UPM Biodiversity program

UPM BUSINESS AND BIODIVERSITY PROJECTS 1997-2024

	PROJECT NAME	TARGET	DESCRIPTION	TIME	PARTNERS
1.	**Esker habitats**	To find solutions to restore esker habitats into more natural like conditions	Because of manmade fire prevention activities, eskers have not burnt actively. This has caused a situation where tree cover has closed and natural conditions, open and hot south facing slopes have become cold and shady. Due to this development, a major percentage of esker species have become threatened. This initiative consisted on several different projects to find solutions to treat esker habitats in a way that threatened species would benefit and become more common.	2004-2014	Finnish Environment Institute Metsähallitus
2.	**Valuable habitat inventory**	To find valuable habitats defined by Forest Act, forest certification and UPM from UPM owned forests	All UPM forests were inventoried by map and on-site to find and protect valuable habitats. Inventory was done by trained specialists on summer time. As a result, over 20 000 sites were identified and protected, like springs, brooks, unditched mires and groves.	1997-2002	
3.	**Fire habitats**	To increase amount of controlled fires and to find new ecoefficient ways of controlled fires to promote biodiversity of fire-dependent species.	Forest fires have been common in Finnish forests before fire preventing activities took place. Due to the history, part of species are dependent forest fires and they need burnt wood and soil in their lifecycle. Target was to increase the amount of silvicultural controlled fires and to find new ways, like burning of retention tree groups, to increase resource to fire dependent species.	2004- 2011	Ministry of Agriculture and Forestry Ministry of Environment via the METSO -project
4.	**Restoration of Boreal Forest and ForestCovered Mires, Metsälife**	To restore forests and mires into more natural conditions in protected areas to promote biodiversity	By restoration to create characteristics of a natural forest that are lacking or absent, such as dead and decaying wood, charred wood, deciduous trees, variation in the structure of the forest and natural hydrological conditions. Target was to speed up nature's processes to promote biodiversity.	2002-2007	EU LIFE Nature Fund Metsähallitus

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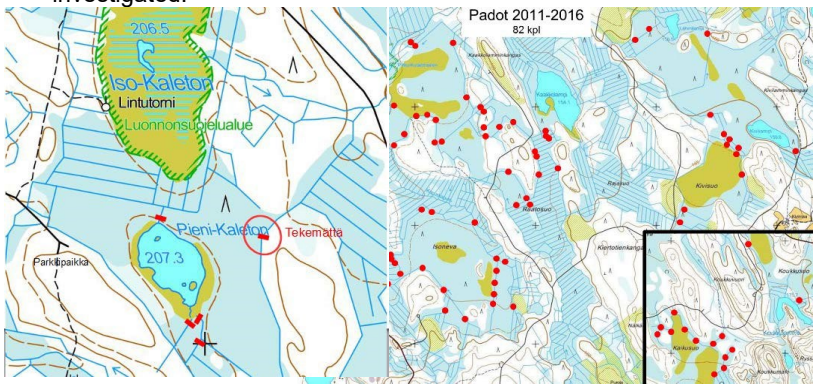
5.	**Peatland restoration**	To restore mire's hydrology into more natural conditions by blocking earlier made ditches and to promote habitats of Red Grouse (*Lagopus lagopus*)	Selected mires were identified to be low productive for forestry but having value for biodiversity and to Red Grouse. Plan how and where earlier made ditches shall be blocked and how was done and implemented. Also possible need for harvesting to create more open area for Red Grouse was investigated. 	2010- 2017	Keurusseudun luonnonystävät (Friends of nature in Keuruu area) Finnish Association for Nature Conservation's district in Central Finland
6.	**Siberian Jay**	To find solutions to promote habitats for Siberian Jay (*Perisoreus infaustus*) and to study needed conditions in breeding site and surrounding forests.	To investigate possible protection needs in breeding sites and what kind of forest activities are possible in surrounding forests in areal level.	2009-2011	Finnish Association for Nature Conservation, funding Ministry of Agriculture and Forestry and Ministry of Environment
7.	**Creat Crested Newt (*Triturus cristatus*)**	To promote habitats of EU-protected species Creat Crested Newt	To investigate possibilities to improve habitats of the species by harvesting in buffer zones and to improve old habitats by excavator. It was also tested, can new habitats be created by digging.	2010-2013	Center for the Economic Development, Transport and the

