



Future4Leopards Foundation

ANNUAL REPORT 2017

Background & Mission

With a background in leopard conservation since 2001, the Project “Future4Leopards” was launched in 2013 at Wildlife Conservation Research Unit (WildCRU). It then grew to Future4Leopards Foundation as a non-profit organization (registration number 42141). Our mission is to improve the conservation status of the Persian leopard by producing cutting-edge science, enhancing law enforcement and anti-poaching, controlling contagious diseases, engaging local communities, developing the capacity of conservation practitioners and affecting policy and decision-making. Our approach is empirical, interdisciplinary and highly collaborative. Currently, the Foundation is pursuing its pragmatic conservation goals within multiple reserves in Iran.





Making Good Things Happen

A highlight of major accomplishments in 2017

Life is at risk in the Middle East, due to consecutive catastrophes, from political tensions and military conflicts to severe droughts. Obviously, they do not only threaten humans, but the entirety of biodiversity. There is increasing public pessimism concerning the region and many species are widely perceived to face a gloomy future. We would like to share an optimistic message that there are areas in this region that can motivate conservation, given basic protection is granted and sound science is applied to inform management efforts.

We are fully aware that we cannot make a miracle for the leopards, especially in a region of the world that is primarily dominated by political and economic crises, relegating biodiversity conservation lower down in the country's main priorities. Nevertheless, we aim to be useful, in some key areas, based on our limited resources, capacities and knowledge. We remain committed to continuing our work, building upon our successes and looking to the future.





Multiple areas, single goal safeguarding leopards

Persian leopards roam many areas, but we are focused on the areas where we are most needed. Currently, our team is on the ground across three regions of the country, each with unique challenges.

Steppe Mountains: Kopet Dag Eco-region is a leopard hotspot, expanding across the Iran-Turkmenistan rugged montane landscapes. We work in Tandoureh National Park which is globally well-known for its large population of Persian leopards.

Drylands: Different types of challenges are faced for leopard conservation across drylands in central Iran. The small size of the existing leopard populations have made them prone to gloomy future. We work in Bafq, as the most well-known leopard reserve in the region.

Hyrcanian temperate region: We even work in human-dominated landscapes, where people and leopards share their land in the northern Hyrcanian temperate region. Conflict with communities is a serious challenge in addition to the retaliatory killing of the leopards. We work in a few areas, some even not protected by law, with the main goal of engaging communities to achieve management through collaboration.



1. Science and research

A rigorous beginning for conservation

Future4Leopards Foundation is grounded in science. With special considerations to nature and climate changes and needs, our scientists have developed innovative approaches to effectively convey the best available information. We draw on science to advance cutting-edge conservation tools and methods, connect natural and social systems, and tackle emerging threats. Our conservationists track dynamic needs and lead regional and national attempts to halt factors threatening some of the promising leopard landscapes and their sympatric species. We also rely on the scientific process to ensure that our on-the-ground conservation programs are effective and producing measurable results.

The FLF's field researchers conduct studies year round to gain insight about Persian leopard habitat, wild prey species and the cats themselves. Trail cameras photograph wild leopards as they move throughout their home ranges, while GPS collars give us the opportunity to track an individual leopard's movements for an entire year.

Achievements in 2017

- A systematic camera trapping survey was carried out in northern Iran's Caspian forests;
- A systematic population assessment, using 60 camera stations was conducted in Bafq Protected Area, a hyper-arid mountain in central Iran;
- A socioeconomic investigation was conducted on poachers' motives and attitudes in Tonekabon;
- A 2nd season of camera trapping was carried out in Tandoureh to compare population trends in 70 stations;
- 6 publications were published in international peer-reviewed journals.



Highlight: The largest leopard population in the Middle East explored in Tandoureh

Leopards are not difficult to capture using camera traps, but when it comes to their cubs, it is incredibly challenging. For example, many leopard population studies throughout the species global range reported quite a few cubs in the published literature. But the question is whether the tiny proportion of cubs reflects the reality of entire leopard population or is it just a result of our surveying efforts?

