

LIFE Lynx Palatinate Forest, Germany – Ver. 4

I was asked to give details about the cross-border lynx reinstatement project in NE France/Germany, but I realised I had to do a bit more digging to understand the full context for myself. It is a LIFE funded project that is in an early stage in actual releases. However, a lot of work has gone into reaching that point, as evidenced by the amount of documentation available.

Other than this being a regional reinstatement in two countries that already have lynx populations, rather than a trial release in England/Scotland, I find a number of similarities with the Lynx UK Trust proposal: it is a cross-border project; the overall location is heavily forested, but it is mainly plantation forest, as well as the forest being mainly in public ownership and managed by national and state forestry organisations. The big difference is that the areas both sides of the border are designated Natural Parks (IUCN Cat. V) which came together to form the first transboundary Biosphere Reserve.

The LIFE project is based on sequential release of eventually 20 lynx into the Natural Park on the German side, with the reasonable expectation that they will breed and migrate across the border into the Natural Park on the French side. In one sense, this cross border similarity to the Lynx UK Trust proposal may suggest a strategy of release locations just in Kielder Forest in England, but with the hope of eventual migration over the border in to Wauchope and Eskdalemuir Forests in Scotland. Application for a trial release licence to both Natural England and Scottish Natural Heritage would still be required with this strategy.

LIFE LUCHS PFÄLZERWALD – BIOSPHÄRENRESERVAT PFÄLZERWALD-NORDVOGESEN (RÉSERVE DE BIOSPHERE VOSGES DU NORD-PFÄLZERWALD)

In 1998, two natural parks that straddle the border between France and Germany - Vosges du Nord and Pfälzerwald – became the first transfrontier Biosphere Reserve (BR) with 1,300 km² on the French side and 1,800 km² on the German side (1,2). The core area of the BR is made up from existing nature reserves on the French side, such as National Nature Reserves, Integral (Strict) or Directed (Managed) Forest Biological Reserves, whereas it is an indeterminate designation on the German side (there is some overlap with Natura 2000 sites). The area of the core is stated as only 19 km² (0.63%) (1). However, this is much less than the area that can be assessed visually from maps of the zonation of the BR (2,3).

The BR is operated by SYCOPARC (Syndicat de Coopération pour le Parc Naturel Régional des Vosges du Nord) and Naturpark Pfälzerwald (2). It is a predominantly cultural landscape, three-quarters of its overall area covered by temperate forest, 83% of which is publicly owned. About 70% of the forest on the German side is plantation pine, which is best suited to the dry and nutrient-poor sandy soil (4). Landesforsten Rheinland-Pfalz manages the state forests and is a service provider for the management of communal forests as well as for the support of private forest ownership (5). On the French side, forest covers 60% of the total area, and consists of three main species: beech, Scots pine and oak (6). State forests make up 60% of the forest on the French side, 25% are communal forests and 15% are private forests. The state forests are managed by the Office National des Forêts. Some of the private forests (50 km²) are managed by members of the Pro Silva association, with an approach of forestry close to nature. Native stands of oak are found on sandy soils; alder on the alluvial deposits bordering streams, and alder with ash in alluvial forests; Scots pine on bog peatland, a relict environment of the post-glacial period; and ash woodland in ravines (7). In the main, though, the forests on either side are non-natural with a very regular structure (silviculture by age class) many non-native species (spruce, Douglas fir, larch and red oak) and clear cuts still visible in the landscape. The aim for the forest is to be multifunctional in fulfilling production of quality wood, providing tourist opportunities, and in the protection of nature. Even given these uses of forests both sides of the border, the forest cover of the BR constitutes the largest unfragmented forestry entity in western Europe.

There is a history, since 1975, of considering lynx reinstatement in the Pfälzerwald, the more recent periodic sightings there assumed to be of lynx that migrated across the border from France. Lynx have a

tenuous presence in the southern mountains of the Vosges after 21 lynx (12 males and 9 females) largely coming from the Slovakian Carpathians, were reinstated during 1983-1993 (8). There were 58 lynx born between 1992 and 2003 in the Vosges Massif (9) but the most recent surveys carried out by the Lynx Network in France have failed to detect any lynx due to widespread persecution, but this does not rule out completely any current presence (pg. 19 (10)). Against this backdrop, an association was formed in 2010 called "Luchs Projekt Pfälzerwald-Vosges du Nord" (11). This was accompanied by an action plan from a German perspective for lynx reinstatement that combined Pfälzerwald with Vosges du Nord (12). The plan recognised that the lynx could become a symbol for the transnational BR Pfälzerwald/Vosges du Nord. Its evaluation indicated that there were suitable habitats in the cross-border BR, with enough prey, hiding places and undisturbed retreats. Mortality due to road transport was considered, as was scientific monitoring and supportive measures after release, including sufficient financial support. At least 10 to 15 animals were recommended to be released in a central area of Pfälzerwald (see map (3)) with the project being promoted on the French side by means of public relations work and habitat improvement measures. The intention was that the lynx would eventually migrate across the border in to Vosges du Nord.

