

*With this project, Lithuanian Fund for Nature already implements the third project related to the conservation of rare and endangered species and habitats. It is financed by the European Commission's financial instrument for nature protection, the LIFE-programme. With financial support of the European Commission, this project will be implemented outside the borders of Natura 2000, thus creating an ecological network in the Southern Lithuania.*

## AN ECOLOGICAL NETWORK IS NEEDED, BECAUSE:

The majority of animals migrate between different localities for various reasons: e.g. in search for better habitats, food or partners, to avoid competition and more. However, distances between Natura 2000 areas often are too long and difficult to overcome for less mobile animals. For example, the European pond turtle moves several hundred meters a day, given it finds wet and safe places for resting. One example: the distance between Kučiuliškė herpetological reserve, where the turtles live, and the closest protected area – the environs of Stročiūnai village – amounts to 7 km. As there are numerous



Just out of the egg

Photo by Žydrūnas Sinkevičius

settlements, roads and dry pine forests in between, it is unlikely that a turtle can ever manage to move between the two sites.

## THE PROJECT'S AIM IS:

To create an ecological network in Southern Lithuania by ensuring a favourable conservation status for and the saving of threatened populations of native reptile and amphibian Annex II and Annex IV species of the Habitats Directive; simultaneously the ecological value of the target areas will be enhanced.

## MAIN OBJECTIVES AND EXPECTED RESULTS:

- To develop a pilot ecological network in Southern Lithuania, which can be used as a model for other areas in Lithuania and adjacent countries with a comparable situation. Action plans will be prepared, 5 new Natura2000 sites of 5-10 ha in area will be established, 20 wetland areas from 0,5 up to 2 ha in area and 30 small sand pits will be restored. The management regulation of the network will be prepared.
- To secure the long-term viability of populations within the ecological network by implementing direct conservation measures and habitat management actions, such as digging of suitable ponds (120 new ponds), improving existing terrestrial (40 nesting sites for European pond turtle will be created) and aquatic (50 ponds will be renovated) habitats, as well as implementing favourable land-use techniques (2 farms provided with live-stock to maintain grazing).

- To save ensure viability the small and isolated populations of European pond turtle and European tree frog in Southern Lithuania from extinction and to rebuild extinct populations within the ecological network 15 pond turtle populations will be saved from extinction, 8 small populations will be improved by population management actions 100 juveniles will be released into nature. Local tree frog, natterjack and green toad populations will be strengthened by breeding and releasing of 3000 animals.

- To raise awareness in the local population and generate acceptance towards nature conservation's goals. This will be achieved by developing and printing of educational material, carrying out of high-publicity events, articles in local, regional and national newspapers, creating a website, establishing of a nature trail and seminars for stakeholders.

- To generate, share and exchange expert knowledge on the issues of ecological networks, conservation aspects of the target species and best practice strategies in implementing ecologically adequate land-use techniques in Lithuania. This will be realized by intensive exchanges of the project team with international experts on workshops, meetings and seminars. Dissemination of the created knowledge will be achieved by various publications (best practice guidelines, species action plans).