We found something exciting in northeastern Iran which was a higher proportion of cubs in the populations than almost all available estimates from different subspecies of leopards. For example, in Tandoureh, where we are running a long-term camera trapping project since 2016, we recently detected 9 cubs in the population in summer 2017 whereas it was 7 in 2016. Surprisingly, a large family of three cubs was detected in 2017, which has been only very rarely reported for leopards in the Middle East. The family was detected multiple times only in one location, i.e. a spring which was a crucial source during hot summer. We learned that mother leopards in almost half of detections were photographed without their cubs. Lower mobility of younger leopard cubs and the female habit of hunting alone may explain the lower detectability of cubs.

The leopard is likely the most persecuted large cat in the world, vanished from at least 84 percent of their historic range in Asia. In the Middle East and the Caucasus, they generally occur at alarmingly low densities. Yet encouragingly, northeastern Iran expanding along Kopet Dag Mountain is a critical harbour for the endangered Persian leopard.





2. Collar4Conservation Program

Persian leopard diaries

The Persian leopards share most of their range with humans, i.e. only around 25% of the current Persian leopard range is within protected areas. Wandering among humans brings the leopards into direct encounter with them, and intentional or accidental killing committed by humans frequently limits leopards' numbers. Therefore, developing suitable management strategies outside protected areas could be a key factor in the future conservation of leopards.

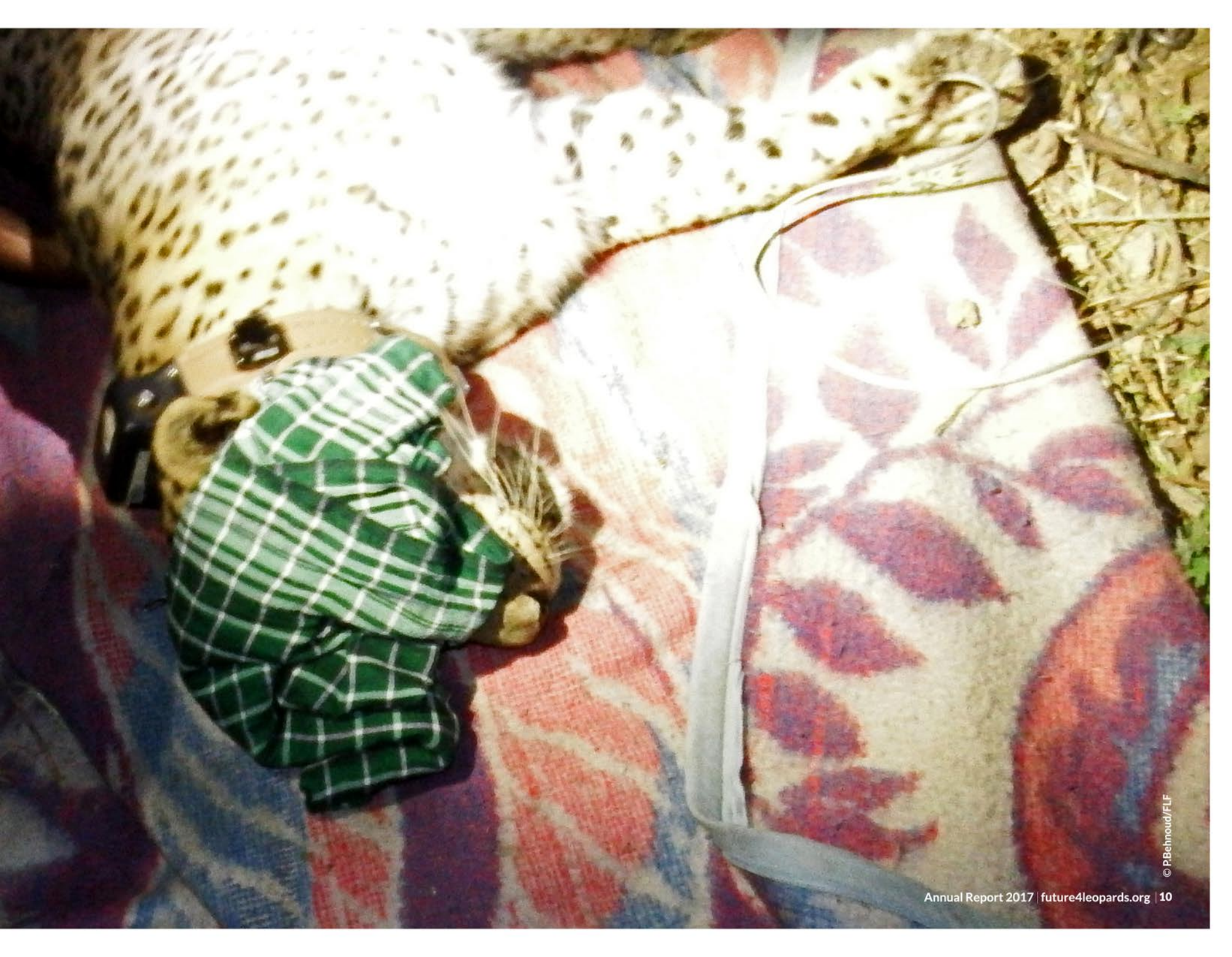
"Collar4Conservation" is a novel initiative to apply high-tech satellite collars for the endangered Persian leopards in order to promote their protection in northeastern Iran. As part of Future4Leopards Foundation, the "Collar4Conservation" produces cutting-edge science to improve protection for the leopards.