A study was also commissioned to determine whether lynx still had a place in the Vosges, and could form a transfrontier population, given the extent of persecution it had suffered from revenge killing by hunters (13). In considering the ecology of the lynx, the natural environments and the quantity of prey, the author concluded that the lynx did have a place in the Vosges in the long term, but with certain conditions: reduce lynx mortality caused by traffic accidents, as well as by actively seeking and punishing perpetrators of illegal shooting; restore ecological connections within the Vosges Mountains as well as between there and the neighbouring Jura and Black Forest; improve dialogue with the Hunters Federations, monitor evolution of deer numbers in areas inhabited by lynx and take into account the presence of lynx when calculating allocations for hunting in areas inhabited by the predator; support sheep farmers by informing them of existing safeguards used elsewhere, providing measures to protect flocks as well as a compensation fund, and provide a management plan for the lynx in case of repeated attacks by an individual on a flock; have a program of monitoring lynx, its reproduction and mortality, territory, genetic diversity, and prey taken; and improve cross-border coordination, especially between the Lynx Network in the Vosges and that of the Rhineland-Palatinate.

An application for LIFE funding was made in 2013 and accepted by the European Commission in 2014 (14). The aim of "LIFE Luchs Pfälzerwald - Reintroduction of lynxes (*Lynx lynx carpathicus*) in the Palatinate Forest Biosphere Reserve" is to re-establish a lynx population in the Palatinate Forest (Pfälzerwald) by releasing 20 lynx (10 coming from Switzerland and 10 from Slovakia) a main objective being to improve the status of the species at the German and European levels and to reconnect lynx populations in Western Europe. An indication of the multiple axes of potential intermixing in western Europe is shown in a mapping - Localisation des populations de lynx en Europe occidentale et voies de connexion (pg. 2 (8)).

The LIFE Lynx project runs for six years from January 2015 with funding of 2.7m € (14). The co-ordinator is Stiftung Natur und Umwelt Rheinland-Pfalz (Foundation Nature and Environment Rhineland-Palatinate). Project partners include SYCOPARC, WWF France and Germany and Landesforsten Rheinland-Pfalz. SYCOPARC will mainly be involved in awareness-raising of lynx in Northern Vosges. Considering the forest continuity of the territory (perhaps upto 2,500 km² of habitat favourable to lynx) it is likely that some lynx may move south into the Northern Vosges within a relatively short time. The Lynx Network of France will then take action to monitor the species, as well as any other individuals present in the national territory (pg2. (8)). Over the longer term, there may also eventually be a genetic exchange with any remaining subpopulations in the Central and South Vosges and further afield with those that do exist in the Jura and the Alps in France.

Concurrently with the LIFE lynx project, the BR is the subject of another LIFE program - LIFE BioCorridors (15). This four year project (February 2016-May 2020) co-ordinated by SYCOPARC with 3.6m € funding, was based on a prior mapping analysis by SYCOPARC of the existing ecological networks of the three types of habitats that make up the landscape of the BR - forests, open environments and river and wetlands – followed by a list of possible measures and actions to achieve a coherent and concerted improvement in

the networks (16). One of the main causes of the current disappearance of species in the BR is the destruction and fragmentation of their natural habitat. The LIFE BioCorridors project aims to re-establish an extensive ecological continuity in a cross-border context that will allow the free dispersal and long-term maintenance of many species, some of which are emblematic of the transboundary BR (17). The project does not target a particular species, but the conservation actions planned are assumed to have a beneficial effect on many animal and plant species in the area. Just focussing on the forests in the BR (see map in Annex 1 (17)) many species require deciduous forests, with large trees, dead wood and cavity trees in order to subsist and disperse freely. However, these elements are currently under-represented in the managed forests. Thus one action is building a network of older trees as islands of 0.5-3 ha, which are not harvested for at least 30 years and can therefore follow a natural development. The aim is to have 10 trees/ha that have one or more cavities as well as other evidence of senescence, such as peeling of bark, lightning damage, and dead branches. Since the non-exploitation required of these areas constitutes a financial shortfall, it is planned to compensate the financial loss related to the non-use in these areas. The increase in old trees and deadwood will have a beneficial effect for a number of woodpeckers, including the Black Woodpecker (*Dryocopus martius*) as well as Bechstein's bat (*Myotis bechsteinii*). There are also aims to diversify plantation stands by planting native hardwoods, and to restoring riparian woodland by removing softwoods and planting alders and ash. The priority target areas for all these forest measures is private forest and community forest, followed by a second priority of state forest areas.

