at regional level, as well as data on some bears in research programs / projects (bears with GPS / GSM / Radio monitoring systems), which cross the border;** **d) Implementation of harmonized monitoring methods between the Carpathian countries, for the comparability and use of data in or-der to adopt the most appropriate measures in order to achieve a population-level management of the species;** **e) Identification, validation, regulation and monitoring the cross-border ecological corridors for the brown bear species between Ukraine - Romania - Serbia and implementation of an action plan to help implement management measures to fulfill the role of these corridors in the long-term;** **f) Development and implementation of the action plan for the brown bear population at the level of the Carpathian region.**
Results	• collaboration protocol between the national environmental authorities of neighboring countries regarding the management of the brown bear population in the Carpathians. • Collaboration projects in the Carpathian ecoregion, regarding the management of the brown bear population in the Carpathians; • New data on the situation of the brown bear population (movement of specimens) at border lebel, to support the authorities in each country to make the best decisions on population management; • Validated, designated and functional ecological corridors between Ukraine-Romania-Serbia, ensuring the brown bear population connectivity in the Carpathian Region; • An action plan of the brown bear population in the Carpathian region agreed and adopted by the neighboring countries (Ukraine-Romania-Serbia) and the countries in the region; • Ensure a better connectivity of the brown bear population in the Carpathian region

ACTION 2.2.	Ensuring the connectivity of the brown bear population in the Carpathian Region
Responsible parties	• Ministry of Environment, • Ministry for Foreign Affairs, • Research institutes and organisations in the field of wildlife, • Environmental NGOs, • managers of the wildlife management units
Terms	• 3 years – Collaboration protocol between neighboring countries • Permanent – Collaboration and data exchange projects on the brown bear population • 5 years – Designation of functional ecological corridors regarding the connectivity of the brown bear population in the Carpathian Region; • 10 years - Regional action plan regarding the brown bear population at the level of the Carpathian Region approved and adopted by the neighboring countries.
Emergency	3
Benefits	3

ACTION 2.3.	Relocation and / or introduction of certian brown bear individuals
Objective	Ensuring a brown bear population with a normal structure in the Carpathian region and in other regions of Europe.
Motivation	There are areas in the countries of the Carpathian region and other regions of Europe, where the brown bear population is not well represented, and in Romania there are areas with high densities of brown bears, from which some specimens can be captured in order to be transfered / reintroduced in other states.
Description	**a) Carrying out joint projects / protocols with the Carpathian countries and others, regarding the relocation and / or reintroduction of brown bear individuals from the brown bear population in Romania. Individuals that can be captured from high density areas (Brașov, Harghita, Covasna, Prahova, Argeș, Vâlcea etc.) in Romania.** **b) These relocation / reintroduction programs can be carried out only at the request of the interested states of the Carpathian region and not only, after all the legal conditions in this regard have been met.** **c) The capture action with the purpose of relocating / reintroducing some brown bear specimens from Romania, is performed only by the Romanian state through specialized and properly equipped teams, only with the consent of the managers of the hunting funds from where the capture action is carried out.**

ACTION 2.3.	Relocation and / or introduction of certian brown bear individuals
Description...	**d) If necessary, actions of relocation / reintroduction of brown bear individuals can be carried out also in countries outside Europe, after obtaining all the necessary opinions / agreements / authorizations.**
Results	• New collaborations between Romania and European countries, in terms of assuring of a stable brown bear population in the Carpathians and beyond, or refreshing brown bear populations in other countries. • Reduction of high densities of brown bears through capture and relocation / reintroduction actions to the detriment of numerical reduction through hunting interventions.
Responsible parties	• New collaborations between Romania and European countries, in terms of assuring of a stable brown bear population in the Carpathians and beyond, or refreshing brown bear populations in other countries. • Reduction of high densities of brown bears through capture and relocation / reintroduction actions to the detriment of numerical reduction through hunting interventions.
Terms	Permanent.
Emergency	3
Benefits	3

Objective 3. Prevention, damage control and resolution human-bear conflicts

ACTION 3.1.	Operation of accredited specialists to provide technical and scientific support in brown bear species management
Obiective	Functioning of the working group, which operates under the auspices of the Ministry of Environment and approved by ministerial order. The working group will support the Ministry of Environment to make the best decisions regarding the management of the brown bear species. Agreement and approval of specialists for Emergency interventions in solving conflict situations caused by the bear. These specialists can work in rapid response teams at regional level, able to intervene in case of problem bears, orphan bears, more complicated (serious) damage cases, traffic accidents, illegal caught bears, injured bears, mortality and other similar cases. Both entities must ensure the best decisions for the bear population to survive and to prevent and reduce human-bear conflicts.