Nevertheless, "Collar4Conservation" is not only about science, it is more grounded in conservation. Undoubtedly, understanding animals' behavior is crucial to develop effective protection for populations. Satellite collars are probably the most useful and reliable equipment for connecting such a gap in knowledge.

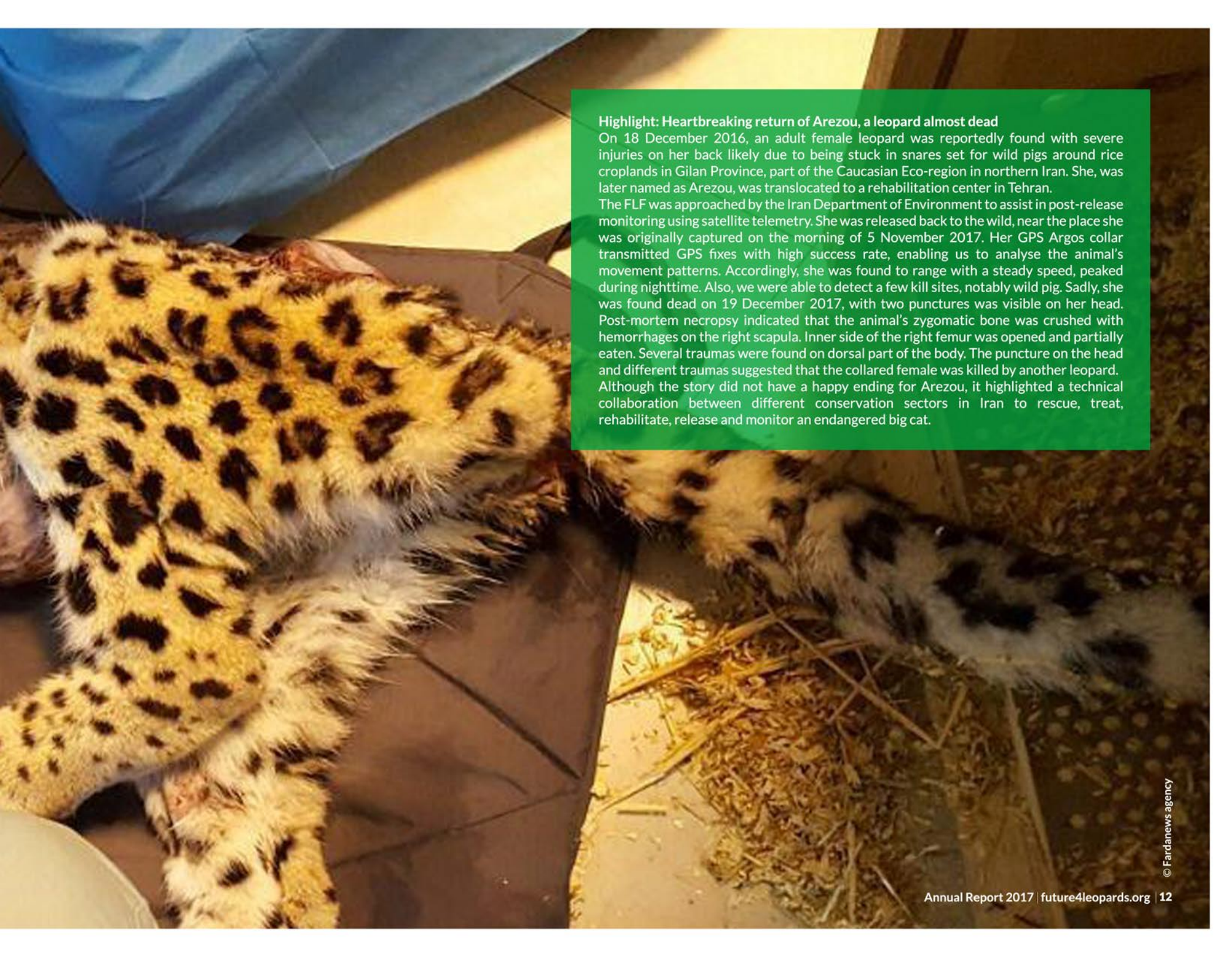
Achievements in 2017

- Tandoureh, the 6th leopard in NE Iran monitored until May 2017;
- 1 new adult male rescued from local snares and released after fitting with a satellite GPS collar;
- 130 kills left by collared leopards were investigated in Tandoureh;
- Preliminary report on ranging patterns of Persian leopards published.









Highlight: Heartbreaking return of Arezou, a leopard almost dead

On 18 December 2016, an adult female leopard was reportedly found with severe injuries on her back likely due to being stuck in snares set for wild pigs around rice croplands in Gilan Province, part of the Caucasian Eco-region in northern Iran. She was later named as Arezou, was translocated to a rehabilitation center in Tehran.

The FLF was approached by the Iran Department of Environment to assist in post-release monitoring using satellite telemetry. She was released back to the wild, near the place she was originally captured on the morning of 5 November 2017. Her GPS Argos collar transmitted GPS fixes with high success rate, enabling us to analyse the animal's movement patterns. Accordingly, she was found to range with a steady speed, peaked during nighttime. Also, we were able to detect a few kill sites, notably wild pig. Sadly, she was found dead on 19 December 2017, with two punctures was visible on her head. Post-mortem necropsy indicated that the animal's zygomatic bone was crushed with hemorrhages on the right scapula. Inner side of the right femur was opened and partially eaten. Several traumas were found on dorsal part of the body. The puncture on the head and different traumas suggested that the collared female was killed by another leopard. Although the story did not have a happy ending for Arezou, it highlighted a technical collaboration between different conservation sectors in Iran to rescue, treat, rehabilitate, release and monitor an endangered big cat.