It should also be noted that very recently, an agreement was signed between the two natural parks to strengthen cooperation in areas of work, such as the expansion of climate protection, near-natural forestry and ecologically sound, quality tourism, and in particular protection of biodiversity – “for a nature protection without borders” (18). It is thus not surprising that the LIFE lynx project is seen in these terms (19): “The charismatic image of the lynx, a symbol of the presence of large “wild” forests and the connectivity of large habitats, should also be used to promote biodiversity in this transboundary biosphere reserve”

In advance of the first release of lynx, the Stiftung Natur und Umwelt Rheinland-Pfalz (Foundation Nature and Environment Rhineland-Palatinate) in combination with the Ministerium für Umwelt, Energie, Ernährung und Forsten Rheinland-Pfalz (Ministry of Environment, Energy, Food and Forests Rhineland-Palatinate) developed a Management Plan for the handling of lynx in the state of Rhineland-Palatinate (20). This is a key document that covers the detail of the biology of lynx, their monitoring and legal situation; issues of disease, and the treatment of injured lynx; the conflicts with livestock, hunters and their dogs; the prevention and limitation of damage, and including the promotion of preventive measures, such as the temporary use of light fences (*lichtzäune*) where irregular flashing lights are installed at an interval of 10-15 m on the existing fence system (these measures are given in outline and then in detail – and see also (21,22)) and the compensation amounts for livestock and hunting dogs (and see as well (23)) as well as conflict management in the sense of illegal killings and illegal releases, and adjustments in hunting quotas to account for deer predation by lynx. The Management Plan leaves open the possibility of relaxing the ban on hunting lynx when favourable conservation status of the population is reached.

Non-native, feral mouflon are a hunted game species in both France and Germany (24, 25). The highest concentrations in France occur on the Mediterranean fringe and in the mountains of the south east, there being no mouflon recorded as being present in the area of the Vosges du Nord (24, 26). While feral mouflon are rare in the state of Rheinland-Pfalz, being the least populous free-living species that lives in its forests, and occurring only in a few areas, it is a game species for which there are Federal and state regulations specifying a hunting season, hunting grounds, and quota (27-30). The Management Plan for lynx in Rheinland-Pfalz recognises that lynx predation of mouflon is likely, as evidenced from Switzerland and the Harz mountains in Germany, to have an impact on the numbers of animals available to hunters (20). The situation of lynx predation will be more acute where mouflon are enclosed by fencing and kept as farm livestock for their meat, as it is with enclosed sheep and goats, although no evidence is given in the Management Plan of the prevalence of this. It does, however, say that the protective measures to achieve the defined minimum protection for sheep can also be applied to these enclosures of mouflon.

The various sections of the Luchse in Rheinland-Pfalz website, operated by Stiftung Natur und Umwelt Rheinland-Pfalz, the organisation coordinating the LIFE Luchs project, have a considerable amount of project detail, including lynx biology, legislative protection for lynx, reasons and measures for resettlement, updates on lynx release as well as Questions and Answers, Literature, project documents, videos, leaflets for farmers, flyers, and contact details (31). It is recognised by Stiftung Natur und Umwelt Rheinland-Pfalz that the wildcat that live in the Pfälzerwald are likely to reside sympatrically with lynx (32).

On 30 July 2016, the first three of an intended total of 20 lynxes were released near Waldleiningen in the Palatinate Forest (33). The two females aged 5 and 3 and one male aged 1 year, came from the Slovakian Carpathians. Each were equipped with GPS collars, the transmitter and battery together weighing no more than 300g, which is less than 2% of the body weight of the lynx. The collars are equipped with a mechanical break-point so that they will fall off after a while. Thus the animals do not have to wear the transmitter collar all their life after the batteries are exhausted. After having first explored their immediate environment, the animals extended their radius of movement, using the cover of the forest during the day, and entering open areas during evening hours. The three lynx acted independently of each other, but their paths have crossed repeatedly. Two sightings of the lynx were reported early on by two hunters, and three dead deer were found. On several occasions, they have crossed several roads without incident (see maps in (33,35)). By November 2016, the first two incidents of predation of sheep had been reported, with lapses in fence protection in both cases being identified as the cause, and viable solutions such as fully enclosing electrified fencing were offered (36). Once the exact number of animals affected were determined, appropriate financial compensation from the Fund through the Foundation was made available.

The movements of the male lynx and the 3 year old female lynx have shown them regularly spending time in the same territory in January 2017, and then a meeting of several hours took place in early February 2017 (37). If mating took place, then offspring may be expected sometime in April. Unfortunately, since the end of December 2016, for unknown reasons, there has been no contact with the collar on the 5 year old female, nor any sightings. The Foundation will continue to search for this lynx. With the start of the breeding season of lynx, the LIFE project in Palatinate Forest enters a second cycle, with additional lynx potentially arriving this spring. In Slovakia, several cages for capture are ready near known areas of prey predation, whereas in Switzerland, attempts will be made first to capture the three females and two males that were equipped last year with radio collars. After a health check and a short stay in the newly set up quarantine station, the animals can be brought into the Palatinate Forest.

Mark Fisher, Self-willed land March 2017

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