ACTION 3.1.	Operation of accredited specialists to provide technical and scientific support in brown bear species management
Motivation	At this moment, in Romania, the number of cases in which the bear comes into contact with anthropogenic activity is increasing and there is no official procedure for rapid intervention of some specialized people in the field of wildlife and citizen security. This situation has led to the creation of many damages and direct conflicts between humans and bears, as well as to interventions in such cases of some people or entities, without having attributions in this respect and without having the necessary knowledge and facilities.
Description	**a) Ensure the functioning of the working group composed of experts from different institutions / organizations, who are involved in the management, conservation and research of the brown bear species, which should function according to a normative act, which has its own status and functioning regulation.** This group of experts, if necessary, may be common for other large carnivorous species and must have specialists in the following fields: forestry, hunting, agriculture, local / regional / national administration and nature protection. **b) Training of specialists for special interventions in the case of the brown bear species, agreed and approved by the Ministry of Environment based on specific criteria, appropriately equipped, which come from institutions / organizations that have previous experience.** The agreed and approved specialists will work in a minimum of 5 special intervention teams, each one at regional level, where there the brown bear species exist. These teams will operate on the basis of an official protocol approved by the national authorities and an internal functioning order regulation. The role of these intervention teams is the rapid intervention in special cases in the habitat of the brown bear species and the provision of technical assistance services to state institutions (Gendarmerie / Police, etc.), which have competence in ensuring human protection. The approved specialists, together with the environmental authorities and the managers of wildlife management units, will develop criteria for relocating the rescued bears and will identify some predefined areas for relocating some of the rescued brown bears.
Results	• working group made up of experts approved by Ministerial Order, operating under a functioning regulation; • regional special intervention teams, agreed and approved by the Ministry of Environment, consisting of specialists in the field of hunting, forestry, veterinary, biology and ecology, equipped and, operating under a protocol approved by the central environmental authority; • expertise and high support offered to the Ministry of Environment to take the best decisions regarding the management of the brown bear species in Romania; • predefined areas for the release of the rescued bears in the field; • reducing the number of direct conflicts between bears and humans; • reducing the losses of individuals from the bear population; • improving the Ministry of Environment database on the situation of direct human-bear conflicts

ACTION 3.1.	Operation of accredited specialists to provide technical and scientific support in brown bear species management
Responsible parties	• Ministry of Environment, • Research institutes and organisations in the field of wildlife, • managers of the wildlife management units, • Romanian Gendarmerie, • NGOs in the field of wildlife
Terms	• 1 year – creation of a committee / working group • Permanent – the functioning of the committee / working group • 1 year – training qualified specialists • Permanent – the functioning of the qualified specialists
Emergency	1
Benefits	5

ACTION 3.2.	Reducing human-bear conflicts by implementing preventive measures to reduce conflicts
Objective	Implementation of programs and technical norms in the agricultural / forestry / hunting and administrative sector, in order to prevent and reduce damage and direct conflicts caused by the brown bear species. Encourage citizens in the application of systems or equipment for the protection of animals, crops and goods or in the use of guard dogs, by offering the possibility of adhereing to some programs for the purchase of guard dogs or subsidized products from the Romanian state.
Motivation	Maintaining high densities of brown bear species, increases the risk of direct human-bear conflicts. A high level of human-bear conflicts creates difficulties in maintaining the positive attitude of the local communities towards the brown bear species, thus there is a risk of decreasing the tolerance towards this species, and the locals may start using illegal density reduction methods (poaching), in the absence of a functional system of compensation of owners. This phenomenon may in time lead to the impossibility of maintaining the current conservation status of the brown bear species at national level.
Description	**a) Development and implementation of a system of subsidies, compensations and financial stimulation of owners for the purchase of systems for the protection of domestic animals and material goods, as well as for the purchase of specialized dogs.** The subsidies will be similar to the agri-environment payments for other species and the compensations will be for the implementation of the NATURA 2000 measures.

