

ACTION PLAN

For the conservation of the brown bear population in Romania



BRAȘOV
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Activity implemented by: The National Institute For Research And Development In Forestry "Marin Drăcea" – Brașov centre in partnership with the Ministry of the Environment, Carpathian Wildlife Foundation, the Administration of Bucegi Natural Park, Regia Publică Locală a Pădurilor Kronstadt R.A. and the Forest District of Râșnov R.A. in the capacity of associated beneficiaries.

**Brașov
31.03.2018**



LIFE 13 NAT/ RO / 001154 FOR BEAR,, Conservation of the brown bear population (Ursus arctos) in Romania"

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1. Introduction

In compliance with the provisions of G.E.O. 57/2007 regarding the status of the natural protected areas, the conservation of the natural habitats, the wildlife and flora, art. 31, paragraph (4) with the purpose of protection and conservation of the brown bear, there was drafted the national action plan for the brown bear "The action plan for the conservation of the brown bear (*Ursus arctos arctos*) in Romania", document which comprises action and conservation measures, according to the action plans for the brown bear, agreed at international / European level.

The action plan for the conservation of the brown bear in Romania is a document revising the Action plan which served as a basis of the measures adhered to as of 2006 until present by the public authorities responsible with the protection and the management of the brown bear nationally and setting the needed priority actions for the conservation and the management of the bear population at the national level, as well as planning the measures in time and space.

The revised action plan was conceived as a concise and operational document in order to implement the management of this species by the responsible institutions/organisations. This assures the application of the international conventions provisions 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 plans aims to be a flexible document, which may be periodically revised and thus adapted in order to ensure the achievement of the purpose for which it has been drafted and to fulfill in a broader context the objectives at the European level. The existence of a clear conservation policy and objectives within the national management plan may ease the coordination of the management policies and agreements between neighbouring countries sharing the the brown bear population in the Carpathians.

The action plan for the brown bear population in Romania was performed within the project *LIFE FOR BEAR - LIFE13 NAT/RO/001154 – CONSERVATION OF THE 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.), in the capacity of coordinator beneficiary, in partnership with the Ministry for the Environment, Carpathian Wildlife Foundation, the Administration of Bucegi Natural Park, beneficiar coordonator, în parteneriat cu Ministerul Mediului, Fundația Carpați, Administrația Parcului Natural Bucegi, Local Forests Administration Kronstadt R.A., the Forest district of Râșnov Town R.A. in the capacity of associated beneficiaries.

The objectives of the 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 the brown bear population in the conflict area Brașov-Valea Prahovei.

- Optimising the household waste management in order to reduce the conflicts man-bear in the area of Brașov-Valea Prahovei
- Transferring good practice techniques to the stakeholders regarding the conservation and the management of the brown bear population.
- Improving the attitude of the local and national stakeholders regarding the conservation of the brown bear population and the promotion of Natura 2000 sites.

Photo no. 1 Team LIFE FOR BEAR – Bear capture from the anthropic area and relocation in natural habitats



The importance of the project LIFE FOR BEAR:

The project LIFE FOR BEAR bring, in addition to what has been applied up to now, a complex management of the man-bear conflicts, by testing new methods, the improvement of the ones previously applied, namely the optimization of the solutions. The results will lead to finding the most efficient means of reduction of the negative impact of the urban development on the 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 field of hunting at national level, to intervene in cases of human-bear conflicts (captures, relocations, bears rescue from unauthorized traps, releases from captive areas, etc.).

In order to correlate the actions, the project LIFE FOR BEAR (LIFE13 NAT/RO/001154) collaborated with the projects: WOLFLIFE– (LIFE13NAT/RO/000205 – „The implementation of the best practices for in-situ conservation of the species *Canis lupus* at the level of Eastern Carpathians”, project to create the National action plan for the wolf (*Canis lupus*) and the project LIFE Connect Carpathians (LIFE12 NAT/UK/001068)". In the western side of Romania, after 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)" shall be realised the Regional action plan for bear, with specific management measures addressed to the ecological corridor Apuseni – Southern Carpathians.

2. The protection status and the conservation degree of the brown bear population in Romania

The bear species (*Ursus arctos*) is included in Annex II of the Habitat Directive, i.e. Annex 3 of the GEO no.57/2007, that includes wildlife and flora of community interest, which conservation needs the declaration of Special Areas of conservation (SAC) forming the Natura 2000 network. The species is listed within Annex IV of the Habitats Directive, namely the Annex 4A of GEO no. 57/2007, as a species of community interest that needs strict protection. Among the obligations arising from Habitats Directive one may count: maintaining the conservation status favorable for the brown bear population, periodical monitoring and reporting to the European Commission regarding the conservation status of the species.

Also, the species *Ursus arctos* is included in Annex II (Strictly protected wildlife species) in the Convention regarding the conservation of the wildlife and natural habitats in Europe, adopted at Berne on September 19th, 1979 to which Romania adhered to under the Law no. 13/1993.

In order to ensure the protection regime for 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 of hunting and wildlife management unit protection, as amended and supplemented, imposes restrictions on hunting activity, the species *Ursus arctos* being included in Annex 2 of the same, as a species of hunting interest for which hunting is prohibited. In order to reduce the human-bear conflicts and the control of 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 Romanian vertebrates (Botnariuc and Tatole 2005), after the analysis of existent data at that moment, based on the criteria and categories issued by IUCN (2001), included the brown bear population in Romania in the category of vulnerable species.

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

At this moment, 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).

In compliance with the provisions of Habitats Directive, the conservation status is considered "favorable" if:

- The dynamic data of the population shows that the species rests on long-term as a viable element of its natural habitats;

- The natural distribution of the species is neither reducing, nor there is the risk to reduce within near future;
- The species has and is very probable to continue having a sufficiently extended habitat in order to maintain the population on long-term.

After the assessment of the conservation status of wildlife species and natural habitats under Annex IV and Annex V of the Habitats Directive in order to report before the European Commission under art.17 of the same, made in 2013 for 2006-2012, ***the conservation status of the brown bear in Romania is favorable at the level of alpine and continental biogeographical regions*** in which the species is distributed.

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 after the war there were less than 1000 individuals left. At the beginning of the 50s, in Romania there were estimated 860 individuals. 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 March 1 to January 15, banning the hunting of bear cubs throughout the year and 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 constantly until 1969, when it reached about 4700 individuals. Beginning with 1969, due to the pressure caused by the hunting, the bear population began to decline, reaching about 3700 individuals in 1974. According to this law, the hunting period was reduced to 6 months and divided into 2 periods (March 15 - May 15 and September 1 - December 31), special units for hunting management were established whose regime. management was achieved through special forestry and hunting plans that led to the growth of the bear population, in particular due to the large amount of daily feed and the increase of feeding periods (Micu, 1998). The result of these 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 with 2001, the bear population in Romania registered a slight increase in population size year by year (Cazacu et al. 2014).

Taking into account the date of Romania's accession to the EU, according to the evaluations of the respective period, the bear population was estimated at about 6000 individuals, representing about 35-40% of the estimated numbers at the level of Europe (excluding Russia), exceeding the optimal number estimated by bears. 4000 specimens supported by 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 on the estimation of large carnivorous and wild cat populations in Romania (Ursus arctos, Canis lupus, Lynx lynx and Felis silvestris) in order to maintain a favorable conservation status and to establish the number of specimens of the 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), which is widespread 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 substructure) 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 Carpathians in Romania, a result confirmed by Bayesian analysis. In contrast, the family structure of the habituated bears represents a threat to its genetic balance, **with the long-term danger of the appearance of degenerated specimens, as a result of repeated possible inbred** (Cotovelea 2014).

A threat to the population structure is represented by the habituated bears, that exhibit unnatural behavior, 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 of the 10 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 about 7000 individuals out of the total of approx. 18000 bears, and the size dynamics of this population is stable (Boitani and colab. 2015).

