



Bear Smart Community Genzana

Progress report 2015

1. Best practice manual

A best practice manual was written in the months soon after the submission of the project to IBA. Its writing was a team work involving members of Salviamo l'Orso (SLO) with professionals in bear conservation such as biologists and zoologists working for Universities, National Parks and Reserves, and a veterinary in charge of bear's health management aspects. This team work produced an easy-to-understand and complete text which is the result of a positive critical discussion among the professionals involved.



A logo of the Bear Smart Community Genzana was created by the personnel of the Reserve Monte Genzana Alto Gizio (NRMGAG) and has become the brand of the project and the manuals of which 850 copies (750 in Italian and 100 in English language) were printed and distributed to the population in April-May on occasion of public meetings and door-to-door to maximize the best practices dissemination.

The manual concerns a description of the Marsican brown bear and its biology, how to detect signs of presence and behave in case of a direct encounter with the bear, the description of the Bear Smart Community, a bear-smart management of farms securing livestock, a bear-smart management of organic waste and fruit orchards not to attract bears to the proximity of urban areas. Respectful behaviors not to threaten this critically endangered animal have been also brought to readers' attention, such as reducing speed on the roads in the bear home range in order to prevent road-kills. Obviously the text has highlighted the non-dangerousness of the Marsican brown bear supported by the evidence that no attack to human beings has ever been reported to-date, though the authors agreed not to convey a naïve idea of a "teddy bear", reminding that the bear is the largest Italian carnivore and a wild animal potentially equipped to hurt and whose correct and bear-smart management consists in reducing the possibilities of human-bear direct encounters through securing access to easy food conditioning the bears behavior and making them frequenting urban areas. It has been chosen an easy-to-understand registry because the manual is intended mostly to low-educated people from rural areas.

The best practice manual collects on its cover the logos of the partner organizations – such as the lead partner SLO, the associations Dalla parte dell'Orso (DpO) and Rewilding Apennines (RA) - and institutions which have adhered to the project measures, in particular the NRMGAG, the municipalities of Pettorano sul Gizio and Rocca Pia, the Abruzzo, Lazio and Molise National Park (ALMNP), the Majella National Park (MNP) and the Abruzzo Region.

2. Meeting with the local population

Six meetings have been organized so far: three in the summer time and three in autumn. The main purpose of these meeting was to make the citizens of Pettorano sul Gizio and Rocca Pia, the two local communities involved in the projects, to follow the project and to further spread bear-smart best practice for a peaceful bear-man coexistence. Initially May was the month chosen for the first meetings, but then they were deferred in agreement with the Reserve, in order to collect as many people as possible, as the population grows in the summer because of tourists and the returns of immigrants.

Two presentation-meetings were held in Pettorano, one on June 19th 2015, reserved to the members - about 20 people - of the partner local association DpO, and another on July the 10th, in partnership with the NRMGAG. This meeting evidenced the presence of a public, about 40 people, near to the Reserve and SLO. So, the participants were on majority favorable to the bear, but there were also people against bear conservation claiming for bears to be taken back to National Parks as if these were zoos.

The last summer meeting was held in Rocca Pia on August 30th 2015 with a large participation of public, about 60 people, from the local communities and surroundings, proving a clear success for this joined initiative by Salviamo l'Orso and DpO.

Autumnal meetings were held in Pettorano on 29th October, 9th and 15th November. On October 29, the scientists of NRMGAG, ALMNP and MNP met in the NRMGAG about 20 officers of Italian Forestry Corps to instruct them on how to apply dissuasion measures on one or two specimens of bears who were causing damages in Pettorano countryside. On November 9th, the NRMGAG and the Mayor of Pettorano sul Gizio met the community of Vallelarga, the urban-rural area where bear damages most often occur). Despite of the usual unrest of the population living in that area, about 20 people only participated to that meeting held in a local school. On November 15th instead, the 2nd edition of Festa del Letargo (Winter sleep Festival) – an event organized in 2014 by DpO in memory of the bear killed by a man from Pettorano – saw the participation of a large public (about 100 people), scientists and authorities in the Castle square of Pettorano sul Gizio, and all project partners. A round-table was held in the castle conference hall with a large audience. The institutions involved - delegates from Italian Forestry Corps, Abruzzo Region, the Mayor of Pettorano, the Directors of ALMNP and MNP – showed the progress of a responsible bear management in that area. A delegation of citizens from Vallelarga read a letter in public claiming that the protection of people must prevail on the protection of the bear. On that occasion an old farmer complained about daily switching on and off the electric fence – something unbearable at his age – showing the narrowmindedness and cultural deficit of part of the local population as the first obstacle to a possible coexistence with wildlife in general and the bear in particular.