ACTION 3.2.	Reducing human-bear conflicts by implementing preventive measures to reduce conflicts
Description...	Based on criteria established by the Ministry of Environment, protection systems (electrical fences and other systems successfully applied in other countries), and specialized dogs to intervene on the bear will be purchased. **b) Regulation of a funding mechanism for landowners for setting up special crops for bear feed, with the role of buffer.** The role of buffer crops is to maintain bears within natural habitats in order to minimize contact with anthropogenic activities. Creating and using hunting filds and encouraging managers of the wildlife management units to plant some tree species with fruits preferred by the brown bear species. **c) Regulation and control of grazing in the brown bear favorable habitat.** Request the evaluation of the potential impact of grazing on the brown bear species and their habitats and the monitoring of the compliance with the conditions imposed by the regulatory acts in the case of intensive grazing in the favorable habitats of the brown bear species. **d) Reduction of impact on brown bear species caused by infrastructure and tourism activities.** Assessing the potential impact on the brown bear species and their habitats in the case of projects aimed at establishing, rehabilitating, modernizing or extending the tourism infrastructure; Field patrols to avoid the practice of off-road sports, motocross, snowmobiles outside the approved routes; Monitoring the compliance with the conditions imposed by the regulatory acts in case of tourism infrastructure projects. **e) Legal regulation of the manager's intervention on captive brown bear individuals in the built-up area and implementation of intervention protocols in case of problem bears.** The release of the captive bear in the build-up area can also be done by the manager of the wildlife management unit, based on a service contract made with the city hall of the administrative division where the captive bear is. The manager of the wildlife management unit can collaborate with a regional veterinarian for the chemical immobilization action and with the Gendarmerie for securing the perimeter. It is not considered a relocation the action of releasing in the nearest wildlife management unit, where there are favorable conditions for the species, of some bear individuals captured in other areas than in their natural habitat, respectively in build-up areas.

ACTION 3.2.	Reducing human-bear conflicts by implementing preventive measures to reduce conflicts
Results	• A functional system of financial stimulation of the owners. • Buffer agricultural crops installed in each hunting fund that has conflicts with the brown bear species and falls within the criteria established by the Ministry of Environment. • Damage reduction through the implementation of protection systems. • Regulated grazing in the natural habitat of the brown bear species. • Low impact on brown bear species, achieved through regulated tourist activities. • Possibility of the manager of the wildlife management unit to intervene in the case of problem bears and bears in problematic situations (captive in chain), based on approved and regulated intervention protocols.
Responsible parties	• Ministry of Environment; • Managers of the wildlife management units; • County Environmental Protection Agencies; • National Environmental Guard; • Forest Guards; • Research institutions and organisations in the field of wildlife; • NGOs in the field of wildlife
Term	Permanent.
Emergency	1
Benefits	5

ACTION 3.3.	**Establishing compensation and / or financial support for persons or entities that have been or are affected by the presence of the brown bear species**
Objectives	Compensation of all damages caused by the bear species, to the different natural or legal persons in the sectors of activity related to the fields: agriculture, zoothenics and forestry, damages caused to different material goods, as well as human attacked / injured by the bear, by implementing a compensation system, easy to apply based on clearly established norms following the application of previously implemented good practice examples.
Motivation	At this moment, in Romania, the number of cases of damage caused by the bear species is increasing, and the current procedure for implementing the compensation system is poorly applied. The current procedure for compensating the damages caused by the bear does not include the damages of the material goods and no methode of compensating the persons attacked and injured by the bear, nor the compensation of the families of the deceased persons killed by the bear. Deficiencies in the application of the compensation system, stimulate the reduction of tolerance of rural and urban communities towards the bear species and increases the number of poaching cases. This fact leads to difficulties in ensuring the favorable conservation status of the bear population in Romania.
Description	**a) Completing the legislation by introducing provisions that ensure the implementation of the compensation system of other damages caused by the brown bear species.** • Compensation of material goods, property of natural or legal persons, affected by the bear, as well as compensation of people attacked and injured by the bear and of families of people who died as a result of the attacks caused by the bear. Ensuring the compensation of natural or legal persons within a maximum of 30 days from the date of issuing the decision. • Proposals for additions to the Law on hunting and protection of the wildlife management units no. 407/2006 and GD 1679/2008 regarding the manner of granting the compensations provided by the Hunting Law and the protection of the wildlife management units no. 407/2006, as well as the obligations incumbert on the managers of the wildlife management units and the owners of agricultural, forestry and domestic animal crops for the prevention of damages. • Implementation of a transparent and efficient compensation system by optimizing the evaluation / approval process for the payment and making payments to the injured person, which will facilitate the compensation shortest possible time. • Implementation of a technically based assessment system to eliminate potential attempts at fraud and human error. • Training and equipping the personnel that are part of the commission for finding and assessing damages; • Drawing up and publishing an annual report / situation regarding the implementation of the system of compensation of damages and compensation of persons attacked by the brown bear species in Romania.