Figure 1. Brown bear populations distribution in Europe

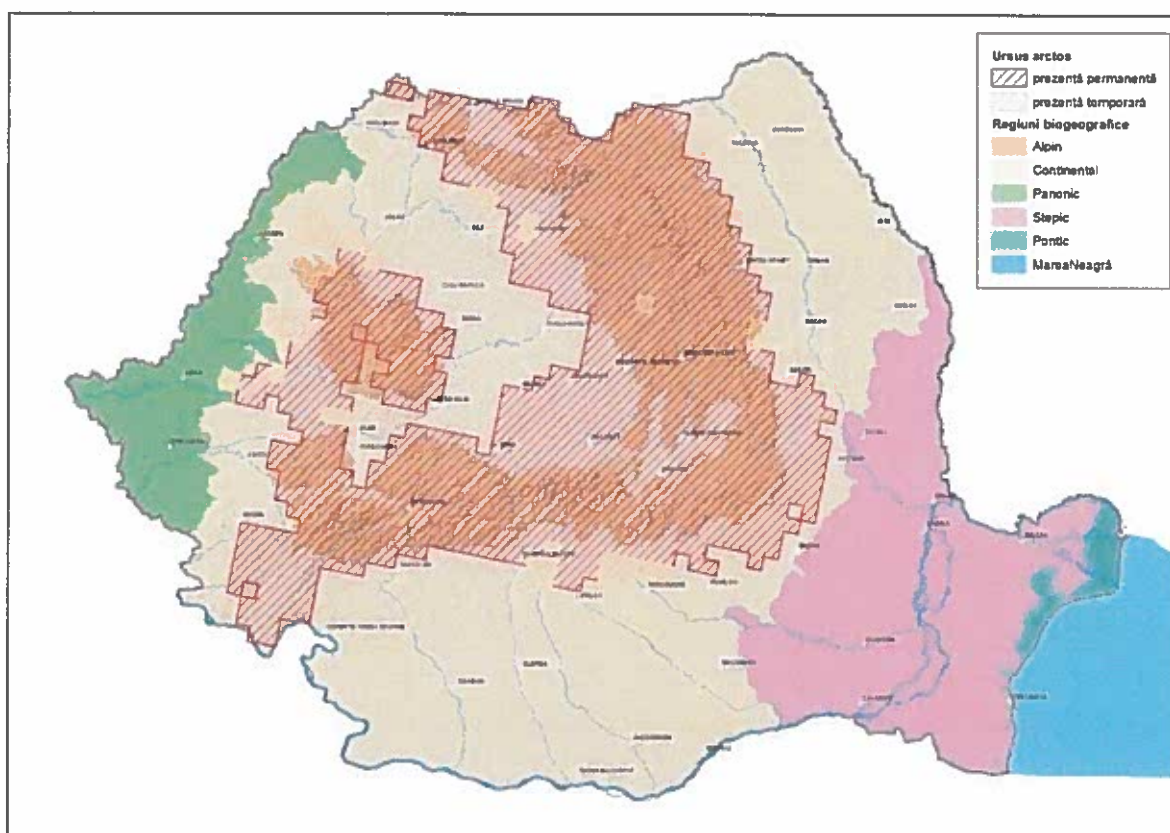


The area of distribution of the brown bear population in the Carpathians, at the level of the countries whose territory overlaps the area of distribution of this population (Romania, Poland, Serbia, Slovakia, but excepting Ukraine due to lack of information) is stable.

The distribution of the brown bear population in Romania was higher in the past, but was reduced after the Second World War, growing slowly after the end of the war. According to the literature data, the habitat of the bear species in Romania was between 1960-1970 approximately 28000 sqm (Micu, 1998). As a result of the measures adopted in 1976, with the increase of the population size recorded during the respective period, the area of spread of this species increased to

65000 sqm. *The brown bear population in Romania occupies an area of over 69000 sqm, representing about 30% of the country's surface*, at altitudes greater 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). 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. At the local level, 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. Also included are the habituated bears, which enter the public domain (Jurj., 2016).

Figure 2. Distribution of the brown bear in Romania (Project analysis LIFE FOR BEAR 2017)



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 offers shelter conditions, tranquility 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 the cycle of life, 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 an important activity is the national level analysis of the quality of the

brown bear specific habitats, considering that the last assessment based on the bonity keys was made 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 assessment 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 biogeographical regions (alpine and continental), and their importance, established on the basis of the experts' opinion.

Table no. 1. Pressures and threats on *Ursus arctos* species and their importance at the alpine and continental biogeographical regions in Romania.

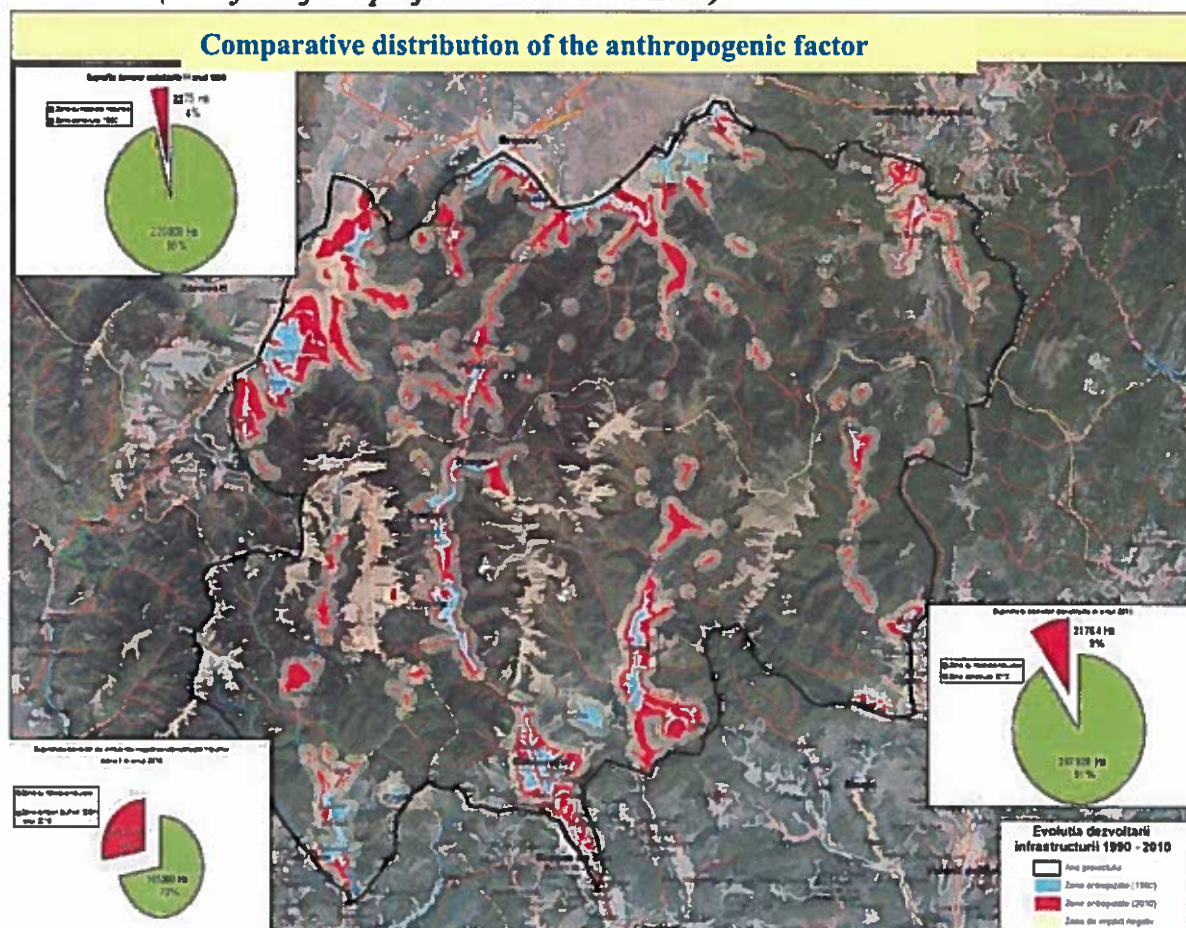
Code and name	Degree of importance			
	Alpine biogeographical region		Continental biogeographical region	
	Pressure	Threat	Pressure	Threat
B06 – grazing in forest/forested area	L	L	L	L
D01.02 –roads, highways	L	L	L	L
D01.04 - railways, TGV	L	L	L	L
E01.01 –continuous urbanization	M	M	M	M
E01.03 – dispersed living	L	L	L	L
E03.01 - storage of household waste / 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.

At the 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 (eg. small bear population, accidental mortality and illegal persecution. It is expected that many of these threats will become more important in the future (Boitani et al., 2015). According to the assessment made in 2012 on 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 is added the degradation of the habitat due to human activities (harvesting wood

and other species of plants, etc.), the lack of knowledge regarding the bear population for the entire distribution area of this population.

Figure no.3 Loss of natural habitat following anthropogenic activities in Brașov – Valea Prahovei area (Analysis of the project LIFE FOR BEAR)



3. The implementation stage of the management measures for the brown bear species by present and identified problems

"The management and action plan for the conservation of the brown bear population in Romania", issued in 2005, under 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 necessary measures for the conservation of the brown bear population and of the specific natural habitats, as well as ensuring the coexistence of the human with this species." The management and action plan for the conservation of the brown bear population in Romania" is a fundamental document in the decision-making process, establishing the 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 during this period, 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 certain areas, the modification of the legislation to remove the bear from the list of strictly protected species and to allow their hunting and to reduce the population size to the optimal number estimated based on the bonuses (managers of wildlife management units, local political factors, etc.).

