



"Best practices and demonstrative actions for conservation of Ursus arctos specie in Eastern Carpathians Romania - LIFEURSUS "

LIFE08 NAT/RO/000500



APM Vrancea

Parteneri: APM Covasna, APM Harghita, ACNV, ACDB



PROJECT LOCATION: Vrancea, Covasna and Harghita County

BUDGET INFO:

Total amount: 515.066 €

% EC Co-funding: 75% - 386.300 €

DURATION: Start: 15/01/10 - End: 20/12/13

PROJECT'S IMPLEMENTORS:

Coordinating Beneficiary: LEPA Vrancea

**Associated Beneficiary(ies): LEPA Covasna, LEPA Harghita,
ACNV, ABC**



APM Vrancea
 Parteneri: APM Covasna, APM Harghita, ACNV,
 ACDB



ACTION A.2: Creating an integrated GIS database to support and demonstrate conservation actions of the project

Objective: Support for long-term monitoring strategies for the conservation and management of the bear's population for 15 Natura 2000 sites is assured.

Expected results: An up to date consistent online database in compliance with EU INSPIRE Directive, serving as good example of cooperation for the common conservation action on brown bear within three counties.

Progress:

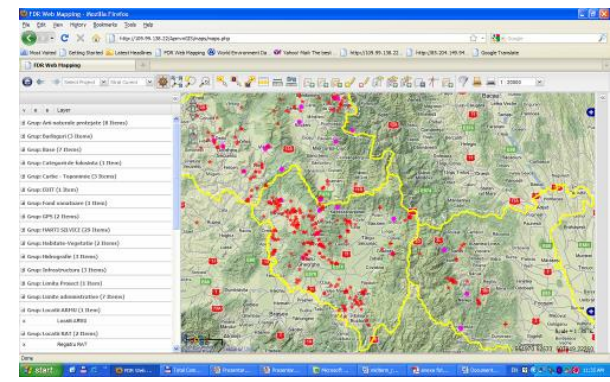
In accordance with the proposed planning, beginning with 12/07/2011, the database and the web-GIS geo-portal were installed on the server purchased and installed at the EPA Vrancea.



The web-GIS portal developing a on-line client application through the project web page www.carnivoremari.ro where there are available two versions of the database:

→ **a public version** with limited access for general public (contains thematic maps and information on project activities, conflict areas, limits of national protected areas and Natura 2000 sites areas in different conservation status, contacts data and territorial jurisdiction of public institutions, managers of protected areas and wildlife management funds etc.

→ **a full and secure version**, up-dated by EPA Vrancea at which they have on-line access the partners in this project. This version provides analysis and sustainable decisions in real-time, ensure completion with information by all partners and first of all ensure coherence of activities implemented to achieve project objectives.





ACTION A.4: Analyze the bear damages at the entire project's area level in order to establish the protection system's implementing sites

- Database on the damage caused by bears is GIS compatible
- Analysis of collected data in the field were completed through achieving and editing of a "Methodology for implementing the protection systems for crops, orchards, sheepfolds and apiaries for reducing the damages caused by bears" that directs how the project team implements protection systems for sheepfolds, crops, bee farms and orchards.

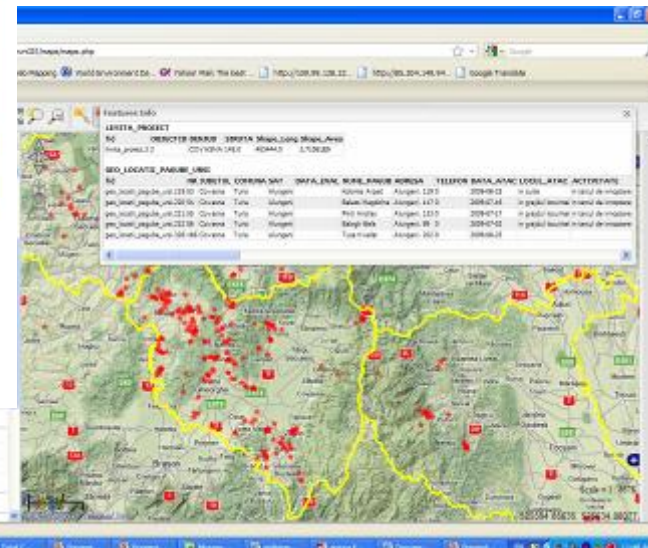


Metodologie pentru implementarea sistemelor de protecție a culturilor agricole, șeptelului și stupinelor în vederea reducerii pagubelor produse de urși