ACTION 3.3.	Establishing compensation and / or financial support for persons or entities that have been or are affected by the presence of the brown bear species
Description...	**b) Establishing a compensation system for the managers of the wildlife management units managing the brown bear species.** • Implementation of a compensation system, financial stimulation for the managers of the hunting fund, in case the activity 1.5. Hunting as a management measure of the brown bear species in Romania, was not implemented by the manager of the wildlife management unit. • The compensation criteria of the managers will be established later by the Ministry of Environment
Results	• Functional compensation system that includes damages in the agricultural, zootechnical and forestry sector, material damage, humans and hunting interest affected by the brown bear species; • Functional system of compensation of the managers of the hunting funds, based on criteria of the Ministry of Environment; • Increasing the tolerance of rural and urban communities towards the bear species; • Reduction of poaching performed to protect agricultural crops, domestic animals and material goods; • Increasing the interest of the wildlife management unit managers to have the brown bear species on the managed wildlife management units, achieved following the application of the compensation system of the wildlife management unit managers, that manage the brown bear species..
Responsible parties	• Ministry of Environment, • Environmental Fund Administration, • wildlife management unit managers, • Environmental Protection Agencies and the National environmental guard.
Terms	• 3 years - modified compensation system, which also includes material damage and human injuries caused (where appropriate) by the brown bear species. • 5 years - Elaboration of management compensation system
Emergency	2
Benefits	4

ACTION 3.4.	Reducing the impact of anthropogenic activities and integrating species conservation measures into other sectors of activity
Objectives	Reducing the cases of direct conflicts between man and bear during the anthropogenic activities in the natural habitat of the bear and in its immediate vicinity.
Motivation	Anthropogenic activities in brown bear-friendly areas and in their immediate vicinity, generate potential direct or indirect human conflicts with the bear, but by stimulating the owners in these areas and by implementing conservation measures, negative anthropogenic impacts must decrease.
Description	**a) Regulating the limitation of urban development in key areas for the bear species (protected natural areas where the bear species exists) and finding compensatory measures for landowners who have restrictive measures for its use.** **b) Implementation of NATURA 2000 payments for landowners who have restrictive measures for its use.** **c) Development and promotion of guidelines on impact assessment and measures to reduce / eliminate the negative impact of anthropic activities on the bear population - Guidelines for forestry, grazing, construction, transport etc.)** **d) Identification of quiet areas and establishment of conservation measures applicable to eliminate the effects due to the disturbance of the species during the winter sleep / bear cub growth / reproduction. In this respect, a minimum set of good practices applicable in the quiet areas will be established (limiting the chases near quiet areas, controlling grazing and the stray dogs, monitoring logging during the winter sleep etc.). Stimulating and promoting collaboration between the managers of natural resource (wildlife, forest, agricultural lands, grassland etc.), so as to respect the minimum conservation measures in these quiet areas.** **e) Integration of species conservation measures in hunting, forestry, agricultural, pastoral management plans, harvesting of forest by-products (berries / mushrooms etc.)** **f) Control of poaching (chains, poisoning, capturing cubs etc.) generated as a form of defense of property, animals and goods by owners through civic involvement of the local population.**

ACTION 3.4.	Reducing the impact of anthropogenic activities and integrating species conservation measures into other sectors of activity
Description...	It is necessary to launch a national campaign to raise awareness of the importance of the brown bear species, targeting farmers, communities and local authorities. In order to be more effective in the fight against poaching, it is necessary to increase the exchange of information between the institutions responsible with the management of the brown bear species and those responsible for monitoring compliance with legal provisions, specialization of personnel and increasing the capacity of the authorities involved.
Results	• Compensatory measures for landowners who do not receive building permits in key areas for the brown bear species; • Natura 2000 payments for land owners within sites of Community importance, which have restrictive land use measures; • Protective measures implemented in the quiet areas for the brown bear species; • Guides for eliminating the impact caused by activities from forestry, grazing, construction and transport, on the brown bear population in Romania. • Conservation measures for the brown bear species integrated in the hunting, forestry, agricultural, pastoral, fruit and mushroom management plans; • Reduction of poaching cases of brown bear species produced by local communities.
Responsible parties	• Ministry of Environment, • County Environmental Protection agencies, • National Environmental Guard, • Forest Guards, • Research institutions and organisations in the field of wildlife, • NGOs in the field of wildlife, • Willife management unit managers
Term	Permanent
Emergency	2
Benefits	4