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

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 national level, are the following:

- Maintaining a viable brown bear population in a sustainable manner, fulfilling the ecological role in all ecosystems that provide adequate conditions for the species' existence;
- Maintaining a normal ecological structure of the brown bear population;
- Monitoring the dynamics of the brown bear population in order to establish the required management measures;

Table no. 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
0	1	2	3	4	
POPULATION ESTIMATION					
Basic methods for estimating bear population	<p>Assessing the number of bears through:</p> <ul style="list-style-type: none"> (1) the measurement of the tracks and the 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. <ul style="list-style-type: none"> - shall be conducted in spring - detailed training on the use of methods will be carried out. - the assessment between the wildlife management units shall be correlated - the assessment from 2010 will be published on the website of the Ministry for 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 	<p>The Ministry for the Environment</p> <p>The National Agency for Environmental Protection</p> <p>National Institute for Research and Development in Forestry</p> <p>Managers of wildlife management units/ administrators of protected natural areas</p>	<p>Budget of the Ministry for the Environment</p> <p>Managers of wildlife management units/ administrators of protected natural areas</p>	<p>Each spring</p>	<p>The Ministry for the 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 for the 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.</p> <p>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.</p>



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Estimation complementary methods	<ul style="list-style-type: none"> - 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 <p>Experimenting with alternative methods of estimation and their implementation</p>	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 derogations granted by the Ministry for the Environment in order to conduct genetic analysis.
NGO involvement in the estimation process	- timely notification of interested NGOs	The Ministry for the Environment		Permanent	The involvement of NGOs in the estimation process is very poor in certain areas due to miscommunication or even lack of communication at local level with the managers of the wildlife management units.





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CONSERVATION OF THE HABITATS AND SPECIES					
Priority scientific studies	- the use of habitats and the capacity to support habitats, fragmentation of habitats and identification of areas of their connectivity - 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	Permanent	Projects funded by LIFE, OP ENV projects were conducted regarding the support capacity of the habitats, the fragmentation of habitats and the identification of certain connectivity areas thereof, ecological corridors at local level (at the level of certain SCIs, areas of implementation of certain transport infrastructure development projects) or regionally (bear population connectivity from Apuseni Mountains/ bear population connectivity from Romania and Ukraine). Recently, genetic studies were conducted on the bear population, including to set the isolation of sub-populations from Carpathians.
Avoiding the fragmentation of the habitats	- all activities with potential negative impact on the habitats used by the bear will be carried out under the control and with the approval of the Ministry For The Environment	Ministry For The 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.
Mitigation actions of the highway negative effects	- bridges, tunnels and viaducts - other measures included in the design of highways - identifying the "fragmentation hot-spots"	Ministry For The Environment Beneficiaries	The beneficiary of the works		Highway projects have been modified by the beneficiary of the works following the results of the studies carried out, consultations and involvement of scientific institutions and NGOs to reduce the impact on the bear population.





Special protection areas (SCI) for large carnivores	<ul style="list-style-type: none"> - creation of a database on projects - elaboration and approval of management plans that will include special protection measures in the SCIs declared for the bear 	Ministry For The Environment and the National agency for environmental Protection	Projects		A number of 90 SCIs, with a surface of 19144 km ² , 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	<ul style="list-style-type: none"> - 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 	Managers of wildlife 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 on the approval of the Norms for drawing up the specialized studies for the sustainable management of the game and of the Instructions for applying the Norms for the preparation of the specialized studies for the sustainable management of the game.
Integrating the forestry and wildlife management	<ul style="list-style-type: none"> - 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 For The Environment		Permanent	The wildlife management plans and the forestry work plans are harmonised with the protected natural areas management plans
Legislation harmonisation	<ul style="list-style-type: none"> - continuous process based on previous studies 	Ministry For The 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	<ul style="list-style-type: none"> - editing of materials, presentations, public conferences - launching of interactive educational programs 	Ministry For The 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	<ul style="list-style-type: none"> - special containers that do not allow access - daily collection of waste in localities with high potential for man-bear conflicts 	Local authorities APM și GNM	Projects and local budgets	Permanent	Containers and the daily collection of waste were provided at the local level within some projects	
Relocation of problem individuals		Ministry For The 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	<ul style="list-style-type: none"> - banning tourism based on garbage bears - prohibition of human activities (feeding, breeding with dogs) 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 by decisions of local authorities or by regulations of protected natural areas in certain areas	



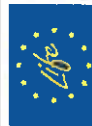
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Study of the types of conflicts and drawing up the measures and procedures for prevention	<ul style="list-style-type: none"> - the registration of conflicts – reporting before Territorial Inspection of Forestry and Wildlife and Agency for the Environmental Protection - carrying out an annual analysis - set of preventive measures - interested institutions 	Ministry For The Environment	Budget, Managers of the wildlife management units, projects	The Ministry For The Environment funded yearly studies on the damages registered on the basis of the data collected by The Agency for the 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, factors which favor damages production, prevention measures.
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 informing public opinion.
Implementing the prevention measures	<ul style="list-style-type: none"> - 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 For The Environment Managers of the wildlife management units		The implementation at local level of some preventive measures but the funding was provided by projects



Damages compensation	<ul style="list-style-type: none"> - 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 For The Environment Managers of the wildlife management units	Budget Ministry For The Environment	Permanent	Only compensation of damages on agricultural / forestry crops and domestic animals according to GO no. 1679/2008, but the legislation of the force does not establish the obligation of the owners of agricultural / forestry and domestic animals to implement preventive measures for the award of damages for 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.
POPULATION SIZE CONTROL					
Granting of waivers	<ul style="list-style-type: none"> - annual report on the damage recorded and the effects of the application of the waivers - establishing the maximum level of intervention following a scientific study 	Ministry For the Environment			The Ministry for the Environment has funded annual studies on the effects of applying waivers on the size of the bear population and establishing the maximum number of interventions



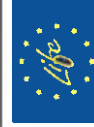
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Data and biological samples collection	standardization by specialized sheets - unitary methodology for sample collection - ensuring conservation - analysis of samples	Managers of the wildlife management units Ministry For The Environment			The Ministry for the Environment by National agency for Environmental Protection transmitted to the managers annually the methodology for the evaluation of the headcount, the records of the data collection in the field on 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 are established by the Order.
Ensuring the transparency on the harvest rate, headcount etc.	- on the website or on request - data is public	Ministry For The Environment			The Ministry for the Environment published on the site reports of evaluation studies but not annually and responded to the requests received on the nationally evaluated headcount, the number of collected individuals.



LIFE 13 NAT/ RO / 001154 FOR BEAR, Conservation of the brown bear population (Ursus arctos) in Romania

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" is 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 a favorable conservation status, 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*) from Romania represents an implementation-oriented document, which is 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 the conservation measures and the coordination of the actions of the factors involved in the conservation and management of the bear population in Romania, in order to achieve the conservation objectives.

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

- Ensuring the distribution area and population size to maintain the favorable conservation status of the brown bear species
- Maintaining the connectivity of the brown bear population in the Carpathian region
- Prevention, damage control and human-bear conflict resolution
- 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 national level, are the following:



- Maintaining a viable brown bear population in a sustainable manner, fulfilling the ecological role in all ecosystems that provide adequate conditions for the species' existence;
- Maintaining a normal ecological structure of the brown bear population;
- Monitoring the dynamics of the brown bear population in order to establish the required management measures;

At the level of Europe, the document identifying key actions for large carnivorous populations in Europe (Boitani et al., 2015) was published in January 2015, over the next five years, 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 drafting of the Action Plan for the conservation of the bear population in Romania, the general actions for the large carnivores from Europe and the necessary actions at the level of the brown bear population from 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 a scientific support in the decision-making process,
- maintaining a stable bear population,
- protection of specific natural habitats and their quality,
- maintaining natural behavior 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.

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 provisions of 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 of the specific habitats, as well as the reduction of conflicts.

4.2. Drafting the action plan

In order to better base 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 aims to develop a revised action plan, analyzing the results and ensuring the transfer of good practices from the projects to national and regional level referring to the brown bear population in Romania, as well as ensuring an intense consultation with the involved factors, including the decision makers, at national, regional and local level.

During 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, during 15-16.03.2019, the third meeting took place at the Faculty of Silviculture and Forest Engineering from the Municipality of Brașov, and on 29.03.2018, the fourth meeting of the working group took place 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 creation of the action plan. (Enclosed the attendance sheets).

In this context, the working group established within this activity, consists 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 guard for environment) and hunting (Forest Guard), representatives of local administrations, administrators of protected natural areas (Piatra Craului National Park and Apuseni and Bucegi Natural Parks), Non-Governmental Organisations.

This document was drawn up after the four meetings within the same work group, in urma celor patru întâlniri în cadrul acestui grup de lucru of 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.

Within the meetings, the following issues were highlighted:

- Assessment of the difficulties identified in brown bear conservation and management at national level;
- Discussions regarding the management practices existing in the case of the bear and their impact on the conservation efforts;
- Collecting public results from other similar projects at international level;
- Discussing good international practices with regard to species management;
- Identification of 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 working manner 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 measures identified;
- Harmonization of conservation interests with economic and social interests for brown bear management in Romania;
- Establishing the manner of implementation of the measures from the point of view of implementation periods, responsibilities, earthquakes, emergencies and needs.

Photo no. 1 The meeting of the working group in Șimon/Bran 05-06.11.2015



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 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 Romania regarding the protection of the species and the need for measures to ensure a sustainable management of the brown bear population in Romania.

The main difficulties encountered by the involved factors present at the meeting were listed, as well as the proposals for solving the same, 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. Also, it raised the need to have a structure of the Action Plan starting from the Key Actions for large carnivores at the level of Europe realized in 2015.