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					Environment, North-Carelia
8.	**Native hardwoods**	To increase the amount of rare broadleaf species to improve living conditions of species dependent on them	Project focuses on planting rare broadleaf species, like lime tree and oak, to add resources to species dependent on them. Project focuses on selecting right genotype to areas to-be-planted and actual planting of seedlings.	2004	
9.	**Dunlin (*Calidris alpina*)**	To treat habitats of Dunlin to promote their breeding site	Reaping of seashore areas where Dunlin breeds with local representatives of Birdlife in Yyteri area.	2006-2010	▪ Birdlife
10.	**White-Backed woodpecker (*Dendrocopos leucotos*)**	To promote actions for White-Backed Woodpecker, the most threatened forest bird in Finland	To collect knowledge on White-Backed Woodpecker and its habitat needs and to decrease prejudice towards the species by communicating new knowledge.	2013-2015	▪ WWF Finland ▪ Finnish Environment Institute ▪ Metsähallitus
11.	**Osprey (*Pandion haliaetus*) nests**	To build artificial nest for Osprey to promote successful nesting	Artificial nests are built for Osprey to promote breeding success. Nests are placed into UPM forests on suitable sites.	**2006-**	Osprey Foundation
12.	**Osprey (*Pandion haliaetus*) satellite monitoring**	To learn migration behavior and use of space in nesting sites	Satellite transmitter was attached to selected Ospreys. Transmitter sent GPS were the Osprey was moving to understand how Ospreys use space in nesting sites and while migrating.	2007-2012	Finnish Museum of Natural History
13.	**Three-toed woodpecker**	To study usage of space in nesting time in forest area	Radio transmitters were attached into Three-Toed-Woodpecker to find out how do they use forest area and deadwood resources in nesting time.	2005	Finnish Museum of Natural History

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14.	**Beetles in deadwood**	To study the importance of deadwood to beetle species and to understand what benefits retention trees can produce to beetle biodiversity	Beetle traps are attached to artificial snags in summer time. Beetles are collected and species are identified to understand can deadwood and retention trees promote beetle species biodiversity.	2004-2018	Independent researcher
15.	**Boreal Peatland -Life**	To protect and restore valuable peatlands	LIFE project focused on finding valuable peatlands in UPM owned land. The most valuable sites in their natural state were protected and earlier ditched areas' hydrology was restored to their natural condition to promote biodiversity in peatlands	2010-2014	Metsähallitus and Center for the Economic Development, transport and the Environment
16.	**METSO-programme**	To voluntarily protect valuable habitats	UPM promotes voluntary protection of valuable habitats. Habitats are protected in UPM owned forests and with private forest owners is discussed on the possibility to protect valuable habitats they own.	**2007**-	
17.	**Heritage forest programme**	To promote voluntary forest protection	To share knowledge on voluntary forest protection to private forest owners and to protect voluntarily selected sites in UPM forests	2005	WWF Finland
18.	**Bats in commercial forests**	To study how EU protected species Brand's bat use forest habitats in their daily life	Radio transmitters were attached to Brand's bats (*Myotis brandtii*) and their space usage in commercial forests was followed.	2008	Independent researcher
19.	**Light & Fire Life**	To promote biodiversity in hot and open areas by using harvesting and burning methods	EU Life project In Natura 2000 areas harvesting and burning methods are used to create sunny and hot habitats for threatened species needing hot sunlight. Habitats are, for example, esker slopes where trees shade sun needing vascular plants. Project ended at 2020.	2015- 2020	Metsähallitus
20.	**Osprey (*Pandion haliaetus*) nest camera**	To study Ospreys behavior in nesting time	Camera was set to film Ospreys nest to study nesting behavior of Osprey.	**2015**-	Osprey Foundation

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21.	**Parallel field testing of forest certification standards**	To understand how forest certification standards emphasizes sustainability aspects	Different forest certification standards were studied and tested on how they take into account economical, ecological and social aspects.	2004	DNV, WWF Finland
22.	**Decaying wood in commercial forests**	To inventory how much there is decaying wood in commercial forests	Inventory amount of decaying in wood in commercial forests in Kainuu and Hame region. Two separate forest estates were inventoried on site basis	2005	
23.	**Forest certification**	To promote sustainable use of forests	UPM offers FSC certification to private forest owners. Since 2012 private forest owners have been able to certify their land to FSC via UPM group certificate. UPM promotes PEFC certification to private forest owners. All UPM land is certified according to FSC and PEFC. UPM is actively involved in standard development (FSC and PEFC) both in national and international level.	**1998-**	
24.	**Voluntary projects**	To promote living conditions of forest bird species	Living conditions of forest bird species are promoted by voluntary work. Local bird associations have selected sites and projects and gathered people to voluntary work days.	2011- 2020	Birdlife Finland
25.	**Spatial information of osprey nests**	To promote living conditions of ospreys in commercial forests.	UPM made an agreement with Osprey Foundation and LUOMUS (Finnish Museum of Natural History) on providing spatial information of osprey nests to UPM. UPM uses the information to safeguard the nests in forestry operations. Information will be updated regularly.	**2018-**	Osprey Foundation, LUOMUS (Finnish Museum of Natural History)