3. Law-enforcement and anti-poaching

The endless fight to save the Persian leopard

Wildlife poaching is a serious threat to many wildlife species, especially large carnivores across majority of their global range. Rangers, on the frontline in combating wildlife poaching, are key persons to ensure survival and expansion of large carnivores, including the leopard. However, such an important staff resource commonly attracts little investment. The Future4Leopards Foundation predominantly focuses on improving the performance of rangers who are the key persons for controlling illegal activities and poaching. Basically, they are hired by Iran's DoE, but they suffer from lack of proper training, non-qualified equipment and shortage of motivation. Also, anti-poaching units are severely understaffed, meaning that local people must help the rangers for detection and stopping illegal activities. We are supporting ongoing governmental activities through addressing these four main gaps.

Accordingly, local rangers are receiving training on population monitoring of the leopards, conflict resolution, trapping and ecology of the leopards. Also, an acknowledgment event for outstanding leopard rangers to showcase and applaud their efforts on a bi-annual basis is established and to reward several leopard rangers with the highest performance (assessed based on number of poachers arrested, leopard sighted, etc.). We also support creation and maintenance of a network of local informants, key persons who can report poachers to rangers to reduce poaching pressure on the wildlife, mostly from herders. In order to support anti-poaching patrols, in partnership with local authorities, access trails are built and maintained in higher elevation with preventive gates for better controlling of illegal activities, such as poaching and fire control.