Photo no. 2 The meeting of the work group on 15-16.03.2018 in Brașov/The Faculty of Silviculture and Forest Engineering



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 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 poor coordination and communication between the responsible institutions and the sectors involved in species management in the region,
 - (2) lack or poor 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 of the actions in the Action Plan for the conservation of the brown bear population in Romania.

Photo no. 3 The meeting of the work group on 29.03.2018 at the National Institute for Research and Development in Forestry in Brașov



Within the working groups were identified the most important problems related to the management of the brown bear species and the best solutions for maintaining favorable 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, and the discussions during the last meetings were coordinated by the representatives of the Ministry of the 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 in 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:

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

- A1.1. Conservation of brown bear habitat in Romania
- A1.2. Control of the development of the anthropic areas
- A1.3. Monitoring the brown bear population at national level
- A1.4. Ensuring the optimal population of the brown bear population
- A1.5. Hunting as a management measure of 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 individuals of the brown bear species

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

- A.3.1. The 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 anthropic 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 the management of the same

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

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 needs of individuals moving within the population and ensuring the optimal genetic flow within the population; Ensuring the distribution range of the species, as well as the quality of the specific natural habitats for satisfying the ecological requirements of the species and maintaining a long-term viable brown bear population in Romania.
Reasons	<p>The development and expansion of the inhabited areas, the development and modernization of the 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 there were permanent presence of individuals of the brown bear species outside the historical distribution area reported by Romania, which indicates a dynamic distribution of the species, from different natural and anthropic causes with direct or indirect impact.</p> <p>A number of anthropic activities with an impact on favorable habitats are not regulated properly, so it is necessary to carry out studies and implement management measures, the results of which will contribute to improving the existing regulations in order to reduce the impact of anthropic activities within favorable habitats, so as to ensure their preservation.</p>
Description	<p>a) Mapping the distribution area of the brown bear species in Romania.</p> <p>The mapping of the distribution area is based on the mapping of habitats favorable to the brown bear species, the mapping of the ecological corridors and the mapping of the brown bear species management areas.</p> <p>b) Regulating the implementation of the measures proposed and validated by the guides from previously concluded projects, which</p>

aim at the conservation and management of the brown bear species and specific habitats.

The regulation implies the implementation of methodological-technical norms, applicable in establishing the conditions / taking decisions to issue opinions / agreements / authorizations for plans / projects / activities that affect habitats favorable to the brown bear species, for reducing / eliminating:

- the impact of the anthropic projects / plans / activities (transport infrastructure, alternative power parks, development of residential areas, tourist infrastructure, etc.);
- the impact of the anthropic activities (tourism, collection of berries / mushrooms, forestry and hunting, exploitation of natural resources, etc.) on the brown bear species, carried out in the natural habitat.

In this regard, the Ministry for the 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 enforceable technical norms. Should be found that the information do not cover all impact areas, then the commission proposes to make other guides, containing the measures necessary to achieve a conservative management of the species.

Based on these analyses, the Ministry for the Environment implements technical norms for the previously developed guides, where appropriate and 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 use of the 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 land work plan in order to harmonize agro / forest / pastoral and urban planning plans with potential impact on brown bear species management.

o Regulating the development, approval and implementation of the wildlife management plans at the wildlife management unit level and their harmonization with the management plans of the protected natural areas, over which they overlap, which have the brown bear species in the standard form NATURA 2000

d) Conducting a study on the impact of mushroom and berry harvesting activities on 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, catching and / or purchasing and / or marketing, on the national or export territory, of mine flowers, plant fossils and vertebrate and invertebrate animal fossils, as well as of plants and animals from the flora and fauna, respectively, of their importation), so that the authorization of harvesting forest accessory products is carried out according to the results of the study.

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 supplied for 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 shall comprise 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 the natural resources that affect the trophic resource of the species or lead to 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, on the traditional anthropic activities carried out in these areas

	The presence of brown bears outside the traditional area is becoming increasingly common, where local communities are neither accustomed to the presence of the species in the area, nor developed conflict prevention or mitigation systems, which could affect the species in the long term by reducing its acceptance in those areas and beyond.
Results	<p>The surface of the favorable habitat;</p> <p>Habitat quality map and risk areas for habitat fragmentation;</p> <p>Technical norms for reducing the impact of some plans / projects / activities on the favorable habitat;</p> <p>Set of management / conservation measures in NATURA 2000 sites for brown bear species;</p> <p>Involving managers of wildlife management units in the approval process of plans / projects / activities with potential impact on favorable habitat;</p> <p>Regulated activities for collecting mushrooms and berries from favorable habitat;</p> <p>Measures to improve the trophic supply needed for the species;</p> <p>Improvement and preservation of the natural habitat;</p> <p>Online databases on the conservation of favorable habitat and brown bear species management;</p> <p>Guides for evaluating the impact of anthropogenic activities on the brown bear population in Romania.</p>
Responsible	The Ministry for the environment; the Agencies for Environmental Protection, the National guard for environment, Forest Guards, Research Institutes/Universities/Organisations involved in the 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 anthropic areas	
Objective	Limiting the development of anthropogenic infrastructure within habitats favorable to the brown bear species.
Reason	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 may decrease the level of acceptance of the species by the local communities, which share the same territory with the brown bear species.
Description	a) Regulation of urban development in the key areas for the brown bear species.

	<p>Good practice guides will be developed with recommendations on the use of the territory in the areas frequented by bears, so that they are not affected by the development of the city. Identification of compensatory measures for the landowners in these areas, which are required to limit the use of the respective lands.</p> <p>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.).</p> <p>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.</p> <p>Making recommendations for their 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.</p>
Results	<p>Good practice guides that include in the form of recommendations a set of measures for the development of the urban area of the bear area;</p> <p>Compensatory measures for land owners in these areas, which are required to limit the use of the respective lands;</p> <p>Special measures for construction and landscaping of brown bear habitat, intended to be included in the urban planning regulations.</p> <p>Preservation of natural habitat.</p> <p>Keeping the bear's natural behavior.</p> <p>Reducing direct human-bear conflicts.</p>
Responsible	The ministry for the environment; County councils; Town halls; Owners; Agencies for Environmental Protection; the National Guard for Environment;
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.
Reason	The main management decisions of the brown bear species are taken following the knowledge of the state of conservation of the population and of the population trend at national, regional and local level. Hence, the decisions of conservative management 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	<p>a) Monitoring the conservation status of the brown bear population.</p> <p>The monitoring of the conservation status of the brown bear population will be carried out periodically, every 6 years, at national level, 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 of international and national good practices.</p> <p>Monitoring should target the following categories of data needed to analyze the conservation status (population, habitats, pressures and threats):</p> <ul style="list-style-type: none"> • The estimation of population size and structure aims: annual and periodic estimation of population, birth and mortality within the brown bear population, population dynamics, identification of areas where there are high human-caused mortality, as well as assessment of the health of the bear population ; • The evaluation of the quality of the habitats shall aim: the 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 the pressures and threats can be considered significant for the conservation status will be used. <p>It is recommended that such monitoring of the population size, useful for the assessment of the conservation status, be also based on methods grounded on genetic analyzes that can provide information with a high accuracy of the population size. Secondary, depending on the available resources, other objectives can be pursued, such as: establishing the evolutionary potential and genetic viability and for early detection of genetic problems (consanguinity) within the bear population at national level; establishing the level of gene flow within the bear population at national level.</p> <p>Standardization and coordinated application of the national monitoring methodology are the key elements for ensuring data quality. The creation of a system that ensures the collection of the data resulted by applying the monitoring program as well as other studies on this species, is necessary to facilitate the access of the 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.</p> <p>b) Intensive monitoring</p>
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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:

- 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 (consanguinity) within the bear population at national level,
- establishing the level of gene flow within the bear population at national level.

The collection of the data from the field is carried out following the elaboration of some protocols for collecting the samples in collaboration with the managers of the wildlife management units and yearly collection of samples from the shot down, 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:

- estimation of 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;
- identification of the areas where there are high human-caused mortalities;
- identification of areas with high levels of conflict,
- assessment of 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;
- the 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 field of wildlife.

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 with the help of the cameras with motion sensors in the areas of movement / passage and in the feeding sites. It is recommended to use the bear monitoring methodologies (based on the collection of tracks and photos) proposed in the "Guide for estimating the brown bear population" developed within the LIFEURSUS project - LIFE08NAT / RO / 000500.

In order to eliminate / reduce the multiple counting and counting 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 with the help of the cameras with motion sensors in the areas of movement / passage and in the areas where they produce damages and conflicts. In order to eliminate / reduce the multiple counting and counting 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 for the Environment) of the territorial structures (Agencies for the Environmental Protection), which will coordinate the monitoring of the brown bear population at the county level.

All the data reflecting the presence of the brown bear species in the wildlife management units will be integrated in a study of estimating 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

With the centralization of the data on the county, proposals will be made of maximum threshold for intervention on wildlife management units and managers. At the same time, the managers will justify their proposals.

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.