ACTION 3.5.	Prevention of conditioning and habituation of bear specimens
Objective	Prevention of conditioning and habituation of bear specimens Reducing conflicts caused by habituated bears by preventing habituation.
Motivation	In the last 20 years, the phenomenon of bear habituation has intensified, a phenomenon based on inadequate management of household waste or other food sources of anthropogenic origin. In order to prevent accidents caused by habituated bears, the system for collecting household waste must be regulated so that bears no longer have access to easily accessible food sources, as well as regulating access to other food sources of anthropogenic origin is mandatory.
Description	**a) Prohibition and regulation of human activities that encourage the habituation of the bears and alter its natural behavior..** These activities consist of the intentional feeding of bears by unauthorized persons, dog chase, the storage of household waste in the natural habitat of the bear and at its border, the deliberate and repeated approach to some bears visiting easily accessible food sources, as well as additional / irregular feeding. **b) Elaboration and implementation of waste management measures at the level of local communities (urban, rural or tourist isolated areas) in the potential areas of conflict with the brown bear species.** **c) Purchase and installation of household waste collection systems, anti-bear containers-type, in areas with a high conflict risk, where the brown bear species benefits from the inappropriate management of household waste.** The criteria for selecting the container model, and the installation and implementation of these anti-bear containers will be determined by the Ministry of Environment following a study of the necessity to use these household waste collecting systems. The installation of these waste collection systems will be carried out following the signing of a collaboration protocol between the local public authority (town hall), the company dealing with the sanitation service and the institution / entity / organization that purchases anti-bear containers, where this is the case. **d) Elaboration of a study regarding the measures to reduce the accessibility to anthropic food sources, finalized with the elaboration of a technical guide, which will be available for the interested entities;** **e) The regulation of some normative acts established by the local authorities, regarding the application of sanctions at local level for the non-compliance with measures to prevent / reduce the conditioning and / or habituation of bears**

ACTION 3.5.	Prevention of conditioning and habituation of bear specimens
Description...	**f) Regulation of complementary feeding for brown bear species (periods, locations, quantities, type of food etc.) and correlation with feeding for other species (wild boar).** Carrying out a study on the effects of reducing or intensifying the administration of complementary feeding for the brown bear species. Following this study, a set of technical norms / measures will be developed to be implemented by the managers of the wildlife management units in the process of administering the additional food.
Results	• Reducing the habituation phenomenon by implementing a high-performance household waste management system; • Installation and use of anti-bear container systems in areas with the highest risk of use of household waste by the brown bear species. • Complementary feeding rules.
Responsible parties	• Ministry of Environment, • County and Local Councils, • Sanitation companies, • National Environmental Guard, • Forest Guard; • Universities, • Research Institutes; • Managers of the wildlife management units
Term	5 years
Emergency	1
Benefits	5

Objective 4. Education, information and communication regarding the brown bear species and its management

ACTION 4.1.	Education, information and communication regarding the brown bear species and its management
Objectives	Informing and raising awareness of both stakeholders and the general public regarding various aspects of the brown bear and collaboration with stakeholders, to improve the conditions for peaceful coexistence of humans with bear, ensuring the conservation of the brown bear species in Romania. The aim is to transmit objective and useful information about the bear and the species management measures,an education to prevent and manage conflict situations between humans and bear and a communication between the stakeholders to harmonize the aspects related to species management, for the purpose of conservation.
Motivation	In the context in which opinions on how to manage the brown bear population in Romania are divided and often antithetical, it is necessary to bring a balance in opinions and information transmitted. The concept of "brown bear species conservation" is very broad and includes many types of actions and measures that need to be implemented. The involvement of stakeholders and the general public can have a major beneficial effect if a collaboration is built based on a complex and objective information and awareness. In order to ensure the stakeholders' understanding of the issues related to the brown bear in Romania and to determine their action for the purpose of peaceful coexistence, it is necessary to organize several information and education activities.
Description	**a) Educational and information programs at national level to increase the degree of acceptance for brown bear species.** • Campaigns to inform and educate on the prevention of conflicts of any kind between man and bear. Interested factors must be informed and educated on the methods of preventing the damage that the bear can cause, as well as measures that should be taken to avoid human injury by bear; • Campaigns to inform and educate on the system of granting compensation, under the legal conditions in force, in cases where the bear produces various damages; • Knowing the compensation system and the obligations of the owners can ease the procedure and reduce the conflict situations. **b) Informing and raising public awareness through various means regarding the problem of brown bear population conservation in Romania and the actions taken in this regard.** Information and raising awareness about the actions taken to conserve the bear population will increase the understanding of how the actions are carried out and the need to carry them out. The general public may show an increased tolerance towards the bear species and the actions taken for its conservation if