Though farmers, hunter groups and other potential opponents of the bear were invited to these meetings, we need to report the presence of a majority of people already aware of the importance of wildlife conservation. General indifference has eventually prevented these opposing groups to participate.

2.1 Erasmus Plus program with Plymouth University

A group of twelve Erasmus plus students from the faculty of Conservation Biology of the Plymouth University (UK) attended to these meetings and their continuous presence in the area from July to the end of the year 2015 has been the best indicator of the importance of the bear to an international public and a resource for local rural communities, fighting against depopulation and immigration to nearby cities or overseas. Furthermore, these students have come on purpose to carry out the Bear Smart Community Genzana, after an agreement with SLO as receiving organization. Their contribution to the actions provided by the project has been fundamental for three main reasons:

- a. Direct help on practical actions on the field to the partner organizations;
- b. Direct presence on the project area and continuous monitoring;
- c. Despite the language barrier, indirect help in the continuous dissemination of best practice by raising the level of acceptance of the bear – a resource able to attract young foreign students to almost completely depopulated villages with a high elderly rate - by the local population.

Since July 2015, these students have been implementing the project actions, in particular:

- Installation and maintenance of electric fences,
- Wildlife monitoring by camera traps,
- Wildlife observation from a distance,
- Bear transects with collections of signs of presence,
- Recovery of the environmental quality of areas frequented by the bear by removing abandoned barbed wire, debris, snares,
- Road ecology initiatives such as the recovery of wildlife underpasses to favor bio-permeability,
- Fruit trees bear-smart management,
- Researches on the bear and its biology,
- Help in meeting organizations,
- Researches on human dimension by the production and distribution of a questionnaire to evaluate the project efficiency and level of human-bear coexistence awareness.



3. Bear-proof-waste-bins

5 bear-proof-waste bins were purchased in June and gave in July to the municipality of Rocca Pia, where bears eating from organic waste bins were reported last year (2014). Though a large male was often observed in the summer time near Rocca Pia and was lately reported also in October, no bears overturning bins have been reported, partly thanks to the bear-proof-waste-bins. However, the municipality of Rocca Pia has not yet removed the old non-bear-proof organic waste bins, despite the agreement with SLO. The reason is that only one operator is in charge of collecting waste and he avails himself with an automatic waste collector truck which is not able to take and automatically empty the bear-proof waste bins which are smaller and do not fit the collector forks. The municipality of Rocca Pia is going to buy a new truck with mobile forks, adaptable to bins of different sizes. Not to make their effort and expenses vain, in addition to the presentation meeting, Salviamo l'Orso stuck special stickers on the bear-proof waste bins to make the residents aware of the importance to secure organic waste from the bear. After this, a major use of the bear-proof bins has been reported.



4. Acquisition and installation of electric fences

In June Salviamo l'Orso acquired 13 electric fences out of the 17 initially requested. In fact, after a punctual recognition by Mr. **Pietrantonio Costrini**, a freelance professional hired on purpose, of the 17 farms which had required protection, only 13 were those which could actually be protected by electric fences. About the other 4, 2 renounced to the electric fence for neighborhood problems (the chicken coops are located at the border with other properties and the electric fence would be installed were not allowed), in one case the farm does not exist anymore and in the last case a strong iron cage for three chickens was recommended instead of an electric fence because of a concrete floor all around the already existing enclosure. The models requested - B 100, B 300, Equimaster - varied according to the farms to protect. The selected brand for best quality and performances was Gallagher.

Stored in the municipality's warehouse, SLO's volunteers and the English students installed the electric fence in July-August to 13 small farms. Table 1 reports the GPS coordinates of these farms. The domestic animals to protect were essentially poultry and rabbits, but also bee hives, some sheep, a horse and a pig.

No.	Domestic animals	Area
1	Geese	Vallelarga, Pettorano sul Gizio
2	Poultry and rabbits	Vallelarga, Pettorano sul Gizio
3	Chickens	Vallelarga, Pettorano sul Gizio
4	Chickens	Vallelarga, Pettorano sul Gizio
5	15 sheep	Vicenne, Pettorano sul Gizio
6	10 sheep, 1 horse, 1 pig	Valle Pescara, Pettorano sul Gizio
7	Poultry and rabbits	Valle Pescara, Pettorano sul Gizio
8	Poultry	Ponte d'Arce, Pettorano sul Gizio
9	Poultry	Via Cavate, Pettorano sul Gizio
10	Poultry	Vallone S. Pietro, Pettorano sul Gizio
11	Ducks	Vallone S. Pietro, Pettorano sul Gizio
12	Poultry	Vallelarga, Pettorano sul Gizio
13	Bee hives	Vallelarga, Pettorano sul Gizio

Table 1. SLO Electric fences in the study area.