	<p>Following the result of the permanent / annual monitoring, the central authority for environmental protection (Ministry for the Environment) will determine the level and manner of intervention for the brown bear population at national level, in correlation with the results of the conservation status monitoring and the intensive monitoring, if they were performed until the end of the permanent / annual monitoring.</p> <p>The analysis of the primary data from the wildlife management units' managers in order to carry out the permanent / annual monitoring study will be 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.</p> <p>The activity shall be contracted by the Ministry for the Environment, for a period enabling the development of the activity each year.</p> <p>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.</p>
Results	<p>Conservation status of brown bear population;</p> <p>Minimum size of individuals of the brown bear population, determined by genetic analysis;</p> <p>Genetic characterization of the brown bear population;</p> <p>Yearly estimates and trends of brown bear population size, determined following permanent monitoring;</p> <p>Study regarding the year of estimation of the brown bear population in Romania, after which the Ministry for the Environment can establish the maximum level of annual / periodic intervention in the brown bear population;</p>
Responsible	<p>The Ministry for the 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</p>
Term	<p>3 years (regularly at 6 years) - Conservation status of brown bear population;</p> <p>3 years (regularly at 10 years) - Minimum size of individuals of the brown bear population, determined by genetic analysis;</p> <p>permanent (annually) – Yearly estimates and trends of brown bear population size, determined following permanent monitoring.</p>
Emergency	1
Benefits	5

ACTION 1.4.	Ensuring the optimal headcounts of brown bear population
Objective	Maintaining the brown bear population at an optimum level, so that the wildlife management units' managers be 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.
Reason	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 from the game, which inhabits a wildlife management unit, in a certain population structure, and ensures the conservation of the 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 and they are 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	<p>a) Determining the optimal number of brown bear population in Romania.</p> <p>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, objectively measured 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 populations of other hunting species and the damage caused to humans</p> <p>b) Determining the areas of brown bear population management at national level in order to ensure the optimal number of brown bear population.</p> <p>In order to ensure and maintain the favorable conservation status of the species, 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:</p> <ul style="list-style-type: none"> ○ 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 management zoning will be conducted periodically (10 years) and represents a management tool designed to ensure the favorable state of conservation of the brown bear species in Romania.

The management of the brown bear species will be zoned 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 social and economic aspects, which will substantiate the setting of objectives and the choice of measures.

Taken into account that the process of designating some areas involves a high level of information and a participatory approach with the aim of reducing 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 should take into account population size, habitat status / quality, optimal headcounts, historical wildlife management units, existing protected areas, ecological corridors, concentration areas, conflict zones, 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 (Order of Minister), issued based on their Results obtained from 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 conditions of the habitat, reducing the disturbance and minimizing the human activities with 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 full 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, wildlife management is carried out by the wildlife management units' managers 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 (mainly for females)*. These areas are determined by a scientific study, together with the wildlife management units' managers

Wildlife management units in these areas or parts thereof may be classified as gene pool conservation areas and managed appropriately, including by providing grants for the wildlife management units' managers (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 for the tolerance of the species 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, it shows an unbalanced structure by sex.

In these areas, granting mechanisms for the methods of protection of households and good practices of habitats should be provided. In order to make 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 sleep, for breeding, feeding and seasonal movement, as well as corridors of regional and national interest, where the estimated headcounts are greater than the optimal headcounts 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 cervids and wild boars 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 regulated form and with clearly established objectives, so as not to favor the artificial growth of the headcounts;
- exceptionally, relocations of some bear individuals, which come from the conflict management areas, with the agreement of the manager of the wildlife management

unit and of the local authorities (town hall, local council), where this action is to take place.

- regulating the densities of brown bear headcounts by hunting actions regulated by the central authority responsible for species management.

The maximum level and the manner of intervention in the brown bear population by hunting in the sustainable management area, is determined following the annual studies based on permanent / annual monitoring at national level, based on the 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. In the context of undesirable effects in the sense of endangering conservation objectives, the hunt 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 major social impact and the presence of brown bear individuals is not desired by local communities and / or authorities.

Such areas comprise:

- residential urban areas, tourist resorts and those in close proximity to them;
- partial areas of traditional concentration (areas with orchards and agricultural crops used by bears) during the season of hyperphagia.

In these areas, they must encourage (stimulate) social behaviors appropriate to conflict prevention and discourage the practices that lead to altering the behavior of animals.

Damage / conflict prevention methods in this area need to be stimulated for the purchase of animal protection equipment / agricultural crops / material goods (electric fences, specialized dogs, anti-bear bins), which are successfully used in all countries where they were implemented.

Regulation of complementary feeding for the brown bear species in these areas.

It is possible to realize the deviation feeding, of temporary character, outside the zones of risk of conflicts. Proper management of

complementary feeding for other species (wild boar), so that it can be 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 / dumps, 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 harvesting of bear individuals, aimed at reducing the population, in order to ensure the safety of local communities. Intervention planning must consider reducing the population base by extracting juvenile individuals or harvesting 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 relation to the species.

Any form of support granted to wildlife managers must be related to the achievement of the management objective.

(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 where appropriate, even by hunting (the individuals endangers the lives of people), established by the responsible authority outside the quotas previously planned.

In such areas feeding of any kind of bear is not allowed. With the observation for five consecutive years of the females with cubs in natural habitats, on the occasion of the revision of the zoning, the respective area can be included in one of the other three areas.

The areas proposed in the management of brown bear species, have an informative and explanatory character of the way we consider that the zoning should be approached.

	<p>The zoning will be finalized following the scientific study, in which an ecological analysis and a social and economic analysis will be carried out to substantiate the setting of objectives and the choice of measures. Also, the scientific study must establish measures for managing the habitats, the bear population and the human-bear conflicts, for each management area.</p> <p>c) Study on determining the impact of brown bear species on prey species (deer, deer, wild boar), with implications in the wildlife, forestry and agricultural sectors.</p> <p>The study will be conducted 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 maintaining the favorable conservation status of the brown bear population in Romania and carrying out an adequate hunting management that maintains a prey-predator balance at the hunting / county / region level.</p> <p>The compensation of the managers when lacking the intervention level, where the results of the study show that there is a major impact on the prey species.</p>
Results	<p>The optimal number of brown bear population under the current conditions in Romania;</p> <p>Zoning of brown bear species management in Romania, obtained from a scientific study at national level and regulated by a normative act</p> <p>Study on determining the impact of brown bear species on prey species;</p> <p>Compensation of managers who have wildlife management units, where the brown bear species has a significant impact on the prey species;</p>
Responsible	The Ministry for the Environment, Research institutions and organisations in the field of wildlife, Managers of the wildlife management units, conservation organisations.
Term	2 years (regularly revised at 10 years)
Emergency	1
Benefits	5
ACTION 1.5. Hunting as a management measure of the brown bear species in Romania	
Objective	<p>Maintaining an optimal brown bear population from the ecological, economic and social point of view, by extracting the population surplus (the difference between the estimated real and the optimal headcount), from the areas with high densities, through specific actions of regulated hunting, for achieving the balance in nature. and in order to maintain the current favorable conservation status of the brown bear population in Romania;</p>

	<p>Prevention and reduction of damage and conflicts caused by the brown bear species through the controlled headcount reduction of brown bear numbers from potential conflict areas;</p> <p>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.</p>
Reason	<p>In the current national context, the conservation status of the brown bear species is favorable, the population trend is increasing, the level of damages and conflicts is increasing, and the acceptance of the species in the rural communities and in some tourist areas of national interest is decreasing. In this context, hunting is required to be a management tool, which maintains the size of the brown bear population to an optimal headcount, accepted by specialists in the field of wildlife and by rural and urban communities.</p> <p>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).</p> <p>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 loss of fear towards the bear's man, with direct implications on the level of damage and attacks of some individuals with deviant behavior on the human.</p> <p>The central public authority for environmental protection can grant derogations from these 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 should not be detrimental to maintaining the populations of the respective species in a favorable state of conservation in their natural area and 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 exemption.</p>
Description	<p>a) Extraction of population surplus by sex and age classes, by specific hunting actions</p> <p>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 interests of wildlife protection, the conservation of natural habitats and the prevention of damage to crops, domestic animals, forests and other property;</p> <p>The extraction of the population surplus is mainly done in the <i>areas of sustainable management</i> (from the point of view of the management of the brown bear population in Romania), namely in the natural habitats where the estimated numbers and densities of the brown bear population are higher than the optimal ones.</p>

Following the determination of optimal herds and species management areas, measures to reduce the high densities of brown bear will be applied.