ACTION 4.1.	Education, information and communication regarding the brown bear species and its management
Description...	they are aware of the effects that some anthropic activities can have on the species, in general or on the behavior of the bear in particular. **c) Information and awareness campaigns on the importance of the brown bear species, focusing on the main role of umbrella species that it has in the ecosystem.** It is very important that the image of the bear is a positive one, the social component needing a permanent information regarding the protection of nature and wildlife species. It is important to know that the presence of the bear contributes to maintaining biodiversity. **d) Information and awareness on the role and involvement of various entities in the problem of brown bear conservation in Romania.** It is important to convey the role that each entity has in supporting the species conservation and the possibility of action, under legal conditions, on any aspect concerning the bear species. The wildlife engineer, as a wildlife management unit manager, is responsible for preserving all species of hunting interest and their livelihoods, including brown bear species. The hunter-gatherer as administrator of the wildlife management unit has the task of conserving all species of hunting interest and their living environments, including the brown bear species. The manager of the wildlife management unit has personel specialised in wildlife, who are directly involved in all aspects at local level, related to this species. **e) Promote civic involvement in support of bear conservation;** The general public can support the conservation of the bear population in Romania by providing various information, such as: the presence of bears in inappropriate places, the presence of bear traps, the intentional feeding of bears in inappropriate places, the encounter of bears or different signs (tracks, excrements, scratches, corpses etc.) in their natural habitats, poaching cases etc. Following the information and awareness on various aspects concerning the brown bear in Romania, people from the general public can contribute to the conservation of the species. **f) Advising sessions with stakeholders.** Stakeholders play the most important role in the large carnivorous species conservation, which is why maintaining a collaborative relationship with them is fundamental. The collaboration must be bilateral, which is why it is necessary to carry out regular meetings in order to reach a joint decision on the measures to be taken and implemented for the efficient management of the species. Including advising sessions in the national financing programs of education / communication projects in the field and establishing partnerships between institutions / organizations and the media will ensure transparency in the decision-making process.

ACTION 4.1.	Education, information and communication regarding the brown bear species and its management
Description...	**g) Assessment of the social and economic impact of brown bear conservation at national level.**
Results	• Prevention and reduction of human-bear conflicts; facilitating the procedure for granting compensation • Increase the degree of information on the concrete actions that are carried out in order to conserve the species and the impact that some anthropic activities can have on the bear • Awareness of the general public on the role and importance of the bear • Increasing awareness of the role and involvement of various entities in the problem of brown bear conservation in Romania. • Providing additional support in species management by enhancing the sources of information collection and dissemination. • Harmonizing the needs of the stakeholders with the needs regarding brown bear conservation in Romania. • Identification of the social and economic impact that some actions for the conservation of the brown bear species can have in the areas in which they are carried out.
Responsible parties	• Ministry of Environment, • County Environmental Protection Agencies, • National Environmental Guard, • Forest Guard; • Research Institutes and organisations in the field of wildlife; • NGOs • Managers of the wildlife management units.
Term	Permanent.
Emergency	2
Benefits	4

Objective 5. Improving the legal and institutional framework regarding bear species management

ACTION 5.1.	Improving institutional capacity
Objective	Efficient functioning of the institutions involved in brown bear species management in Romania.

ACTION 5.1.	Improving institutional capacity
Motivation	The effect of the anthropogenic development and the loss of the natural habitat of the brown bear at national level, which have direct consequences on the management of the species, and the involvement of the institutions is not regulated at all levels, thus lacking procedures, infrastructure and specialized personnel to active help management of the species.
Description	**a) Functioning and improving the activity of the Working Group for the conservation of large carnivores.** **b) Establishment and approval of special intervention teams at national level, made up of approved experts and ensuring efficient coordination and functioning. Teams whose role is to intervene between humans and bears, in settling conflict situations in natural and anthropic habitats or save some captive bear individuals in different forms (chains, accidentally trapped in different rooms etc.)** **c) Increasing the number of people and training people within the structures involved in species management. Transfer of experience from one area to another regarding brown bear species management - and from one country to another.** **d) Training of persons involved in the application of measures to reduce and control damage caused by bears:** • Informing the stakeholders about the attributions of the structures involved in the management of the species (Local authorities / Sanitary Veterinary Direction / Economic agents with activities in bear habitat / Police / Gendarmes) • Informing stakeholders about the existing damage compensation system and conservation measures. **e) Building, equipping or extending of rehabilitation centers for bear individuals with problems (accidents etc.) at regional level.** **f) Carrying out / supporting the development of centers (sanctuaries) with an educational role for the individuals that cannot be rehabilitated / released;**
Results	• Conservative management of the brown bear species provided by institutions based on procedures, specific infrastructure and qualified personnel; • Teams of specialists authorized to intervene in the rescue of the bear from human-bear conflict cases. • Functioning of bears rehabilitation centers and of educational centers with role regarding the brown bear species.