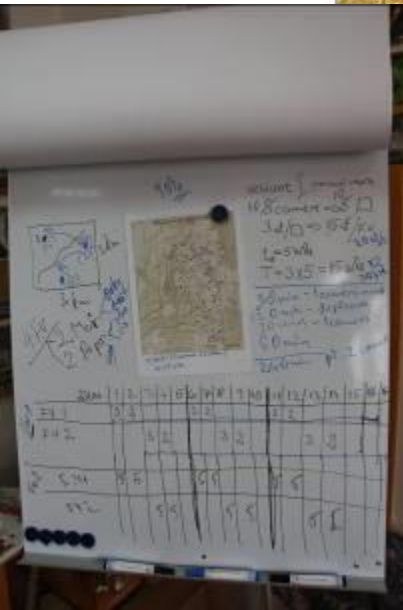
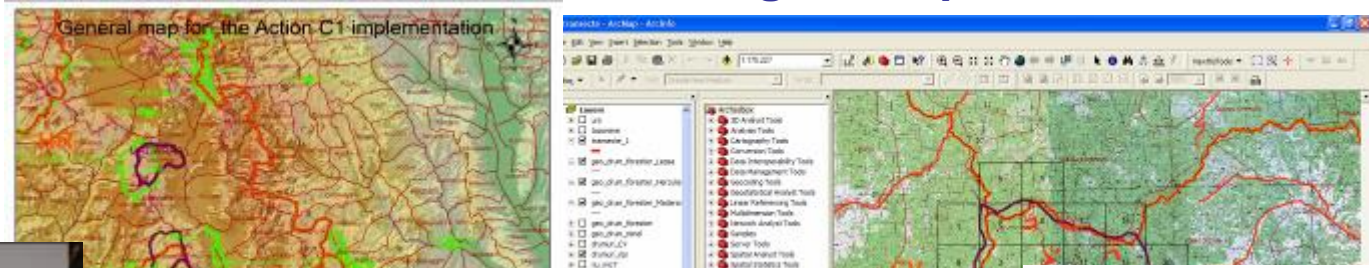
2010

LIFE08NAT/RO000600 - LIFEURUS





ACTION C.1: Demonstrative application of a method set for quantitative and qualitative assessment of the bear population in areas strictly demarcated and administrated from game management point of view



when $FC = 0.64$

$$N = F + M + CUBS + YEAR + TWO$$

$$F = \frac{FC}{PFC} = \frac{0.64}{0.58} = 1.1034$$

$$M = F = 1.1034$$

$$CUBS = REPR \times F = 0.7 \times 1.1034 = 0.7724$$

$$YEAR = CUBS \times S_{year} = 0.7724 \times 13.8 = 10.659$$

$$TWO = YEAR \times S_{two} = 10.659 \times 0.58 = 6.178$$

$$N = 2 \cdot \frac{m}{PFC} + \frac{REPR \cdot n}{PFC} + \frac{REPR \cdot n \cdot 2}{PFC} + \frac{REPR \cdot n \cdot 2 \cdot w}{PFC}$$

$$N = 2 \cdot \frac{n \cdot (1 + REPR + REPR^2 + REPR^3 + \dots)}{1 - REPR}$$

$$N = 2 \cdot \frac{n \cdot [1 + 0.64 + 0.4096 + 0.262144 + \dots]}{1 - 0.64}$$

$$N = 21,0014 \cdot n$$

LIFE URSUS – LIFE08NAT/RO/000500

PRELIMINARY REPORT

FOR 1.03.2011 – 01.08.2011 FIELD ACTIVITY RESULTS

ACTION C1



Authors: Mihai Pop, Viorel Popescu, Silviu Chitac
AUGUST 2011



ACTION C.1: Demonstrative application of a method set for quantitative and qualitative assessment of the bear population in areas strictly demarcated and administrated from game management point of view



APM Vrancea

Parteneri: APM Covasna, APM Harghita, ACNV,
ACDB



ACTION C.1: Demonstrative application of a method set for quantitative and qualitative assessment of the bear population in areas strictly demarcated and administrated from game management point of view

- 28 transects - 8 visits - totally 224 visits - 448 km
- 120 days of photo trapping on 240 capture stations - 30 (spring) and 32 (autumn) single bears
- 22 females with cubs were identified - 7 with COY.