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 the data on the county, the wildlife management units' managers will make maximum intervention proposals for the brown bear species, at the level of wildlife management units. The maximum intervention thresholds proposals will be based on: the level of damages and conflicts registered; the situation of the real staff compared with the optimal ones; 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 for estimating the number of brown bears at national level, after which the Ministry for the 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, the responsables grounding on analysis and criteria made by the specialists of some institutions / universities / entities, who have competences and expertise in this regard.
- The maximum level of intervention in the brown bear population, will be set annually up to the level of the natural increase and even beyond (where applicable and 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:
 - In the case of harvesting or capturing the individuals of the brown bear species in the natural environment, at any of the stages of their biological cycle, a number of individuals of the brown bear species are granted, for a 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;
 - 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 nature, at any stage of their biological cycle, as well as trade in products obtained from individuals of bear collected, rests at the disposal of the central public authority for the protection of the environment, which can be granted to the managers of the wildlife management units who have exhausted the maximum number of

	<p>intervention or those who have not received maximum number of intervention.</p> <ul style="list-style-type: none"> • 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. • Rescheduling the 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 may include two seasons) shall become the reference system and not the season. • Achieving some action implementation indicators, monitored by the Ministry for the Environment. <p>Permanent monitoring of the harvested bears, by collecting biological samples and drawing up the records established by the authority in this regard and displaying the same and the summaries on the site of the environmental authorities, for full transparency.</p> <p>b) Hunting as a measure to prevent conflicts and damage caused by the brown bear species.</p> <p>The application of this measure will be implemented throughout the year for situations of concrete conflicts, analyzed by a commission of specialists, of which also representatives of the Local Agencies for Environmental Protection and / or National Environmental Guard - County Commissioners.</p> <p>The measure shall apply for:</p> <ul style="list-style-type: none"> ○ Prevention of major damage to crops, livestock, forests, fishermen 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 <p>The application of this action will be carried out in the areas where damage and conflicts are repeatedly recorded and applied based on clearly established criteria under the monitoring of the regional / local environmental authority. This action can be implemented in particular in the areas of conflict management, but also effectively in the other areas, with the purpose of preventing human-bear conflicts.</p> <p>The determination of the maximum level of intervention in these cases is done following annual analysis / studies and is applied in the following situations:</p> <ul style="list-style-type: none"> ○ if some bear individuals endanger public health and safety, ○ individuals that are repeatedly found in cities and tourist resorts, ○ individuals that repeatedly go to specially arranged places for the shelter of domestic animals, endangering their safety and / or service personnel,
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	<p>○ individuals present in the carcass of the domestic animal killed by them, located outside the natural habitat of wildlife species.</p> <p>The harvesting 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 the prior notification and the opinion of the territorial agencies for environmental protection and of the county commissariats of the National Environmental Guard, in based on the documents prepared according to the Government Decision no. 1.679 / 2008 regarding the way 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 incumbent on the managers of the wildlife management units and the 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 was monitored and identified for the purpose of harvesting, and the individuals collected under these conditions are deducted from the total number of specimens provided.</p> <p>The maximum number of interventions in this case should be established and managed by the Responsible authority, taking into account the number and incidents existing in the previous year and not in relation to the optimal population or the population surplus.</p> <p>Harvesting or capturing bear individuals can only be carried out under the supervision of the 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 sheet) harvested by the from a hide method or captured outside hunting seasons.</p> <p>The individuals harvested under the above conditions may only be held and transported with a year tag and accompanied by copies of the hunting authorizations.</p>
Results	<ul style="list-style-type: none"> • A brown bear population in Romania in a state of favorable and optimum conservation from an ecological, economic and social approach, kept in balance through hunting, as an action of coordinated control from a technical and scientific approach. • 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 sex, by hunting methods that do not endanger the man and the bear. • Yearly implementation by the central public environmental authority of waivers for a maximum level of intervention in the brown bear population,

	<p>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.</p> <ul style="list-style-type: none"> 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 units they manage.
Responsible	The Ministry for the Environment; Ministry for Water and forests; Wildlife management units' managers; Research institutions and organisations in the field of wildlife; County agencies for environmental protection.
Term	Yearly
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.
Reason	<p>Romania is going through a process of developing road and rail transport networks, as well as extending tourist or residential areas on the outskirts 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.</p> <p>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 ecological connectivity are absolutely necessary.</p>
Description	<p>a) Approval of the methodology for identifying and designating the ecological corridors respectively.</p> <p>In the last 5 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 handed to the Ministry of the Environment;</p>

b) Validation of regional and local ecological corridors for 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 species, in compliance with Art. 14, GEO 57/2007;

Following the validation of the ecological corridors, the Ministry of the Environment submits the opinion of the Romanian Academy and designates them under GEO 57/2007

d) Developing and integrating specific management / conservation measures to ensure connectivity in the management plans of the protected natural areas.

The management / conservation measures will be integrated only in the management plans of the protected natural areas with the role of ensuring the conservation of the brown bear species and of the ecological corridors so as to ensure that the brown bear population's connectivity is maintained at national, regional and local level;

e) Elaboration of a set of regulations, procedures and technical measures to avoid / reduce / compensate the effect of fragmentation of habitats 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;

g) Maintaining and restoring the permeability of linear infrastructure elements in critical areas for connectivity, including as a measure to reduce the risk of accidents in traffic / 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 5 years would surprise the changes in the favorable habitat and could intervene with measures to maintain / restore the permeability of the infrastructure that affect 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 the agriculture, the exploitation of the forests, the change of the land use category, the pooling of properties and their enclosure on large areas.

j) Implementation, approval and implementation of regional action plans for the brown bear species in the ecological corridors areas.

The regional action plans for the brown bear species, must respond to the conservation needs of the species, through specific actions of the area, meant

	<p>to ensure the connectivity at regional level and to prevent the isolation of individuals.</p> <p>k) Monitoring the functionality of the critical areas within the ecological corridors and adapting the management measures, if any;</p>
Results	<ul style="list-style-type: none"> • Ecological corridors at national, regional and local level identified, validated and designated as ecological corridors for the brown bear species, according to GEO 57/2007 and highlighted by the National Agency for Cadastre and Real Estate Publicity in the national, regional and local plans for spatial planning and urban planning, 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 harmonizing 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;
Responsible	Ministry for the environment, Local agencies for environmental protection, Guard for the Environment, Research institutes and organisations in the field of wildlife, Managers/tutors of the natural protected areas, managers of the wildlife management units, Environmental NGOs.
Term	<ul style="list-style-type: none"> • 5 years - Validated and designated ecological corridors • 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 ecological corridor areas. • at the term review of the pastoral, forestry, hunting work plans and management of the completed waters 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
Objectives	Identification and reduction of pressures and threats at the borders 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.
Reason	<p>In the relevant cross-border areas (between Romania, Ukraine and Serbia) for the conservation of the brown bear species, there are not enough joint studies and management of the brown bear population that could identify the connectivity situation of the bear population at the Carpathian level, with small exceptions, in the Maramures area there are ecological corridors identified in a cross-border project (open borders for bears in the Carpathians of Romania and Ukraine).</p> <p>There is no protocol for the exchange of scientific information on the management of the bear species at the border level and there is little information about the poaching situation, the species area immediately after the Romanian borders, the connectivity areas, the bear individuals that use both the Romanian territory, as well as Ukraine and Serbia.</p>
Description	<ul style="list-style-type: none"> 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) Develop a collaboration protocol between the environmental authorities of the neighboring countries, regulating the exchange of information and knowledge regarding the brown bear population (population size and structure, genetic structure, distribution, etc.) and threats that endanger connectivity at the level of region, 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 order to adopt the most appropriate measures in order to achieve a population-level management of the species; e) Identifying, validating, regulating and monitoring the cross-border ecological corridors for the brown bear species between Ukraine - Romania - Serbia and drawing up an ACTION plan to help implement management measures to fulfill the role of these long-term corridors; f) Develop and implement action plan brown bear population level Carpathian region.

Results	<ul style="list-style-type: none"> • A collaboration protocol between the national environmental authorities of the 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 population of brown bear (movement copies) at borders, supporting 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 of the region; • Better connectivity of the brown bear population at the Carpathian region.
Responsible	Ministry for the Environment, Ministry for Foreign Affairs, Research institutes and organisations in the field of wildlife, Environmental NGOs, managers of the wildlife management units
Term	<ul style="list-style-type: none"> • 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 of 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 certain individuals from the brown bear species
Objective	Ensuring a brown bear population with a normal structure in the Carpathian region and in other regions of Europe.
Reason	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 transfer / reintroduce them in other states.
Description	a) Carrying out joint projects / protocols with the Carpathian countries and beyond, regarding the relocation and / or

	<p>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.</p> <p>b) These programs of relocation / reintroduction 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.</p> <p>c) The action of capture for 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 which the action of capture is performed.</p> <p>d) When needed, 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.</p>
Results	<ul style="list-style-type: none"> • New collaborations between Romania and the countries of Europe, regarding the assurance of a stable brown bear population in the Carpathians and beyond, or the refreshment of some 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 wildlife (hunting) interventions.
Responsible	Ministry for the Environment, Research institutes and organisations in the field of wildlife, managers of the wildlife management units
Term	Permanent
Emergency	3
Benefits	3

Objective 3

Prevention, damage control and human-bear conflict resolution

ACTION 3.1. Operation of accredited specialists to provide technical and scientific support in brown bear species management	
Objectives	<ul style="list-style-type: none"> • Functioning of the working group, which operates under the auspices of the Ministry of the Environment and approved by order of the Minister. The working group will support the Ministry for the 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