None of those farms protected by SLO have suffered attacks by bears and no domestic animals have been killed, even though some attacks in the area were reported on non-adequately-protected farms soon after the installation of the electric fences.

Electric fences provided by the Majella NP, installed by the volunteers of SLO and DpO, went to integrate those acquired by the Reserve, Rewilding Apennines and SLO. More than 75% of the farms in the area of intervention have been secured, as it shows the reduction of 73% in damage events suffered this year compared to 2014's.

Year	2014	2015
No. Damage events	52	14
% Damage reduction	100	73
% Expected reduction	-	50

Table 2. Comparison of bear damages occurred in the study area in years 2014 with 2015.

5. Closure of vehicle traffic on two forestry roads

In his recent Site of Community Importance (SCI) Management Plan, the NRMGAG Manager reported three forestry roads to be closed in the Reserve through the location of horizontal metal bars in order to reduce human disturbance, mainly by jeeps, motorbikes and quads, in wild area. This action will be implemented in the next month by the Abruzzo Region in force of Regional Law no. 3, 4th January 2014, even though the Abruzzo Region has not yet approved the SCI Management Plan. SLO is exerting a lobbying action on Abruzzo Regional Government to enforce the law provision.

6. Installation of mitigation measures to prevent wildlife-vehicle collisions

This measure is still in progress because of the long bureaucratic process required to get necessary authorizations. After several meetings with ANAS - the authority in charge of State Road SS 17 - SLO and the NRMGAG obtained the promise to fence out some stretches of road particularly dangerous for wildlife in general and for the bear in particular.

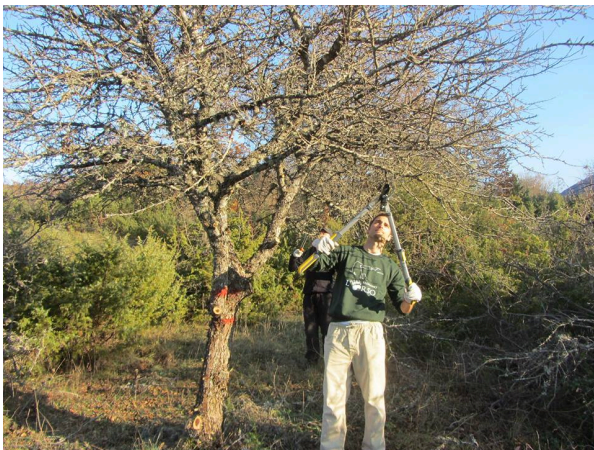
Other soft, but not less important, measures to reduce the risk of wildlife-vehicle collision were performed by SLO volunteers in collaboration with the NRMGAG staff and under the supervision of the Reserve Director - Mr. Mauro Fabrizio, road ecology expert - and consisted in the recovery of an underpass of SS 17 particularly frequented by wildlife. This wildlife crossing was impeded by rubbish (mainly old tires, plastic bollards, plastic and glass bottles) dumped there by uncivil people. The underpass was successfully cleared of all this debris and restored as a wildlife crossing, as stated by some videos of wolves and deer taken by camera traps while wildlife monitoring by the English students. Though no bear was recorded going through that underpass in the project period, last year fixes by Peppina the bear's collar proved to the NRMGAG scientists that she used that passage.



7. Pruning and care-taking of the fruit trees in abandoned orchard in extra-urban areas

Fruit trees in abandoned orchards in extra-urban areas have been carefully geo-referenced and are being pruned in these days by our volunteers. The volunteers have taken part also in fruit collection, especially apple, peach and fig pick up, as a bear smart measure to clear urban areas of fruit attracting the bears in their vicinities. This action must be improved in the following years because of the large amount of fruit orchards abandoned, some in fenced areas where they escape any recognition by volunteers.

8. Regular checks and required reparation of all fences



The electric fences are regularly checked by our volunteers. This activity will be carried out also in the following years and concern:

- Regular check of the correct functioning of the fences in all their components,
- Regular check of the structures and their maintenance by the farmers. In case of alteration, the correct conditions will be restored. In case of persistence of these alterations by the farmers, the electric fence will be taken back by SLO and given to another farmer,
- Check of the effective presence of livestock to protect. In case of absence, the electric fence will be taken back by SLO and given to another farmer with livestock.

As a matter of fact the association will need extra funds to guarantee checks on a regular basis and, therefore, the effectiveness of these preventive measures.

9. Monitoring of all actions (implementation and spending, and indicators of success)

Check of the effectiveness has already been carried out at a first stage focusing on:

- Impact of bear-smart actions on food conditioned bears,
- Human dimension.