Achievements in 2017

- 4 kilometers of access trails built for rangers in Tandoureh;
- 2 trail motorbikes procured for "Leopard Guardian" program;
- Exchange program organized for 7 rangers to visit Tandoureh;
- A key poacher allegedly in charge of shooting at least 100 animals arrested in Tandoureh due to better accessibility of the national park's for rangers on newly built access trails;
- 2 gangs of poachers detected by our black flash camera traps and were subjected to court in Tandoureh;
- More than 30 attempts of poaching in Tonekabon was deterred by our Leopard Guardians in partnership with local rangers;
- Developing a collaborative management plan jointly with local conservation practitioners in Tonekabon;
- A ranger post was provided for anti-poaching unit in Tonekabon.





Highlight: Leopard Guardian program

Since January 2017, the Future4Leopards Foundation has hired a local cattle rancher in northern Iran, to serve as a "Leopard Guardian". Mohammad Anbalou, the country's first leopard guardian, works in areas neighboring Dohezar-Sehezar No Hunting Area, which is well-known to host different charismatic mammals, including Persian leopard and its prey species. 25 years old, Mohammad's job is to patrol the area, investigating conflict cases with the leopards, controlling poaching activities in partnership with local rangers and deploying camera traps, while looking after his cattle deep into the forest. He is working closely with local rangers, and preliminary training has been provided by both the Foundation as well as the Department of Environment. He wears similar clothing to rangers and informs them whenever needed, such as sighting of poachers.

Strategic position of his summer and winter ranch in the heart of the area, along with his passion and enthusiasm for nature, have made him a unique candidate to establish this program, i.e. leopard guardian for the first time in Iran. During his first days of patrolling, he stopped a poacher who had just shot a wild pig from more illegal activities. He is fully funded by the Foundation and you can support us to continue this critical program, hiring locals to save their natural treasure, for the benefit of leopards as well as coexisting communities.



4. Community outreach programs

Building the next generation of conservationists

The majority of leopards' reserves are surrounded by rural communities, some of which have schools. Many of the rural people help their families in livestock husbandry activities, normally as shepherds accompanying the herds during outdoor grazing. The Future4LeopardsFoundation is addressing school kids and students, educating them on lives of the leopards, and hoping for them to be able to pass on the knowledge and educate their families and the next generation of people co-existing with the leopards.

Besides educational activities and outreach festivals, the FLF is organizing eco-trips to Tandoureh National Park for school kids in spring 2017 to provide them with a unique experience of wildlife, nature camps, and museums. Thus, local people who are not normally allowed to visit the National Parks can learn more about the area.

Achievements in 2017

- 4,000 wall calendars produced and distributed among thousands of rural households living alongside the leopards in six leopard reserves;
- Over 180 school children attended two series of educational classes, representing 18 villages around Tandoureh;
- Over 100 local school children attended eco-trips.









Highlight: Eco-trips give locals a feel for the leopards

Many villagers live their lives around national parks, but almost none of them are allowed to visit the protected mountains nearby. In other words, what they know and how they feel about their neighboring national park is mostly based on what they see on TV rather than on first-hand experience. The resulting lack of understanding can cause resentment among people if they feel that their right to explore the countryside around them is not being respected. This in turn can be the basis for serious conflict between conservation agencies and communities all around the world.

At Future4Leopards Foundation we are pursuing a different approach. Our view is that as long as people have no sense of what exists in their own backyard they will not be willing, let alone able, to protect the wildlife with which they share their natural environment. Thus, there is a need for local people to get to know the national park in their area (although we do have to be careful that poachers don't accompany such trips as fake visitors!). In spring 2017, more than 250 local school kids and their teachers from 12 main villages around Tandoureh National Park were invited by the Foundation to visit the park. During what would have been a once in a lifetime experience for many of these children they visited the park's visitor center, where a collection of the park's animals is exhibited. Then they were taken on an excursion into the park to see a waterhole and places where we captured one of our leopards. Eco-trips like this are an important part of our outreach programs because they give locals not only awareness and information but, more importantly, a passion for nature and the natural surroundings in which they coexist with leopards and other animals.