Mean calculated 14 bears/sqkm



ACTION C.2: Creation and demonstrative working at the entire project's area level of an entity which will establish the risks and necessary measures in situations created by problem bears



Metodologie pentru evaluarea riscurilor ridicate de prezența urșilor în zonele locuite

RAT (Risk Assessment Team)



2010

LIFE08/NAT/RO/000500 - LIFEURSUS

De provocate de urs? - e az ön gazdaságában által okozott problémák?

În primejdie gospodăria sau siguranța ta? a, hogy ez veszélyezteti a biztonságát?



situații
mp util un
Primăriei,
gestionarul
re din zonă.
u sollicită
ormeze
ntiel
Mediului.

Ilyen esetekben azonnal értesítse a Polgármesteri Hivatalt, a helyi Rendőrséget vagy a vadásztársaságot. Kérje ezek képviselőit, hogy mielőbb hívják a Megyei Környezetvédelmi Ügynökség csoportját.



LIFE08NAT/RO/000500 – LIFEURSUS



Risk Assessment Team

Activity report on LIFE08/NAT/RO/000500 project March 2010 – December 2010

Responsible for the action: EPA Covasna
Authors of the report: Ioan Mihai Pop, Szabo Szilard, Radu Mihai Sandu

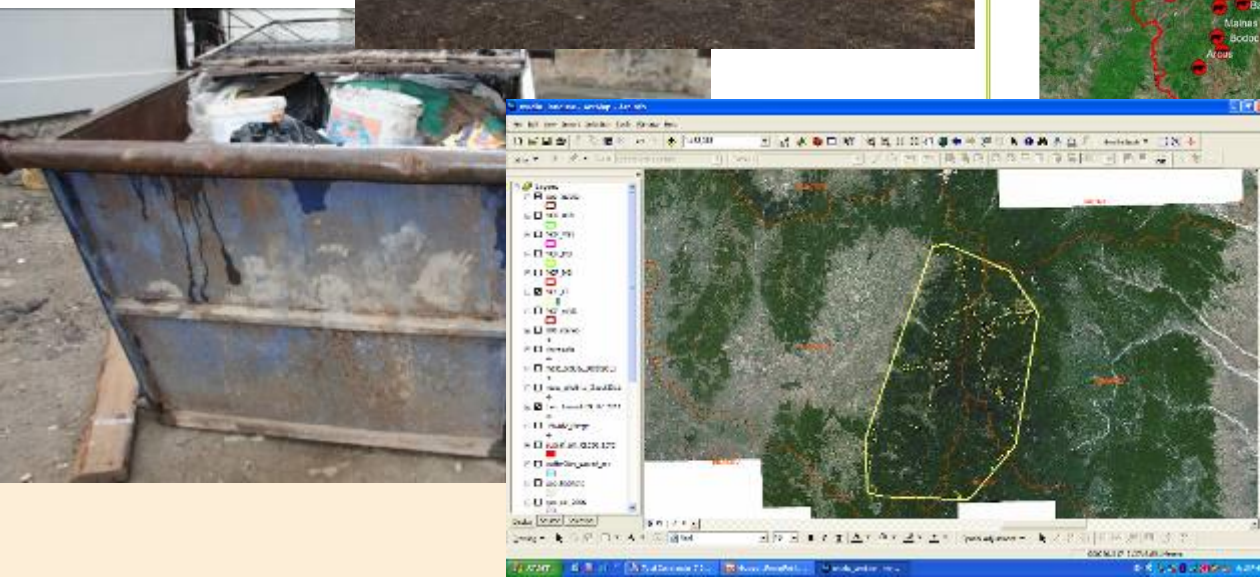
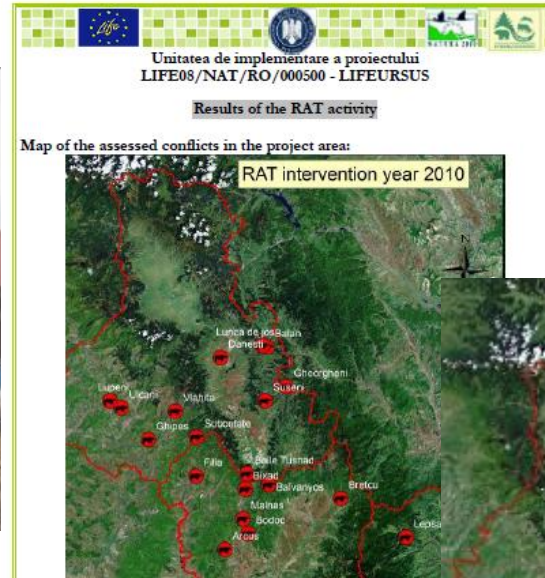
December 2010