ACTION 5.1.	Improving institutional capacity
Responsible parties	• Ministry of Environment, • County Environmental Protection Agencies, • National Environmental Guard, • Forest Guard; • Managers of the wildlife management units
Term	Permanent.
Emergency	2
Benefits	4

ACTION 5.2.	Improving the legal framework and applying the legal provisions
Objectives	Ensure an efficient administrative framework to strengthen the brown bear species management system at national level, so as to maintain a favorable conservation status
Motivation	The legal framework regulating the management of the brown bear species in Romania needs modifications / additions, so as to cover both the needs of the species and those of the people.
Description	**a) Modifying the legislation in order to steamline and complete the system of awarding compensation for damages.** **b) Modifying the legislation to facilitate the special effective interventions of the authorized specialists, through capture actions by chemical immobilization, using tranquilizers;** **c) Modifying legislation to facilitate emergency interventions in urban areas / the use of firearms in special cases for the protection of people;** **d) Harmonization and implementation of regulations in the field of hunting and forestry management to include measures to reduce the impact of these activities on the brown bear population and specific habitats.**

ACTION 5.2.	Improving the legal framework and applying the legal provisions
Description...	**e) Improve the control regarding the observance of the legal provisions and the application of sanctions.** • Improvement of the legal framework for better collaboration between institutions / bodies empowered in preventing and fighting against hunting poaching; • Increasing the institutional capacity / specialization of the personnel from the institutions / bodies empowered in the prevention and control of poaching; • Modifying the legal framework to increase the efficiency of actions to prevent and combat hunting poaching, including by classifying poaching with firearms as a high-risk crime; • Recommendations for the criminal prosecution bodies regarding the current problems of brown bear species management (poaching); • Declaration of fur and bear skulls at the County Environmental Protection Agencies, that are owned by hunters or different natural and legal persons. Measure regulated by the Ministry of Environment through its county structures.
Results	• Favorable conservation status of brown bear species in Romania • High level of acceptance of the brown bear species in Romania
Responsible parties	• Ministry of Environment, • County Environmental Protection Agencies, • National Environmental Guard, • Forest Guard; • Research Institutes and organisations in the field of wildlife; • NGOs • Managers of the wildlife management units
Term	Permanent.
Emergency	2
Benefits	4

6. MEANS FOR IMPLEMENTING THE ACTION PLAN

For the implementation of the action plan, the essential elements are:

- Establishing / applying the standard methods and protocols for population monitoring and evaluation, for the collection of biological / genetic samples and for training of persons involved in applying such protocols.

- Developing the framework for collecting relevant data for the assessment of the conservation status, including pressures and threats at national level, and ensuring public access and stakeholder access to this information.

- Zoning the management methods applied to the bear population in Romania, according to the interests of species conservation, prevention and reduction of conflicts and damages caused by the species.

- Setting clear criteria for controlling the size of the population, so that the bear population is in balance with the short-, medium- and long-term conservation interests of the species and with the social, cultural and economic interests.

- Functioning of the work group for the conservation of large carnivores in Romania to provide the scientific and technical support needed to substantiate decisions.

- The organization and functioning of the intervention teams to ensure fast and efficient action in the field in situations of risk to the local population or which require the rescue of some bear individuals;

7. CONCLUSIONS

The action plan of the brown bear population in Romania was developed by the LIFE FOR BEAR project team between January 2015 – March 2018 and has passed through four stages of consultations with the specialists from institutes / institutions / entities / universities / non-governmental organisations, involved in the management, conservation and research of the brown bear species. Following the consultation stages, it resulted a consolidated version of the action plan, in which were harmonised all the needs of the species from ecological, ethological, conservational, social and economic point of view.

The action plan for the conservation of the brown bear population in Romania will be an integrant part of the "Management plan for the conservation of the brown bear population in Romania". The management plan will be finalized based on the outputs of the project LIFE FOR BEAR and other LIFE NATURA funded projects carried out in Romania and will be submitted to the Ministry of Environment after completion. It is worth mentioning that LIFE FOR BEAR project will come to an end in October 2019 accordingly to the Grant LIFE13 NAT/RO/001154 Agreement.