Photo by Nerijus Zablockis



Wetland in Juodabalė overgrown with willows

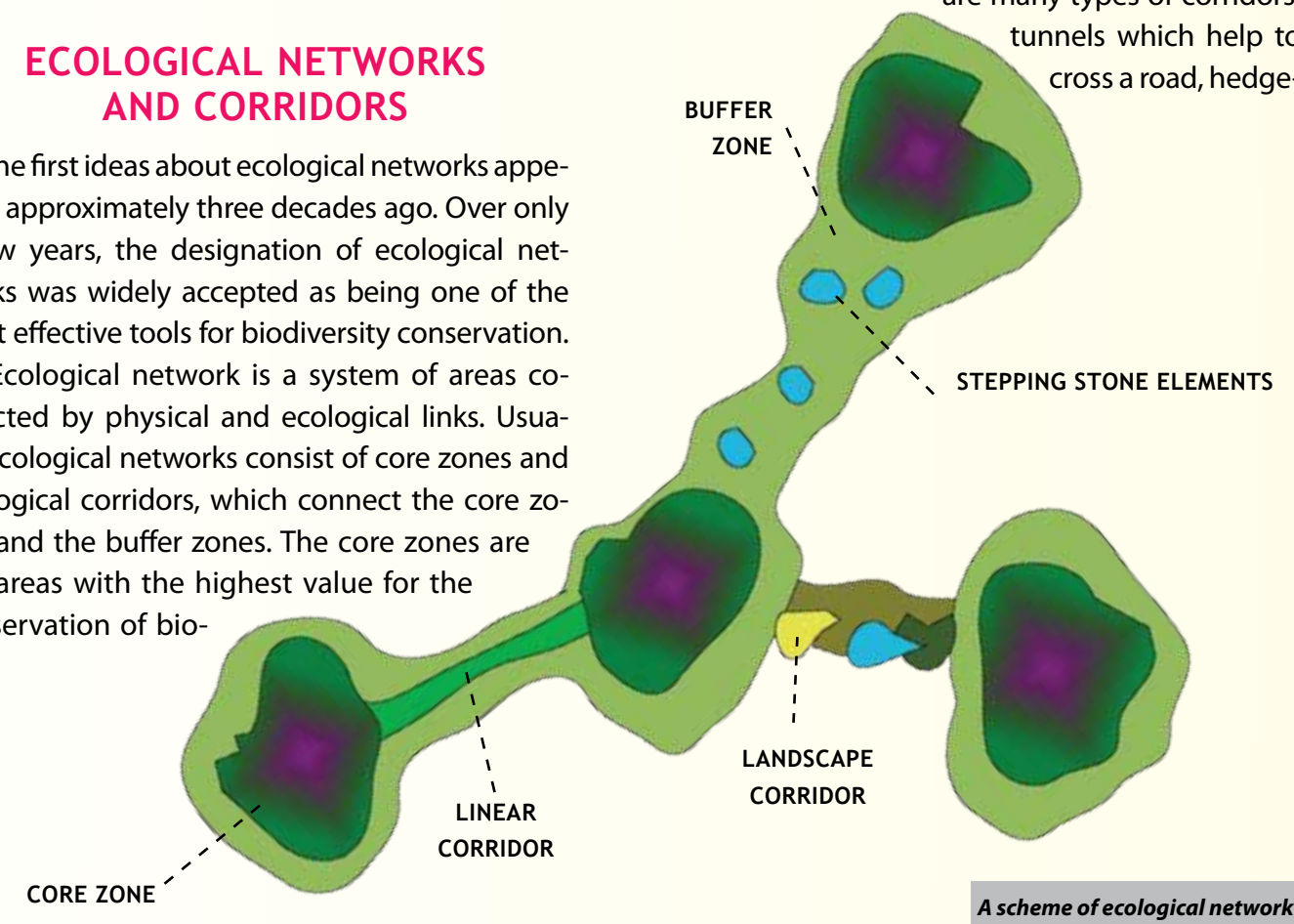
Duration of the project is 4 years (2010 – 2014).

The total budget of the project amounts to 766 000 euros.

The project is co-financed by the European Union environmental financial instrument "LIFE+" and by the Lithuanian State Budget Special Program for the LIFE +. Also it is co-financed by Lithuanian Fund for Nature and associated partners.

## ECOLOGICAL NETWORKS AND CORRIDORS

The first ideas about ecological networks appeared approximately three decades ago. Over only a few years, the designation of ecological networks was widely accepted as being one of the most effective tools for biodiversity conservation. An Ecological network is a system of areas connected by physical and ecological links. Usually, ecological networks consist of core zones and ecological corridors, which connect the core zones and the buffer zones. The core zones are the areas with the highest value for the conservation of bio-



diversity. In the European Union such areas are designated as Natura 2000 areas. These areas form a European-wide ecological network. Areas which are important for bird and habitat's conservation are united in this network. Unfortunately, the distances between these protected areas are often too long, that less mobile endangered species could travel from one protected area to another. To enable spatial connection between protected areas, ecological corridors are needed. There

are many types of corridors: tunnels which help to cross a road, hedge-

rows structuring intensively used agricultural areas, ponds in a dry landscape, coastal wetlands for migrating birds. The corridors can be linear, such as rivers or hedgerows or made of stepping stone elements, where migrating animals can find shelter and food. The type of corridor chosen depends on the ecological needs of animal and plants species it is intended for.

## REPTILES AND AMPHIBIANS HAVE TO BE PROTECTED

Some species like the pond turtle, the fire belied toad and the crested newt have existed for millions of years – sad enough that only a few last decades of human activities have been enough to threaten them with extinction. Reptiles and amphibians are a priceless part of our natural heritage as well as biodiversity - we are responsible for the conservation and protection of these species also for future human generations.

