

Photo: Benjam Pöntinen

Flying Squirrel LIFE:

Co-operation for improving
the conservation of the Flying
squirrel in Europe

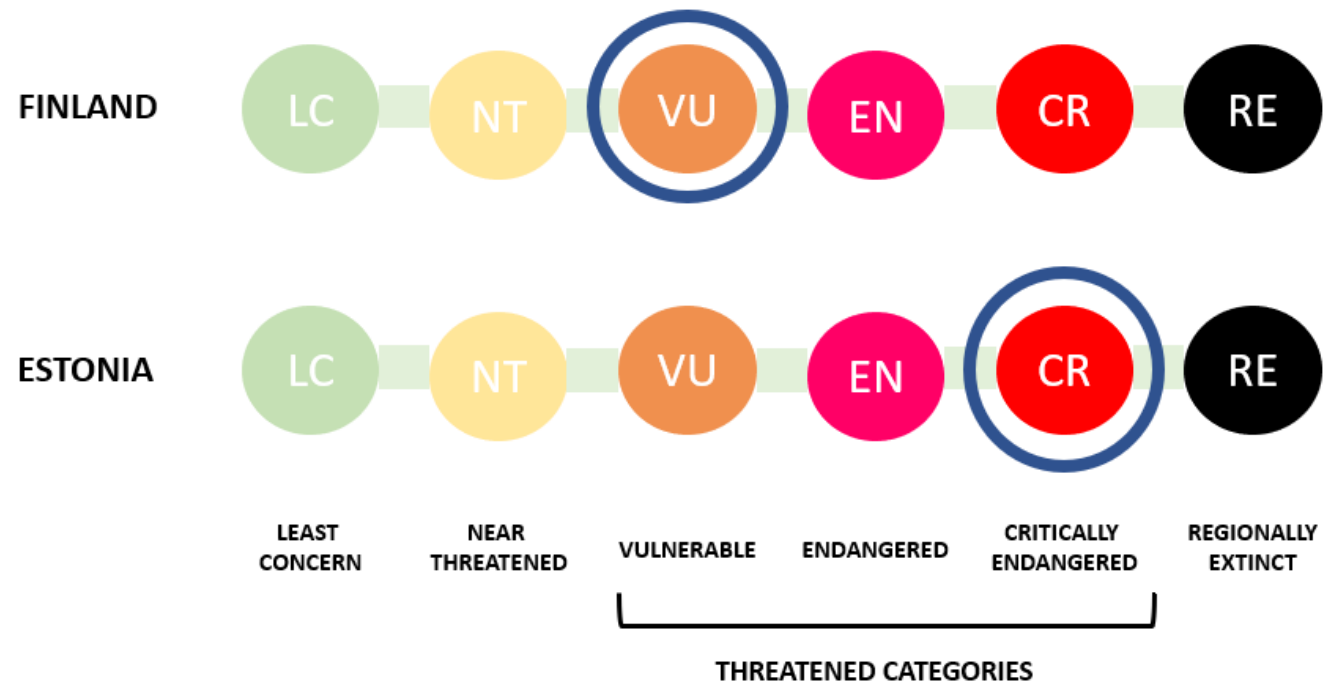
Summary of a project brochure “Liito-orava-
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Endangered Flying Squirrel

In the European Union, the Siberian flying squirrel (*Pteromys volans L.*) can be found only in Finland and Estonia and its conservation status is unfavorable. The main threats for flying squirrel are habitat loss and fragmentation.



Suitable habitats for flying squirrels through versatile cooperation

The main goal of the Flying Squirrel LIFE project is to develop and introduce new procedures that take flying squirrel into account in land use planning. The project focuses on supporting habitat network: flying squirrels need ecological corridors with forest cover for moving between good habitats. It also needs protected breeding and feeding areas.

We reach our goal through cooperation: the project involves a total of 18 organisations, representing key land use planning actors in Finland and Estonia. The European Union LIFE Programme finances most of the total project budget of 8.9 million euros. The project will last approximately 6.5 years (1 August 2018 – 31 March 2025).

