Summary

The LIFE Save the Flyers Project was realized covering two areas of central Italy: the area of Mount Amiata (Grosseto), about 30.000 ha large, situated in south Tuscany and the Gola della Rossa e Frasassi Natural Regional Park (Ancona), located in an area of central Apennines within Marche Region.

The project involved many SIC and ZPS as, in Tuscany: Cono vulcanico del Monte Amiata (IT51A0017), Monte Penna Bosco della Fonte e Monte Civitella (IT51A0020) and the SIC/ZPS Monte Labbro e Alta Valle dell'Albegna (IT51A0018) and Alto corso del Fiume Fiora (IT51A0019). In Marche: SIC Gola di Frasassi (IT5320003), Gola della Rossa (IT5320004), Valle della Vite e Valle dell'Acquerella (IT5320012) and Valle Scappuccia (IT5320002) and the ZPS Gola della Rossa e di Frasassi (IT320017) and Valle Scappuccia (IT5320016).

The project had three main objectives:

1. to favour the conservation of Chiroptera inhabiting the project areas (protecting the most important caves from anthropogenic disturbance, increasing the watering and foraging areas and increasing the availability of refugees);
2. to help the settlement of two independent populations of Red kite (*Milvus milvus*)
3. to significantly decrease the risk of electrocution for the Red kite and other species of raptors listed on Annex I of the Birds Directive (2009/147/CE).

The project management was carried out by Mr. Aldo Coppi, General Administrator of UCMAG, together with an external subject, Biodiversità sas, expert in EU projecting, which had the role of general supporting institution for the two associated beneficiaries Comunità Montana dell'Esino Frasassi and Enel Distribuzione S.p.A. as well.

To guarantee the appropriate tranquillity to the reproductive and wintering bats populations, 6 fences were installed within the Amiata area, to protect 5 caves and 3 fences were set inside the Gola della Rossa e Frassassi Regional Natural Park to protect 3 caves.

Interventions of prairies cleaning-up were performed in a portion of 33 ha of the Amiata area and in 113 ha of the Frasassi N Park, to prevent grassland disappearance, with consequent reduction of the foraging areas available for bats.

Inside the Frasassi N Park, a confining fence for livestock (3 km) was realized as well, in order to favour grazing activities and, thus, to preserve open areas and to maintain prey availability for bats.

To make some forested spaces, located within the Amiata area (conifer reforestations and tick copses), suitable for bat foraging, pruning activities were realized, involving 62 ha of woods and 5 glades of 0.5 ha each were created. In the Frasassi N Park, pruning involved 10 ha of wooden areas and allowed to plant 700 young plants of the main local shrub species.

Since wetlands are important watering areas for bats and increase prey availability, considering also that they often tend to bury themselves and disappear, within the Amiata area 17 pre-existing wetlands were requalified, an old fountain was restored and 2 new wetlands were created ex-novo, from the beginning; 2 more other new wetlands were created in the Frasassi N Park.

The scarcity of holes and cavities on trees where bats could find refuge, caused by the young age of woods, was handled by the setting of 1.197 bat boxes within the Amiata area and 71 inside the Frasassi N Park.

In the Amiata area the bat boxes in 2014 recorded a use rate of 52% (508 bat boxes of 964 checked), highlighting a clear positive trend (use rate was of 5% in 2012 and of 25% in 2013). The bat species using the boxes were 4: the Lesser noctule or Leisler's bat (*Nyctalus leisleri*), the Greater mouse-eared bat (*Myotis myotis*), the Common pipistrelle (*Pipistrellus pipistrellus*) and the Soprano pipistrelle (*P. pygameus*).

In the Frasassi N Park, during summer 2014, the use rate was of 57% (41 refugees used of 71); the species using it was the the Lesser noctule or Leisler's bat (*Nyctalus leisleri*).

The scarcity of holes and cavities in modern buildings or in the restored ones was faced throughout the installation of 91 bat boards within the Amiata area, 73 of which in local agriturismos and of 77 bat boards inside the Frasassi N Park, 23 of which on the walls of housing facilities.

In the Amiata area, the bat boards recorded a use rate of 11% (10 refugees of 91 checked). Inside the Frasassi N Park, the use rate was of 11% (9 refugees of 77 total).

For both areas, the species using the bat boards was the Kuhl's pipistrelle (*P. kuhlii*).

These rates are probably going to increase, since the discovery and use of these refugees by bats need quite long periods.

The action aimed to the consolidation of two populations of Red kite was based on the methodology already used in various regions of Great Britain as well as in the Amiata area, within the LIFE Biarmicus Project (which brought to the settlement of 16-18 individuals).

The protocol foresaw the relocation of young individuals of Red kite from France (Corsica) and from Switzerland (Fribourg Canton), their permanence inside aviaries for about two months and their following release, supported by active bird feeding platforms. The released Red kites were equipped with wing tags, with ISPRA and rubber foot rings and with remote monitoring devices.