5. Conflict resolution

Whose problem is the conflict?

As a serious and escalating problem, conflict between communities and large carnivores has resulted in removal of many animals as well as economic loss for people. Fortunately, in 2016, the Iran Department of Environment in partnership with Ma Insurance Company has launched "Persian Leopard Insurance Program" to cover compensation costs of depredation made by the leopards. However, regardless of performance and sustainability of state-run compensation program, there are additional challenges for management of large carnivore conflicts in Iran. Lack of necessary training among conservation practitioners, including experts and rangers have resulted in improper management when a serious conflict occurs, particularly with the case of the leopard. Accordingly, a rescue team has been established for quick response to urgent occurrences of human-leopard conflict throughout the country. Our rescue team's goals are to provide expertise for proper diagnosis and dealing with the animal and human and to assist in identification and follow-up actions. Furthermore, in case of urgent actions, we provide technical support to Iran's Department of Environment for safe capturing and translocation of problem leopards, after making sure that the animal has no chance to persist within its current habitat.

Achievements in 2017

- 8 conflict cases were visited and inspected to verify the predator in charge and to assist in improving preventive measures;
- Finalizing "Human-Carnivores Conflict Resolution Manual", targeting Persian leopard, grey wolf and brown bear.





Highlight: How to deal with a problem leopard?

These days, thanks to the unique expertise we have at Future4Leopards Foundation to capture leopards, we are receiving phone calls that "there is a leopard here attacking on livestock, come and capture it"! That raises a concern that instead of trying to reduce and prevent conflict with leopards, capturing and translocation which should be the last resort has been prioritised as the first action to do. Technically, capturing a leopard is not the first solution; it is definitely the last, when alternative measures fail to resolve the problem.

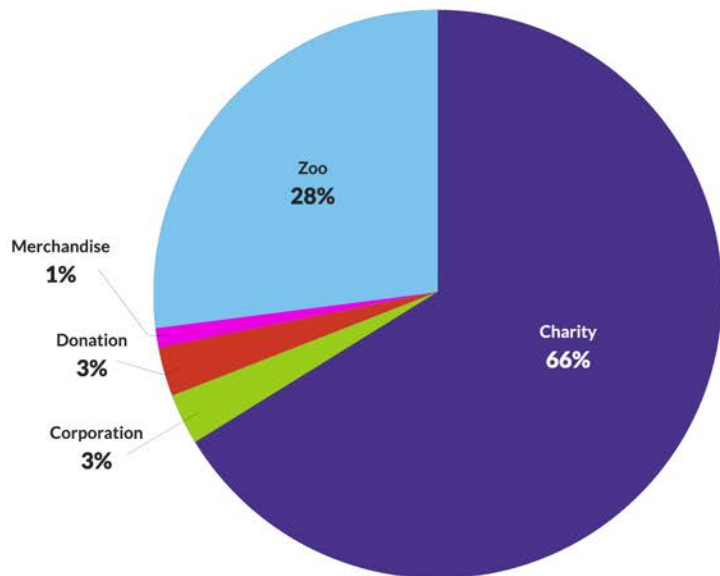
Recently, we have been asked to visit an area in the north of the country, south of Caspian Sea (250 km from Tehran) where a leopard(s) was responsible for several cattle depredations in a small area. As usual nowadays, we have been asked for a capturing operation. But, there are significant steps before such a decision to remove a leopard from its habitat. The first question is how many leopards are responsible? If it is several, capturing only one of them does not help people to get rid of the problem. Secondly, how many cattle have been killed by leopard(s)? Is it an infrequent event or is the leopard now preying mainly or exclusively on cattle? Then, are all available preventive measures being applied but did not working well? If it is decided to capture the leopard, it is crucial to think beforehand where to translocate? And many more questions that must be considered in these situations. Fortunately, we have been successful in convincing our partners at both cases to think about alternative measures and leave capturing as the last solution.