Proiect LIFE08/NAT/RO/000500 LIFEURSUS - APM Covasna, APM Harghita. Acest proiect a fost realizat cu sprijinul financiar al Entitatii Europene prin intermediul programului LIFE+. Responsabilitatea pentru conținutul prezentului raport este de exclusivă a autorilor și nu reprezintă opiniile Comisiei Europene.



ACTION C.2: Creation and demonstrative working at the entire project's area level of an entity which will establish the risks and necessary measures in situations created by problem bears





ACTION C.3: Extending of the Animal Rescue Mobile Unit (ARMU)'s action range at the entire level of the project area and insuring of rapid interventions for capturing, relocating and monitoring of problem bears

Objective: Prevention through different actions of rescue, trap release, relocation, monitoring of brown bear population decline caused by poaching, accidental killing of specimens from human-bear conflict areas.

Animal Rescue Mobile Unit - ARMU team - and the Center for Monitoring and Rehabilitation of Large Carnivores - CRCM - were established in LIFENAT05/RO/000170 project, “Enhancing the protection system for large carnivore in Vrancea County”

The Center for Monitoring and Rehabilitation of Large Carnivores - represented by the building in Lepsa Funicular, which implies the existence of areas of care medical and temporarily held of animals, representing the base of shelter and work for the field team.

The second component is the **Animal Rescue Mobile Unit** materialized in the field pick-up having function of veterinary ambulance.



- Between January 15, 2010 and December 30, 2011 ARMU worked in actions aimed at 32 exemplars of the species *Ursus arctos*;
 - 5 exemplars released from improvised traps and returned to the natural environment;
 - 5 exemplars captured and relocated;
 - 22 exemplars (cubs) taken in rehabilitation programs in the centers of Lepsa - Vrancea and Balan, Harghita. Seven of these specimens were taken from the project area;



Medical intervention room realized according to sanitary/technical studies and it is equipped with all necessary equipment and furniture.



- In the same period, ARMU has been duly of 5 cases of bears immobilized by poachers in traps in the project implementation area, but of these, one died before ARMU arrival, for another exemplar the hunting manager, due to irrecoverable state decided to euthanize the bear, and in three cases the team has not found the bears, which were self-released.





ACTION C.4: Reducing of juvenile mortality caused by human disturbance with the protection of hibernation dens in the cub nourishing period

Objective: Reducing of juvenile mortality caused by human disturbance with the protection of hibernation dens in the cub nourishing period

In achieving the objective of the action it has pursue touching these goals:

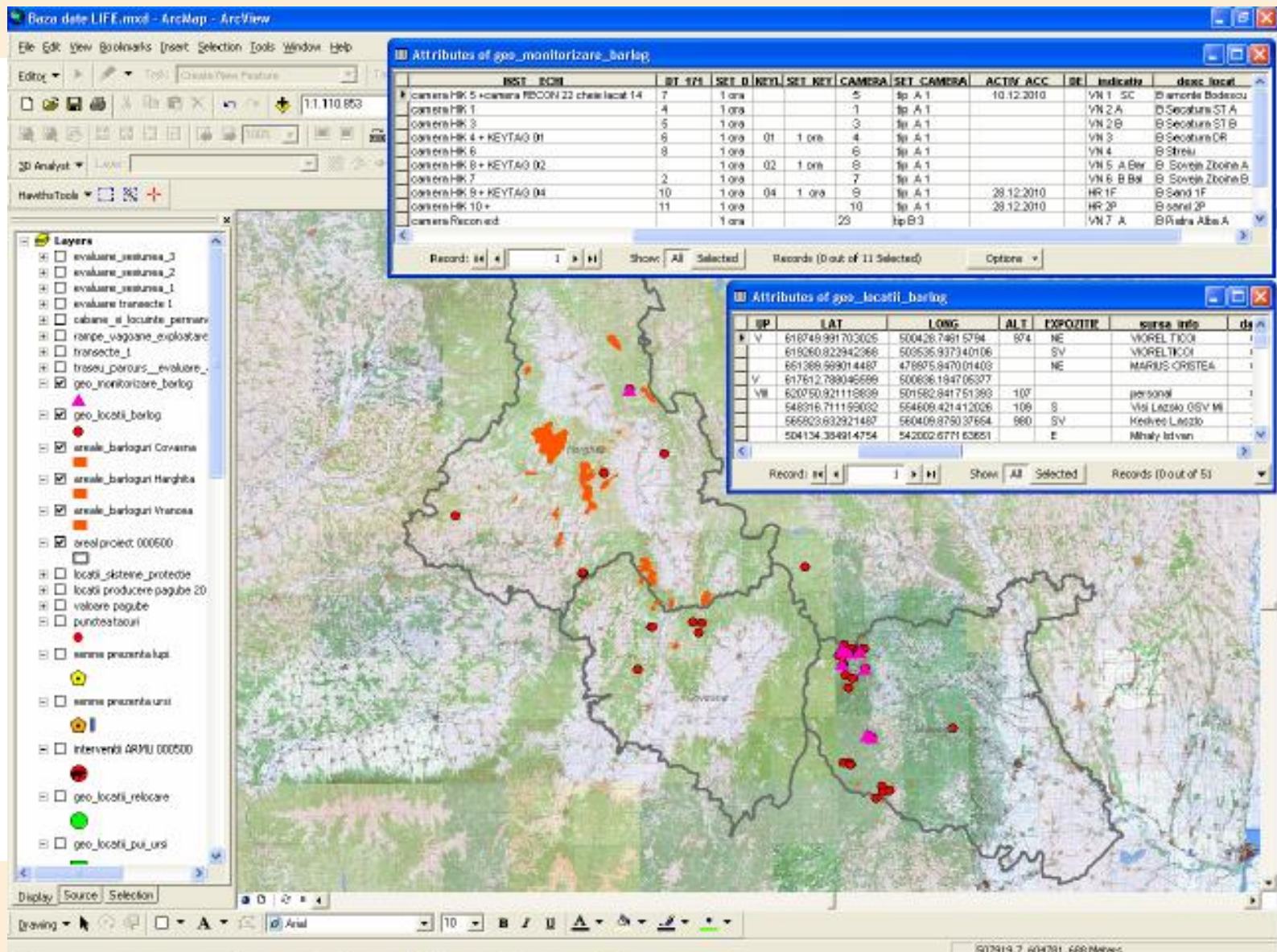
- Identifying the dens location and implementation in GIS format of this information for their analysis in relation to the position of exploitation prosecution or of potential plans/projects;
- Identify of occupancy periods of dens correlated with values of measured climatic parameters (temperature, humidity, dew point);
- The establishment of direct or indirect correlation between temperature changes imposed by global warming and behavior of bears during winter sleep;
- Analyze the impact of human activities on juvenile mortality;



Based on these sources there have been identified until **01 September 2011** on the area of project implementation:

- 76 areas with dens and areas where bears have repeatedly wintering in the last 5-7 years.
- 61 dens for which it has been achieved precise location and there were made measurements of physical parameters.





Transpunerea in baza de date GIS a informatiilor



Monitoring systems of bear dens include:

camera network IP HIK VISION, model: DS – 2 CD 802PF, storage environment card SDHC 16 GB;
unidirectional microfon;
spot led 12V;
recorded (temperature, humidity, dew point) SYN DT - 171 installed inside the den set to record parameters every 60 minutes;
recorded (temperature, humidity, dew point) Trix 8 installed outside the den;
camera Talon Extreme 3.0MP Digital Scouting Camera, Recon installed for monitoring the space outside den, body camera and also the recorder of climatic parameters were installed in metal skeletons against destruction by bear.