Within the Amiata area, between 2010 and 2014, 31 individuals from Corsica and 29 from Sweden were released. From the first release, carried out in 2007, to the ones performed in 2014, 105 young Red kites were released.

Some aviaries located at the CERM (Endangered Raptor Centre), Rocchette di Fazio (GR), represented the setting – in area. There, a new bird feeding platform and a monitoring unit, close to it, were built on purpose.

An additional feeding platform was realized inside the Parco Faunistico del Monte Amiata (Arcidosso - GR), a wildlife fenced area managed by the UCMAG.

The outcomes of the activities carried out for Red kites conservation were evaluated throughout:

- the analysis of the annual trend of the reproductive season
- the feeding platforms use rate, monitored with video checking
- the monitoring of movements (made during the years 2010 and 2011 with VHF telemetry and during the years from 2012 to 2014 with GPS data loggers “UvA-BiTS”, Amsterdam University).

Between 2011 and 2014 it was possible to locate and monitor 12 nests, recording the birth of 21 chicks and the first flight of 20 juveniles. In 2014 the number of juveniles detected at the feeding platform at the end of July allowed to estimate the presence of at least 7 reproductive pairs nearby the CERM; the number of adults visiting the area during the period April – May 2014 allow to estimate the presence of probably 19-24 pairs.

Numerous individuals, migrating and wintering, also visit the area. Winter censuses carried out during the years 2012 – 2014 recorded the presence of more than 70 individuals. Moreover, important fact is the settlement of 1-2 reproductive pairs and at least 2-3

wintering individuals of black kite (*Milvus migrans*), species that was not present in the area before Red kite reintroduction. It is noticeable that the feeding platform foraging activity allowed also to monitor and verify the movement of 3 individuals, released from the Frasassi N Park to the Amiata area.

From 2010 to 2013, 33 young Red kites, coming from Corsica, were released in the Frasassi N Park. The settling-in period of the animals was carried out inside pre-existing aviaries located in Vallemontagnana (AN) during the first two years, while during 2012 and 2013, inside three new aviaries built in Genga (AN), where a new feeder was installed as well.

As already mentioned, the released Red kites showed a tendency towards a premature dispersal. This assumption was confirmed by the 5 satellite transmitters installed in 2012 and the GPS data loggers installed in 2013.

Many individuals moved for long distances and some definitively moved to South Italy (especially to Basilicata) and to the Amiata area. Therefore, in 2014 it was decided to stop the release programme.

The actions to make medium-voltage power lines safe for birds, foreseen at first for a total length of 30 km, were implemented on a total of 72,5 km (35,2 km within the Amiata area and 37,3 km inside the Frasassi N Park). This was thanks to the fact that in many sections of power lines, it was possible to insulate the bare conductor cables nearby the sheathed supports using a self-bonding electrical tape. This is an efficient insulation method, much cheaper than the others used in the past.

Many activities were carried out to promote the project and to share the obtained results, to raise the common awareness about its main issues and to get people (common people and stakeholders) involved with the project activities and actions.

Within the Amiata area, inside the Parco Faunistico of Monte Amiata, an educational room about bats and Red kites and a didactic path about Chiroptera were realized and an educational activity (589 total hours) was implemented, both following the path and inside the room, with students and groups of adults, involving 6.000 people.

An educational room was realized also inside the Natural History Museum of Serra S. Quirico (Frasassi N Park), where an educational activity (271 total hours) was implemented, with students and groups of adults, involving 4.000 people.

Didactic lessons about the project subjects were carried out to 31 classes of schools located within the Amiata area (involving 498 school students) and for 24 classes of schools within the Frasassi area (involving 353 students). At the same time, a drawing contest was launched and received the participation of 24 classes and 353 students. Within this contest, all the participants and the 57 winners were rewarded in a big celebration event. The same thing was organized and realized at the Frasassi N Park, with the participation of 20 classes and 401 students (23 of which were rewarded within three events).

To share the conservation actions for bats, implemented within the project inside the Frasassi N Park, a technical meeting with the principal speleological groups was organized.

A “door to door” awareness campaign was implemented for the local agriturismos and it involved about 65 housing facilities for each project area, the distribution of promotional materials and the organization and implementation of a workshop.

The dissemination of the obtained results and the connection and dialogue with many European experts and Institutions was favoured also by the implementation of two final Meetings. The first, 3 days long, took place within the Amiata area and was organized into two sessions, one with the title “Red kite conservation in Europe” and the other with the title “Birds and electric wires”; the second, one day long, took place in Fabriano (AN), and had Chiroptera as main subject (Title: “Actions for Chiroptera protection”).

To support the project dissemination, a general brochure, a touristic guide of the Amiata area, a guide about bats, a didactic kit about bats and one about Red kites, a DVD about the project, posters and stickers about Red kites and bats were realized. Another tool useful to the project dissemination was the web site (www.lifesavetheflyers.it), which recorded more than 13.700 contacts and in which a total of 68 news were published.