Photo by Nerijus Zablockis



After restoring the wetland pond turtles and red-bellied toads were found in the habitat



The project is coordinated  
by Lithuanian Fund for Nature



in cooperation with associated partners:  
Ministry of Environment of the Republic of Lithuania  
Dzūkija National Park  
Veisiejai and Meteliai Regional Parks  
Lithuanian Zoological Garden  
and international consultancy company  
„AmphiConsult“



**Contacts:**

Project director Nerijus Zableckis  
Lithuanian Fund for Nature  
Algirdo 22-3, Vilnius LT-03218  
Nerijus.z@glis.lt  
Dalia.b@glis.lt  
www.glis.lt/ekotinklas

We invite landowners to cooperate with us in the restoration of the habitats. If you own agricultural land within the project area – wetlands, meadows or fields – you are very welcome to contact the project's staff.

If you notice rare reptiles or amphibians (on a road, or nesting sites in a roadside) please inform the staff of local protected areas or Lithuanian Fund for Nature. This information will help to know the distribution of rare animals. Do not take the animal; do not bring or transport it to another locality.

## ECOLOGICAL NETWORK WILL HELP TO CONSERVE THESE SPECIES:

### European tree frog (*Hyla arborea*)



Photo by Dalia Bastytė

The European tree frog is the rarest frog in Lithuania. It is one of the smallest frogs in Europe; it grows up to not more than 3–5 cm length. It has adhesive discs at the end of its fingers, therefore these frogs can climb on a vertical surface. Most often tree frogs are bright green but they can change their colour and become even grey as a consequence of weather conditions and other factors, which are not yet fully understood. Tree frogs breed in the ponds with rich submersed vegetation and shallow zones. The water surface should be not overshadowed, allowing it to be heated quickly by the sun. Adult tree frogs spend a lot of time climbing on the vegetation around their aquatic habitat. They hibernate in the burrows, decaying trees, piles of stones and even in cellars.

### Sand lizard (*Lacerta agilis*)

The sand lizard is a little bit bigger and more colourful than the other Lithu-

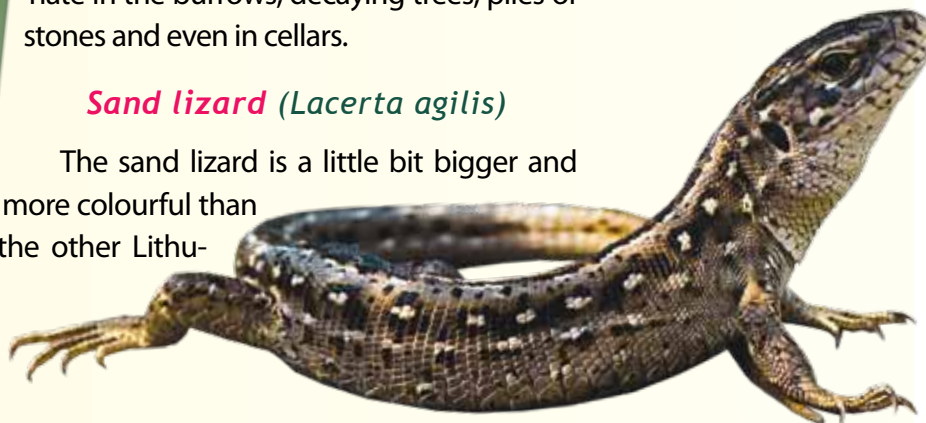


Photo by Aurelijus Bendžinskas

anian species, the viviparous lizard (*Lacerta vivipara*). Sand lizards are brown, with a liny pattern of brown and white spots. During the breeding season (April – May) males change their colour into bright green, only a stripe along their back remains brown. The length of a sand lizard (with the tail) can be more than 20 cm. These lizards can live up to 12 years. It is the only lizard in Lithuania that lays eggs.