REFERENCES

Anon, 2005: *Management and action plan for the bear population in Romania. Ministry of Agriculture, Forestry and Rural Development and Ministry of Environment and Water Management,* București, 79 pp.

Boitani, L., F. Alvarez, O. Anders, H. Andren, E. Avanzinelli, V. Balys, J. C. Blanco, U. Breitenmoser, G. Chapron, P. Ciucci, A. Dutsov, C. Groff, D. Huber, O. Ionescu, F. Knauer, I. Kojola, J. Kubala, M. Kutal, J. Linnell, A. Majic, P. Mannil, R. Manz, F. Marucco, D. Melovski, A. Molinari, H. Norberg, S. Nowak, J. Ozolins, S. Palazon, H. Potocnik, P.-Y. Quenette, I. Reinhardt, R. Rigg, N. Selva, A. Sergiel, M. Shkvyria, J. Swenson, A. Trajce, M. Von Arx, M. Wolfl, U. Wotschikowsky, D. Zlatanova, 2015: *Key actions for Large Carnivore populations in Europe. Institute of Applied Ecology (Rome, Italy). Report to DG Environment, European Commission,* Bruxelles. Contract no. 07.0307/2013/654446/SER/B3.

Botnariuc N. and Tatole V. (eds), 2005: *Cartea Roșie a vertebratelor din România., Academia Română și Muzeul Național de Istorie Naturală "Grigore Antipa",* Curtea Veche Publishing, București.

Cazacu C., Adamescu M., Ionescu O., Ionescu G., Jurj R., Popa M., Cazacu R., Cotovelea A., 2014: *Mapping trends of large and medium size carnivores of conservation interest in Romania.* Annals of Forest Research, 57(1), 97-107. doi:10.15287/afr.2014.170, ed. Silvică, Voluntari, Ilfov.

Cotovelea A., Șofletea N., Ionescu G., Ionescu O., 2013: *Genetic approaches for Romanian brown bear (Ursus arctos) conservation.* Bulletin of the Transilvania University of Braşov, Series II: Vol.6 (55) No.1: 19-26.

Kaczensky P., Chapron G., von Arx M., Huber D., Andrén H., Linnell J. (eds), 2013. *Status, management and distribution of large carnivores – bear, lynx, wolf & wolverine – in Europe - part 1, Istituto di Ecologia Applicata, Rome, Italy (prepared for the EC with the assistance of Istituto di Ecologia Applicata and with the contributions of the IUCN/SSC Large Carnivore Initiative for Europe* (chair: Luigi Boitani) under contract N°070307/2012/629085/SER/B3), 72p.

Kleven O., Hallström B.M., Hailer F., Janke A., Hagen S.B., Kopatz A., Eiken H. G. 2012: *Identification and evaluation of novel di- and tetranucleotide microsatellite markers from the brown bear (Ursus arctos).* Conservation Genet Resour. 4: 737-741.

McLellan B.N., Servheen C., Huber D. (IUCN SSC Bear Specialist Group), 2008: *Ursus arctos. The IUCN Red List of Threatened Species.* Version 2015.2. <www.iucnredlist.org>.

Mertens A., Ionescu O., 2001: *Ursul – ecologie, etologie, management.* Haco International.

Servheen C., Herrero S., Peyton B., 1999: *Bears. Status Survey and Conservation Action Plan.* IUCN/SSC Bear and Polar Bear Specialist Groups, Gland, Switzerland.

Straka M., Paule L., Ionescu O., Stofik J., Adamec M., 2012: *Microsatellite diversity and structure of Carpathian brown bears (Ursus arctos): consequences of human caused fragmentation.* Conservation genetics, 13: 153-164.

Swenson J., Gerstl N., Dahle B., Zedrosser A., 2000: *Action plan for the conservation of the brown bear in Europe (Ursus arctos).* Council of Europe, Strasbourg, France.

Taberlet P. and Bouvet J., 1994: *Mitochondrial DNA polymorphism, phylogeography, and conservation genetics of the brown bear (Ursus arctos) in Europe. Proceedings of the Royal Society of London,* Series B, 255: 195–200.

Temple H.J. and Terry A. (Compilers), 2007. T*he Status and Distribution of European Mammals.* Luxembourg: Office for Official Publications of the European Communities. viii + 48pp.

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