Project brings together diverse knowledge and expertise

Project partners in Finland:

- Metsähallitus, Parks & Wildlife Finland
- Metsähallitus Forestry Ltd
- Centres of Economic Development, Transport and the Environment (for North Karelia, North Savo and Southwest Finland)
- Cities of Espoo, Jyväskylä and Kuopio
- Kuopio Natural History Museum
- Finnish Museum of Natural History
- Natural Resources Institute Finland
- Central Union of Agricultural Producers and Forest Owners
- The Finnish Association for Nature Conservation
- Finnish Forest Centre

Project partners in Estonia:

- Eesti Erametsaliit (Estonian Private Forest Union)
- Keskkonnaamet (Estonian Environmental Board)
- Metsakorralduse Büroo (Forest Survey Bureau of Estonia)
- Riigimetsa Majandamise Keskus (State Forest Management Centre of Estonia)

Habitat networks and ecological corridors are the key concepts in the conservation of flying squirrels

Flying squirrel *habitats* are old mixed forests with large spruces and deciduous trees. Spruces give shelter for the flying squirrel, while aspen and other deciduous trees are important food sources. The *home range* of a flying squirrel consists of several breeding sites, resting places, core areas, foraging areas and movement corridors between them. Average home range size is eight hectares for females and 60 hectares for males.

Flying squirrels move effectively from tree to tree by gliding when the average tree height in forests reaches 10 meters and the distance between trees remain within a gliding distance of a 20-30 meters.

The project focuses on supporting *habitat network*: flying squirrels need ecological corridors with forest cover for moving between good habitats. The *breeding site* of the flying squirrel is a site where the flying squirrel breeding occurs, and a *resting place* is where flying squirrels spend their daytime. The deterioration and destruction of breeding sites and resting places of the flying squirrel is prohibited in the European Union under the Habitats Directive (Article 12, Annex IV).

Home range of a flying squirrel



Illustration: Tupu Vuorinen

The most important areas in the flying squirrel's home range are the breeding and resting sites (red) and feeding areas (blue). Large spruces provide shelter for the flying squirrel, while aspen and other deciduous trees are important food sources.

Habitat network of flying squirrels



The habitat network consists of habitats suitable for the flying squirrel and corridors between them. Due to the lack of ecological corridors, flying squirrels might not be able to disperse to suitable habitats.

Illustration: Tupu Vuorinen

Habitat network in urban areas



- Female's home range
- Corridor

In urban areas, flying squirrels use also backyards and parks for movement, but construction and wide roads may form barriers for movements. Securing the corridors for flying squirrels is a priority in urban planning.

Illustration: Tupu Vuorinen

Increasing the flying squirrel occurrence data

In order to get more comprehensive and accessible flying squirrel data, the Finnish Museum of Natural History will develop an observation database (Finnish Biodiversity Info Facility, www.laji.fi).

Flying squirrel field inventories, by using the common pellet search method, will be carried out on project sites. A new method of using nature charting dogs in locating flying squirrel occurrence will be introduced and tested. Also, a radio telemetry study will be carried out in Espoo to study the spatial movements of flying squirrels.

In addition, the Natural Resources Institute Finland will build habitat models and maps which show the location of the potential flying squirrel areas and are a useful tool for planning inventories and land use.

Joint planning in urban and forestry sites

Stakeholders from forestry, landowners and nature conservation will make management plans together for ca. 40 sites in private and state-owned managed forests in Finland.

Aspen is an important tree species for flying squirrel because it offers food and nesting holes. Aspen continuity in the future will be supported at 16 sites in Natura 2000 areas and nearby managed forests in Finland by opening growing space and protecting young aspens with enclosures. These actions ensure that there will be aspens in different age classes growing and available in the future, too.

Three cities, Espoo, Jyväskylä and Kuopio will combine their strength in urban areas. At a set of urban sites, the effect of previous actions will be evaluated, and new management plans will be made for 20 sites. In addition, habitat networks in the cities will be supported by setting up nest boxes and planting young trees to form ecological corridors for flying squirrels to use between ranges.

Exhibitions and environmental education

One of the big goals of the project is to increase knowledge of the flying squirrel among stakeholders and people. New permanent exhibitions will be built in the Finnish Nature Centre Haltia and Kuopio Natural History Museum in Finland, and in the nature centre Iisaku in Estonia.

Also, a smaller touring exhibition will be created and borrowed for educational purposes all over Finland. In Kuopio, a special ambassador will visit local schools introducing the life of the flying squirrel.

As a part of the project, three new conservation areas will be established in Finland. They will cover 26 hectares together and are located in regions North Savo, North Carelia and Southwest Finland.

Further information

Flying Squirrel LIFE project:

<https://www.metsa.fi/en/project/flying-squirrel-life/>

Project brochure in Finnish:

<https://julkaisut.metsa.fi/julkaisut/show/2443>

Project brochure in Swedish:

<https://julkaisut.metsa.fi/julkaisut/show/2444>



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Vastavalo.fi

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KESKKONNAAMET