	<p>work within rapid response teams at the regional level, able to intervene in case of problem bears, orphan bears, more complicated (serious) damage cases, traffic accidents, illegally caught bears, injured bears, mortality and other similar cases.</p> <p>Both entities must ensure the best decisions for the bear population to survive and to prevent and reduce human-bear conflicts.</p>
Reason	<p>At this moment, in Romania, the number of cases in which the bear comes into contact with the 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 people and bears, as well as to interventions in such cases of some people or entities, without having attributions in this regard and without having the necessary knowledge and facilities.</p>
Description	<p>a) Ensure the functioning of the working group made up of experts from different institutions / organizations, who are involved in the management, conservation and research of the brown bear species, which function according to a normative act, which has its own status and regulation of functioning.</p> <p>This group of experts, if any, may be common for other large carnivorous species and must have specialists from the following fields: forestry, hunting, agriculture, local / regional / national administration and nature protection.</p> <p>b) Training of specialists for special interventions in the case of the brown bear species, agreed and approved by the Ministry of the Environment based on specific criteria, appropriately equipped, which come from institutions / organizations that have previous experience.</p> <p>The agreed and approved specialists will work within a minimum of 5 special intervention teams, one at the regional level, where there is the brown bear species. These teams will operate on the basis of an official protocol approved by the national authorities and a regulation of internal functioning order. The role of these intervention teams is the rapid intervention in special cases from the brown bear habitat and the provision of technical assistance services to the state institutions (Gendarmerie / Police, etc.), which have competence in ensuring human protection.</p> <p>The approved specialists, together with the environmental authorities and the hunting fund managers, will fulfill criteria for relocating the rescued bears and will identify some predefined areas for relocating some brown bear rescued.</p>
Results	<ul style="list-style-type: none"> • working group made up of experts approved by the Order of the Ministry, operating under a functioning regulation; • regional special intervention teams, agreed and approved by the Ministry for the Environment, consisting of specialists in the field of

	<p>hunting, forestry, veterinary, biology and ecology, equipped and , operating under a protocol approved by the central environmental authority;</p> <ul style="list-style-type: none"> • high expertise and support offered to the Ministry of Environment to make 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 for the Environment database on the situation of direct human-bear conflicts.
Responsible	Ministry for the Environment, Research institutes and organisations in the field of wildlife, managers of the wildlife management units , Romanian Gendarmerie, NGOs in the field of wildlife
Term	<p>1 year – creation of a committee / working group</p> <p>Permanent – the functioning of the committee / working group</p> <p>1 year – training qualified specialists</p> <p>Permanent – the functioning of the qualified specialists</p>
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 the direct damage and 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 adhering to some programs for the purchase of guard dogs or subsidized products from the Romanian state.
Reason	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 can start to use density reduction methods through illegal methods. (poaching), in the absence of a functional system of compensation of the owners. This phenomenon may lead in time to the impossibility of maintaining the current conservation status of the brown bear species at national level.
Description	a) Creation and implementation of a system of subsidies, compensations and financial incentives for owners to purchase

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.

Based on criteria established by the Ministry for the Environment, protection systems (electrical fences and other systems successfully applied in other countries), and specialized dogs will be purchased to intervene.

b) Regulation of a funding mechanism for landowners for setting up special crops for bears' food, with the role of buffer.

The role of buffer crops is to maintain bears within natural habitats to minimize contact with anthropogenic activities. Creating and using game downlands and encouraging managers of the wildlife management units to plant some tree species with fruit preferred by the brown bear species.

c) Regulation and control of grazing in brown bear habitat.

Request to evaluate the potential impact of grazing on the brown bear species and their habitats and to monitor 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 the 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 routes approved for this purpose;

Monitoring the compliance with the conditions imposed by the regulatory acts in case of tourism infrastructure projects.

e) The legal regulation of the manager's intervention on the captive brown bear individuals in the city and the implementation of intervention protocols in case of problem bears.

The release of the captive bear in the city can be done also by the manager of the wildlife management unit, based on a contract for services rendered with the mayor of the territorial and administrative division where the captive bear is in the city.

The manager of the wildlife management unit can collaborate with a regional veterinarian for the action of chemical immobilization and with the gendarmerie for securing the perimeter.

Releasing to the nearest wildlife management unit, where there are favorable conditions for the species, of captive bear individuals in areas other than in their natural and urban environment, is not considered relocation.

Results	<p>A functional system of financial stimulation of the owners.</p> <p>Buffer agricultural crops installed in each hunting fund that has conflicts with the brown bear species and fall within the criteria established by the Ministry for the Environment.</p> <p>Damage reduction through the implementation of protection systems.</p> <p>Regulated grazing in the natural habitat of the brown bear species.</p> <p>Low impact on brown bear species, achieved following regulated tourist activities.</p> <p>The possibility of the manager of the wildlife management unit to intervene in the case of problem bears and of the bears in problem situations (captive in a chain), based on approved and regulated intervention protocols.</p>
Responsible	Ministry for the environment; Managers of the wildlife management units; County Agencies for the Environmental Protection; 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	<p>Compensation of all the damages, caused by the bear species, to the different natural or legal persons from the sectors of activity related to the fields: agriculture, zoothenics and forestry, of the damages caused to the different material goods, as well as of the people 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.</p>
Reason	<p>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 being poorly applied.</p> <p>In the current procedure for compensating the damages caused by the bear, there is no method of compensating damages to the property or the persons attacked and injured by the bear, neither compensations for the families of the dead persons killed by the bear.</p> <p>Deficiencies in the application of the compensation system, stimulate the reduction of tolerance of rural and urban communities towards the bear species and increase the number of poaching cases.</p> <p>This fact leads to difficulties in ensuring the favorable conservation status of the bear population in Romania.</p>

Description	<p>a) Supplementing the legislation by introducing provisions that ensure the implementation of the compensation system of other damages caused by the brown bear species.</p> <ul style="list-style-type: none"> • Compensation of material goods, property of natural or legal persons, affected by the bear, as well as compensation of the people attacked and injured by the bear and of the families of the 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 incurring for the managers of the wildlife management units and the owners of agricultural, forestry and domestic animals for the prevention of damages. • Implementation of a transparent and efficient clearing system by optimizing the payment evaluation / approval process and making payments to the injured person, which will facilitate the clearing as soon as possible. • Implementation of a technically based assessment system to eliminate potential human fraud and error attempts. • 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 for damages and the compensation of the persons attacked by the brown bear species in Romania. <p>b) Establishing a compensation system for the managers of the wildlife management units managing the brown bear species</p> <ul style="list-style-type: none"> • Implementation of a compensation system, financial incentive for hunting fund managers, if activity 1.5.Hunting as a management measure of 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 for the Environment.
Results	<ul style="list-style-type: none"> • Functional compensation system that includes damages in the agricultural, zootechnical and forestry sector, material damage, humans and wildlife affected by the brown bear species; • System of compensation of the managers of the functional hunting funds, based on criteria of the Ministry for the Environment; • Increasing tolerance of rural and urban communities towards the bear species;

	<ul style="list-style-type: none"> Reducing poaching performed to protect agricultural crops, domestic animals and material goods; Increasing the interest of the wildlife management units' managers to have the brown bear species on their willife management units, achieved following the application of the compensation system of the willife management units' managers, that manage the brown bear species.
Responsible	Ministry for the environment, Environmental Fund Administration, willife management units' managers, Environmental Protection Agencies and the National environmental guard.
Term	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 of the man with the bear during the anthropogenic activities in the natural habitat of the bear and in its immediate vicinity.
Reason	Anthropogenic activities in areas with favorable habitat for the brown bear species and in their immediate vicinity, are generating 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	<p>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.</p> <p>b) Implementation of NATURA 2000 payments for land owners who have restrictive measures for its use.</p> <p>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.)</p> <p>d) Identification of the quiet areas and establishing the conservation measures applicable to eliminate the effects due to the disturbance of the species during the winter sleep / brood growth / reproduction. In this respect, a minimum set of measures of good practices applicable in the</p>

	<p>quiet areas will be established (limiting the chasms near the quiet areas, controlling the grazing and the stray dogs, monitoring the logging during the winter sleep, etc.). Stimulating and promoting collaboration between natural resource managers (wildlife, forest, agricultural land, grassland, etc.), so that the minimum conservation measures in these areas of peace are respected.</p> <p>e) Integration of species conservation measures in hunting, forestry, agricultural, pastoral management plans, harvesting of forest accessory products (berries / mushrooms, etc.)</p> <p>f) Control of poaching (toils, poisoning, capturing cubs, etc.) generated as a form of defense of property, animals and goods by the owners through civic involvement of the local population.</p> <p>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.</p> <p>In order to be more effective in the fight against poaching, it is necessary to increase the exchange of information between the responsible institutions with the management of the brown bear species and the ones responsible with the control of observing the legal provisions, the specialization of the personnel and the increase of the capacity of the authorities involved.</p>
Results	<p>Compensatory measures for landowners who do not receive building permits in key areas for the brown bear species;</p> <p>Natura 2000 payments for land owners within sites of Community importance, which have restrictive measures of land use;</p> <p>Protective measures implemented in the areas of silence for the brown bear species;</p> <p>Guides for eliminating the impact caused by forestry activities, grazing, construction and transport, on the brown bear population in Romania.</p> <p>Conservation measures of the brown bear species integrated in the hunting, forestry, agricultural, pastoral, fruit and mushroom management plans;</p> <p>Reduction of poaching cases in brown bear species produced by local communities.</p>
Responsible	Ministry for the 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, Wildlife management units' managers
Term	Permanent
Emergency	2
Benefits	4