9.1 Impact of bear-smart actions on food conditioned bears

Collared in March by the biologists of the NRMGAG, ALMNP and MNP, the bear called Peppina (Josephine), first responsible of damages in the area, was tracked down by GPS. Her movements showed the efficiency of the preventive measures because the bear's raids lasted only few days each with few damages occurred on farms which did not request proper protection and escaped recognitions, and then this individual left the area looking for non-protected chicken coops in different areas, very far from the intervention area but still in her appraised home range. So some livestock killed by this food-conditioned individual was reported either by the personnel of MNP or the press. Data were supported by direct sightings and the fixes from the radio-collar.

Unfortunately, ill-functioning of the collar made hard to monitor and prevent this bear's movements and damages to livestock in late October, when damages were reported in some farms at the border with the project's area of intervention, in the municipal area of the town of Sulmona (the biggest town in the area).

Furthermore, SLO volunteers, properly formed by the NRMGAG and a course by Lazio Region Park Agency, identified signs of presence of the bear such as scat and hairs. These evidences were opportunely collected for genetic analysis. That was possible thanks to ten recognitions in the study area in the period July-October. In the same period volunteers carried out also eight observation sessions from a distance. On Wednesday August 2nd the radio collared bear - identification was possible firstly by binoculars, secondly by checking the collar fixes - was observed at an overhead distance of about 80 m while eating some blackberries, then disappearing in a thicket. On August 4th, two days later, the same bear was observed at about 15 m from the volunteers during a transect for bear signs of presence. The animal disappeared in the vegetation clearly showing its collar.



Other monitoring activities were conducted by six camera traps (four provided by the NRMGAG and two by SLO) which were set in wild areas to detect further bear passages than those already ascertained by the NRMGAG. These camera traps did not record any bear, but were a very useful tool to detect the presence of many other wildlife species and their behavior.



In late October, after some bear damages were reported in the area between Pettorano sul Gizio and Sulmona, a tuft of hairs was collected for genetic analysis from a metal fence by the RNMGAG personnel. Very likely another bear - not the collared female whose collar stopped working few days ago - attempted to break into a chicken coop from a steep riverbank where the electric fence was not completed. In that period some citizens had observed a large dark-haired male roaming in the area, probably the same bear observed in Rocca Pia earlier this year.

9.2 Human dimension

At the end of October 500 anonymous questionnaires by SLO were distributed to 500 families in Pettorano sul Gizio and Rocca Pia to verify how bear-smart measures had permeated the local population. SLO produced

500 stickers reading in Italian “I support the Bear Smart Community Genzana” to repay and encourage those citizens who would have returned the questionnaire filled. Nevertheless only 1/5 of these questionnaires were filled out and returned to SLO’s volunteers on the deadline of November 4th, some of them collected in a proper box in the Reserve’s office for the residents in Pettorano old town. Very sadly the old population of Rocca Pia did not respond to the questionnaire as expected. Very few questionnaires were taken back from Rocca Pia. The data sample showed that the majority of people who responded had already a positive approach to the bear, conservation and were somehow close to the local Reserve. Only few questionnaires transmitted a hostility to the bear – seen as a competitor in farming - and conservation policies. So, the results evidence a 4/5 of widespread indifference, and 1/5 of people emotionally involved. A positive approach is consistent to an upper level of environmental awareness and general education, while the negative approach proves a widespread cultural deficit that led to the killing of the bear in 2014. In fact, uneducated people living in the rural areas more affected by bear damages, probably unable to fill out the questionnaire despite its easy-to-understand registry, are the most representative of the 4/5 of never filled questionnaires as directly experienced by the volunteers.

10. Costs

Table 3 shows the project costs with regard only to those requested from IBA. The total expenditure exceeds the amount (14,687) requested in 2015 from IBA for two year-project, testifying to the practical, passionate and problem-solving commitment of SLO to the project implementation.

Description	Quantity	Amount in €
Printing of best-practice manual	850 copies	420,47
Electric fences	13	10,139.53
Bear-proof bins	5	1,586
Total		€12,146 = USD 15,425.42

11. General considerations

The Bear Smart Community Genzana can be considered a necessary either practical or educational tool leading to a peaceful human-bear coexistence.

Mario Cipollone wrote this report with the contribution of PhD Piero Visconti.

Date

December 29th, 2015



Salviamo l'Orso – Associazione per la conservazione dell'orso bruno marsicano - ONLUS

Via Parco degli Ulivi, 9 - 65015 Montesilvano (PE) – C.F. 91117950682

Email: info@salviamolorso.it Website: www.salviamolorso.it