### Common spadefoot toad (*Pelobates fuscus*)

A spadefoot toad has a smooth skin with marbled pattern. Its pupils are vertical like those of cats. Its hind feet are equipped with spade-like welts, used for digging itself into the earth. Spadefoot toads are nocturnal, during the day they hide underground. If they feel threatened, they can burrow themselves quickly, even at night. In spring, during the breeding period, the males call under the water, trying to attract females. Their voices resemble a muffled thumping. Spadefoot toads can be spotted easiest, when they are in their tadpole stage. Among all tadpoles found in Lithuania, they are the biggest –



Spadefoot toad burrowing into sand

Sand lizard



Photo by Nerijus Zableckis

Pond turtle basking in the sun

up to 17 cm length. Occasionally they come up to take a gulp of air in the open water. Adult spadefoot toads are only 6–8 cm long.

### European pond turtle (*Emys orbicularis*)

The pond turtle is a relict species from previous warmer periods. Nowadays this species in Lithuania is on the northern edge of its distribution. A few decades ago they were still present in all Lithuania. Today, they are only found in the southern parts, which are the least affected by melioration. Local people call these animals “iron frogs”. European pond turtles can grow up to 30 cm in length. However, to reach this size takes a lot of time. These turtles are longevous – they can live even more than 100 years. Pond turtles survived only in natural or semi-natural landscapes, which were abundant with slack water bodies. To complete their habitat, there have to be sandy slopes (easily heated by the sun), in which the turtles make their nesting sites, present within a radius of a few hundred meters.

### Green toad (*Bufo viridis*)

The dorsal side of this toad shows a green marbled pattern. It breeds in small shallow water bodies. These nocturnal toads prey on invertebrates in the fields covered with sparse vegetation. In the daytime they seek shelter. Burrows, decaying trees, piles of stones or cellars are used for hiberna-



Photo by Dalia Bastytė

Green toads often live close to the homesteads

tion. Among amphibians, green toads are the ones most adapted to living close to humans – sometimes these toads are abundant in ponds and gardens, they can be seen in greenhouses. Still, the main reason, why the green toad is endangered, is – like with all other rare amphibians - alteration, destruction and fragmentation of suitable habitats.

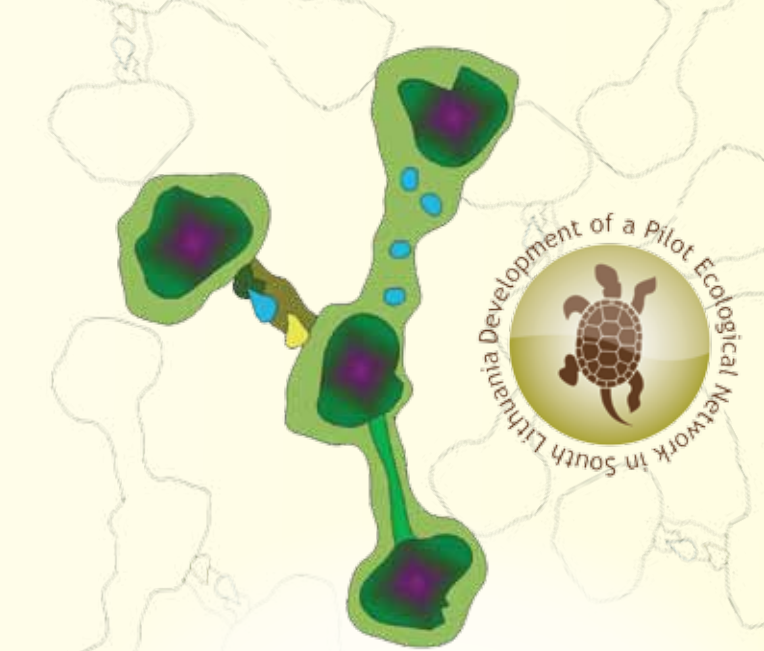
### Large White-faced Darter (*Leucorrhinia pectoralis*)

The biggest dragonfly from the genus *Leucorrhinia*, grows up to 4 cm in length. From the other species is distinguished by a yellow spot on its tail. It reproduces in small slack water bodies with patchy coverage of sedges and cat's-tails, which can be quickly warmed up by the sun. Its larvae develop for two years. The larvae are active during daytime, therefore they are easily noticeable by the predators. These dragonflies do not survive in waterbodies inhabited by fish.



Photo by Giedrius Švitra

Large White-faced Darter



# ECOLOGICAL NETWORK

for the european pond turtle  
and other protected species



LIFE+ Nature Project - Development of a Pilot Ecological Network through Nature Frame areas in South Lithuania  
LIFE09NAT/LT/00581