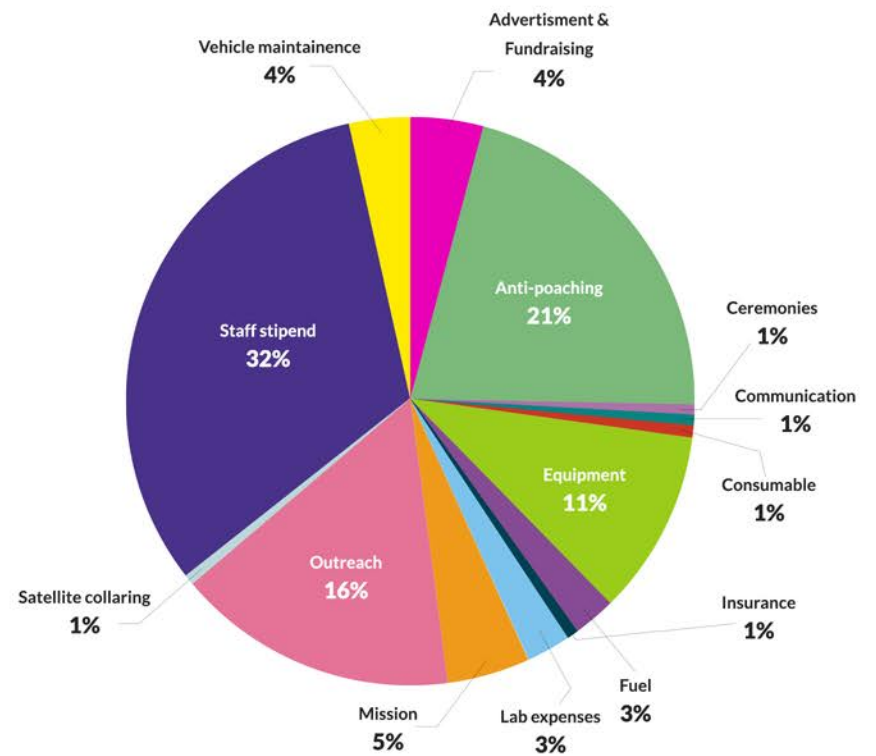


Financial review

2017 - WHERE OUR INCOME CAME FROM



2017 - WHAT OUR MONEY WAS SPENT ON



Donors & Collaborators

The Future4Leopards Foundation could not do its work without the invaluable support of many individuals and organizations around the globe. Below, we recognize our key donors, but there are also many other people who have contributed to our work, either through personal donations, or investing their time and energy to help the success. We would like to take this opportunity to extend a huge thank you to all – you really are making an incredibly important difference to both people and leopards in the FLF's landscapes.

Collaborators

- Iranian Department of Environment
- Wildlife Conservation Research Unit (WildCRU), University of Oxford
- University of Tehran
- Stichting SPOTS
- Rewilding Foundation

Major donors

- People's Trust for Endangered Species (PTES)
- Rufford Foundation
- WWF INNO

Minor donors

- IdeaWild
- Association Francaise des Parcs Zoologiques
- Le Parc des Felins
- Zoologische Gesellschaft für Arten- und Populationsschutz
- Huttell Company
- Senan Company

Individual donors (2017)

- Sepehr Masoumi
- Hadi Norouzi
- Soroush Shariatmadari
- Arta safa
- Bahar Sabet
- Mostafa Nadalian
- Alireza Torkzaban
- Alireza Rafati Gonabadi
- Mohamad Beheshti
- Melika Makremati
- Sirous Tavana
- Negin Sahraei
- Elham Abbasi
- Zahra Rafati
- Behrouz Rouzbeh
- Ehsan Niroumand

- Atefe Arefnia
- Kaveh Naratzouri
- Vahid Nezhadali
- Parivash Khanjani
- Goudarz Eghtedari
- Kian Borzabadi
- Erfan Ghafrani
- Pouya Zehtab Jahedi
- Masoud Abbasnezhad
- Saman Esmaili

Design & layout:
Pouyan Behnoud

Edit:
David Gray



Future4Leopards Foundation
future4leopards.org