ACTION 3.5.	Preventing the conditioning and habituation of bear specimens
Objectives	Reducing conflicts caused by habituated bears by preventing habituation.
Reason	In the last 20 years, the phenomenon of habituation of bears has intensified, a phenomenon that is 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.
Description	<p>a) Prohibition and regulation of human activities that encourage the habituation of the bear and alter its natural behavior. These activities consist of the intentional feeding of bears by unauthorized persons, pursue with dogs, the storage of household waste in the natural habitat of the bear and at its limit, the deliberate and repeated approach to some bears visiting easily accessible food sources, as well as additional/irregular feeding.</p> <p>b) Elaboration and implementation of measures of waste management at the level of local communities (isolated urban, rural or tourist areas) in the potential areas of conflict with the brown bear species.</p> <p>c) Purchase and installation of systems for collecting household waste, anti-bear containers-type, in areas with high conflict risk, where the brown bear species benefits from the inappropriate management of household waste. The criteria for the selection of the model of containers, of installation and implementation of these anti-bear containers will be determined by the Ministry of the Environment following a study of the necessity of using these systems for collecting household waste. 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 makes the purchase of anti-bear containers, where this is the case.</p> <p>d) Elaboration of a study regarding the measures to reduce accessibility to anthropic food sources, finalized with the elaboration of a technical guide, which will be available for the interested entities;</p> <p>e) The regulation of some normative acts established by the local authorities, regarding the application of sanctions at local level for the non-observance of the measures of prevention / reduction of the conditioning and / or habituation of bears;</p> <p>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).</p>

	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 is to be implemented, to be implemented by the managers of the wildlife management units in the process of managing the additional food.
Results	Reducing the habituation phenomenon by implementing an efficient system of household waste management; Installation and use of anti-bear container systems in areas with the highest risk of using household waste by the brown bear species. Complementary feeding rules.
Responsible	Ministry for the 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	Information and awareness of both stakeholders and the general public, regarding various aspects of brown bear and collaboration with stakeholders, to improve the conditions of peaceful coexistence of man with bear, ensuring the conservation of the brown bear species in Romania. The aim is to transmit Objectives and useful information about the bear and the species management measures, education in the sense of prevention and management of conflict situations between man and bear and communication between the stakeholders to harmonize the aspects aimed at the management of the species, for the purpose of conservation.
Reason	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 strike a balance in the 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 based on complex information and awareness and objective is built. 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 more information and education activities.
Description	<p>a) Educational and information programs at national level to increase the degree of acceptance for brown bear species.</p> <ul style="list-style-type: none"> • 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 perform, as well as measures that should be taken to avoid human injury by the 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. <p>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.</p> <p>The information and awareness about the actions taken to conserve the bear population will increase the degree of understanding of the way the actions are carried out and the need to carry them out. The general public can show an increased tolerance towards the bear species and the actions taken for its conservation if they are aware of the effects that some anthropic activities can have on the species, in general or the behavior of the bear in particular.</p> <p>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.</p> <p>It is very important that the image of the bear be a positive one, the social component needing a permanent information regarding the protection of the nature and the species of wildlife. It is important to know that the presence of the bear contributes to maintaining biodiversity.</p> <p>d) Information and awareness on the role and involvement of various entities in the problem of brown bear conservation in Romania.</p> <p>It is important to convey the role that each entity has in support of species conservation and the possibility of action, under legal conditions, on any aspect that concerns 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 manager of the wildlife management unit hired wildlife specialists, who are directly involved in all aspects at local level, related to this species.</p> <p>e) Promote civic involvement in support of bear conservation;</p> <p>The general public can support the conservation of the bear population in Romania by providing various information, such as: the presence of</p>

	<p>bears in inappropriate places, the presence of traps for bears, the intentional feeding of bears in inappropriate places, the encounter of bears or different signs (tracks, droppings, scratches, corpses, etc.) in their natural habitats, poaching cases, etc.</p> <p>Following the information and awareness on the various aspects concerning the brown bear in Romania, people from the general public can contribute to the conservation of the species.</p> <p>f) Advising sessions with stakeholders.</p> <p>Stakeholders play the most important role in the conservation of large carnivorous species, 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 common decision on the measures to be taken and implemented for the effective management of the species.</p> <p>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.</p> <p>g) Assessment of the social and economic impact of brown bear conservation at national level.</p>
Results	<ul style="list-style-type: none"> • 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 about the role and importance of the bear • Increased 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 may have in the areas in which they are carried out.
Responsible	Ministry for the 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	
Objectives	The efficient functioning of the institutions involved in brown bear species management in Romania
Reason	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 on all levels, thus lacking procedures, infrastructure and specialized personnel, in order to help at an active management of the species.
Description	<p>a) Operation and improvement of the activity of the Working Group for the conservation of large carnivores.</p> <p>b) Establishment and approval of special intervention teams at national level, made up of approved experts and ensuring efficient coordination and functioning. Teams that have the role of human-bear interventions, in settling conflict situations in natural and anthropic habitats or save some captive bear individuals in different forms (toils, accidentally trapped in different rooms, etc.)</p> <p>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.</p> <p>d) Training of persons involved in the application of measures to reduce and control the damage caused by the bear:</p> <ul style="list-style-type: none"> Informing the stakeholders about the attributions of the structures involved in the management of the species (Local authorities / DSV / Economic agents with activities in the bear's habitat / Police / Gendarmes) Informing the stakeholders about the damage compensation system and the existing conservation measures. <p>e) Building, fitting or extending of rehabilitation centers of bear individuals with problems (accidents, etc.) at regional level.</p> <p>f) Carrying out / supporting the development of centers (sanctuaries) with an educational role for individuals that cannot be rehabilitated / released;</p>
Results	<p>Conservative management of the brown bear species provided by institutions based on procedures, specific infrastructure and qualified personnel;</p> <p>Teams of specialists authorized to intervene in the rescue of the bear from</p>

	human-bear conflict cases. Operation of bears rehabilitation centers and centers with educational role regarding the brown bear species.
Responsible	Ministry for the 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, which strengthens the management system of the brown bear species at national level, so that the favorable conservation status is maintained
Reason	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 the needs of the people.
Description	<p>a) Modifying the legislation in order to make the compensation system more efficient and compensate the damages</p> <p>b) Modifying the legislation to facilitate the special effective interventions of the approved specialists, by means of capture actions by chemical immobilization, using tranquilizers;</p> <p>c) Modification of legislation to facilitate emergency interventions in the city / use of firearms in special cases for the protection of people;</p> <p>d) Harmonization and implementation of regulations in the field of hunting and forest management to include measures to reduce the impact of these activities on the brown bear population and specific habitats.</p> <p>e) Improve the control regarding the observance of the legal provisions and the application of sanctions.</p> <ul style="list-style-type: none"> - Improvement of the legal framework for better collaboration between institutions / bodies empowered to prevent and fight 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 for increasing the efficiency of the actions for preventing and combating hunting poaching, including by classifying poaching with firearms as a high social risk offense; - Recommendations for the criminal prosecution bodies regarding the current problems of brown bear species management (poaching);

	- Declaration of fur and bear braincases at the County Environmental Protection Agencies, 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 for the brown bear species in Romania
Responsible	Ministry for the 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 the implementation of the Action plan

In order to implement the action plan, the essential elements are:

- Establishing / applying the standard methods and protocols for monitoring and evaluating the population, collecting biological / genetic samples and training the people involved in applying such protocols.
- Carrying out the framework for collecting the relevant data for the assessment of the conservation status, including the pressures and threats at national level, and ensuring the access of the public and the stakeholders 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 conservation interests of the species in the short, medium and long term and with the social, cultural and economic interests.
- Operation of the work group for the conservation of large carnivores in Romania to provide the scientific and technical support needed to substantiate the decisions;
- The organization and functioning of the intervention teams to ensure fast and efficient action in the field in situations of risk for 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 drafted by the term of the project LIFE FOR BEAR during 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. Following the consultation stages, the consolidated version of the action plan was delivered, in which all the needs of the species from ecological, ethological, conservational, social and economic were harmonised.

The action plan for the conservation of the brown bear population in Romania shall be an integrant part of the "Management plan for the conservation of the brown bear population in Romania". The management plan shall be concluded grounding on the outputs of the project LIFE FOR BEAR and other LIFE NATURA – funded projects developed in Romania and shall be communicated to the Ministry of Environment after its conclusion. It is worth mentioning that LIFE FOR BEAR project shall be concluded in October 2019 under the Grant Agreement LIFE13 NAT/RO/001154.

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