Imagini fotografice si secvente de filme capurate cu echipamentele instalate in vecinatatea sau in interiorul barlogurilor in sesiunea de monitorizare septembrie 2010 - mai 2011



ACTION C.6: Implementing at the entire project level of several demonstrative crop, livestock and farm protection systems by using repellent equipment and substances

Based on the analyze made in action A4 and on data regarding the conflict areas saved in the GIS data base during the implementation of action A2, in every spring (until May) each year are going to be mounted at least 30 protection systems around live stocks, crops, and farms in every site where existed conflicts or damages made by bears.

electric fences



audio-visual systems

flags cords



repellent substances

Li Cl Adversive substances



1. Implementation the protection systems.

- The 30 protected perimeters are located in the Vrancea, Harghita and Covasna counties in areas where human activities and bear habitat overlap, conflicts being generated by the existence of some trophic offers. Mixed protection systems consisting of electric fences, flags cords, audio-visual systems and repellent substances, have been installed in: 14 sheepfolds with sheep and goats, 1 cattle ranch, 8 crops, 6 orchards and 1 apiary (in 2010).
- In 2011, respecting the same procedure needed to select the location in which to be implemented the damage reduction systems, there were installed in the three counties 28 mixed protection systems (9 sheepfolds with sheep and goats, 3 cattle ranch, 4 crops, 2 orchards, 6 mixed farms and 4 apiary).

2. The supervise the system's work by visits of the sites and completion of the supervising surveys in order to avoid technical problems and the mission's success assessment.

3. Analyze the cost and benefit balance. Will be realized a file of every protected site, in order to evaluate the action's efficiency.



ACTION C.7 Analyze of the degradation and fragmentation level of the brown bear habitats.

The aim of this action is to analyze the degradation of habitats caused by human activities in Natura 2000 sites and neighborhood in the whole project area, pinpointing the most affected areas, which becomes improper for the brown bear.

As a preceding phase of GIS analysis, there has been preparing layers in vector format, stereo 1970 compatible with GIS portal, having regard to:

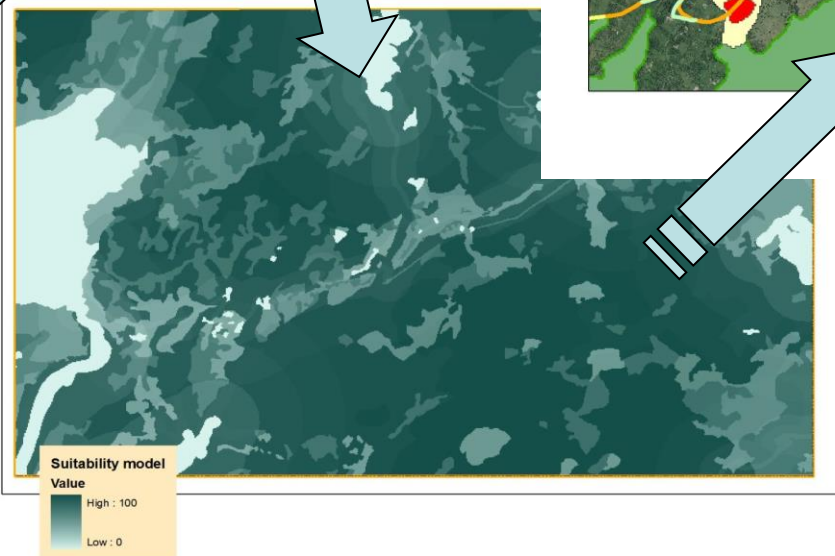
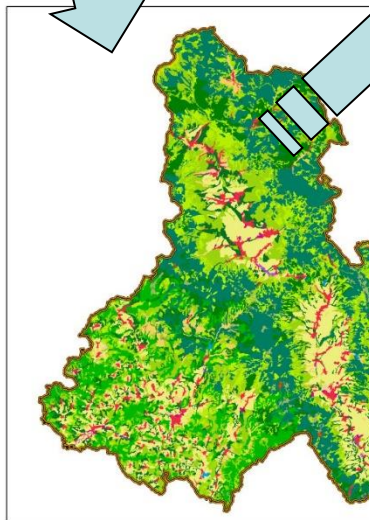
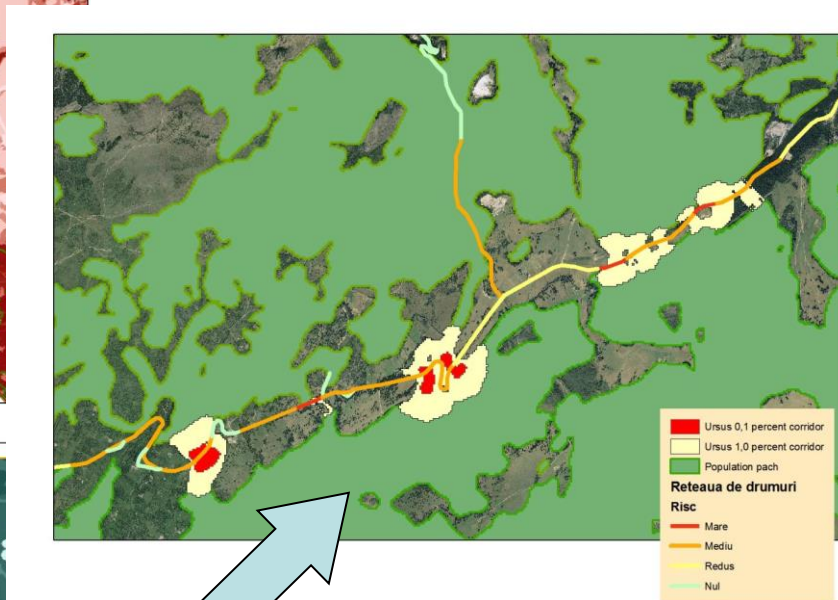
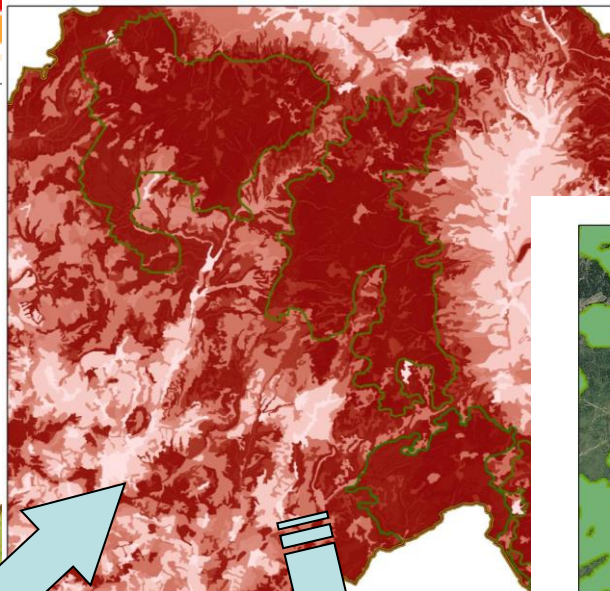
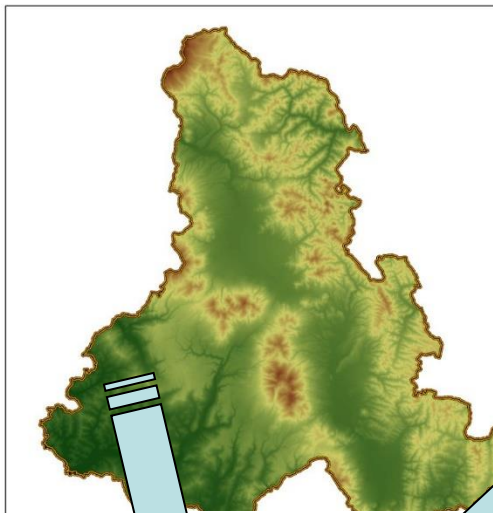
- a. Land characteristics (category of use, degree of degradation etc)
- b. Altitude
- c. Distance to towns, roads, rivers
- d. Sources of attraction (nourishing, orchard, sheepfolds, landfills etc).

After obtaining the results and it will be realized verification and correction of model obtained based on field checking in critical areas. Based on these, it will be developed the final model and the set of measures proposed to reduce degradation and habitat fragmentation.

APM Vrancea

Parteneri: APM Covasna, APM Harghita, ACNV,
ACDB





Suitability model
Value
High : 100
Low : 0

Ursus 0,1 percent corridor
Ursus 1,0 percent corridor
Population patch
Reteaua de drumuri
Risc
Mare
Mediu
Redus
Nul

Parteneri: APM Covasna, APM Harghita, ACNV, ACDB



Thank you!

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ACDB