26.	**Spatial information of nests of large diurnal birds of prey**	To promote living conditions of large diurnal birds of prey in commercial forests	UPM and PKLTY ry (Ornithological society of North Carelia) agreed on providing spatial information of nests of large diurnal birds of prey to UPM. Information covers UPM's own forests and some private owned forests in North Carelia. UPM uses the information to safeguard the nests in forestry operations. Artificial nests are also built to replace abandoned old nests. Information will be updated regularly.	2018-2020	Ornithological Society of North Carelia
27.	**Migrant fish project**	To support restoration of migrating fish stocks	UPM and Centre for the Economic Development, Transport and the Environment of Central Finland are removing fish migration barriers from streams in Central Finland.	2018-2022	Centre for the Economic Development, Transport and the Environment of Central Finland
28.	**Guidelines for forestry operations near ospreys nesting trees**	To promote living conditions of ospreys in commercial forests.	UPM and Osprey Foundation created in cooperation guidelines for forestry operations near ospreys nesting trees. Guidelines are deployed in to everyday use in UPM forestry operations. They are also published in UPM's web page to allow all interested parties to use them.	2017	Osprey Foundation
29.	**Ecosystem services – monitoring and future scenarios**	To study ecosystem service co-production approach and long-term biodiversity impacts	Master thesis on ecosystem services where wood and non-wood ecosystem service production were monitored and modelled from the year 2018 to 2100.	2018-2019	University of Eastern Finland
30.	**EU Beetles LIFE**	To enhance population of eight threatened beetle species populations	UPM protected 40 ha forest area in Häme. The target is to strengthen the population of *Cucujus cinnaberinus* by increasing volumes of decaying aspen in the area.	2018 - 2023	Metsähallitus Center for Economic Development, Transport and the Environment
31.	**Transplanting threatened wood-inhabiting fungi**	To study transplanting as a method to protect rare wood-inhabiting species	20 threatened polypore species have been transplanted to UPM's deadwood habitats. Success of transplanted polypores are monitored.	**2019** -	Natural Resources Institute Helsinki University
32.	**Species occurrence and indicator development**	To study species and deadwood occurrence at regeneration harvesting sites	UPM started co-operation with Centre of Nature resources (LUKE): In the project LUKE is studying the species occurrence at the harvesting sites retention trees and deadwood. Project also includes the further development of species indicators. .	2021 - 2023	Luke Natural Resources Institute, Finland

33.	**Siberian Jay I**	To promote living conditions of Siberian jay in commercial forests.	UPM is using one big forest estate at Heinävesi in a Siberian jay friendly way. Harvesting, harvesting planning and forest management plan is made in a way that ensures existence of suitable habitats and resources for Siberian jay now and in the future.	**2021**-	Risto Sulkava (former chairman of the Finnish Association for Nature Conservation)

34.	**Spring restoration**	To promote biodiversity in small aquatic habitats	UPM and Centre for the Economic Development, Transport, and the Environment of South-Savo restorated four spring habitats at Souht-Savo area.	2021	Centre for the Economic Development, Transport and the Environment of South Savo
35.	**Janakkala conservation model area for birds of prey**	To realize a model area for the protection of birds of prey in the UPM-owned Harviala forest area in Janakkala, to combine measures for the protection of birds of prey and forestry.	The size of the area is approximately 8,000 hectares. In the first phase, during 2022, terrain mapping of the nesting data of birds of prey in the area was started. In the second phase, a network of hawks' artificial nests will be planned in the forest area and artificial nests will be built. The territories of birds of prey in the Harviala forest area are monitored annually.	**2022** -	Finnish Osprey Foundation
36.	**KEURUS project**	To improve the water quality of the Keurusselkä catchment area	Directing water to mire areas in Multia: a water recovery project for undrained mire areas (Palosuo and Suurisuo) located on UPM's property, directing forestry drainage water to them.	2022 -	Central Finland Water and Environment Association (Keski-Suomen Vesi ja Ympäristö ry)
37.	**Mustanjoki**	To restore small waters	Restore the straightened stream bed and restoring the trout population.	**2022** -	Centre for the Economic Development, Transport and the Environment of South Savo
38.	**Helmi habitat programme (+ Pienvesi-Helmi I)**	To restore habitats like small waters and esker habitats	The first action was the restoration of Suorapuro in UPM's sector (in Saarijärvi area) as part of the national Pienvesi-Helmi project. Suorapuro flows for about 1 km on the UPM property. We have been involved in several habitat restoration projects that have been on UPM property.	**2022** -	Finnish Freshwater Foundation, Central Finland Water and Environment Association (Keski-Suomen Vesi ja Ympäristö ry)
39.	**Endangered species identification**	To create identification guide for endangered species found in UPM logging areas	The endangered species must be considered in every action in the forest, from the soil preparation to the final cutting. The objective of the thesis was to make an identification guide for threatened species found in UPM logging areas.	2022	South-Eastern Finland University of Applied Sciences
40.	**Retention trees after felling**	To increase information of what happens to retention trees after felling and how fast the change is	Master thesis	2022 -	The University of Eastern Finland

41.	**Burning school**	To promote awareness and the biodiversity of species dependent on fire habitats.	Participation in the burning-school (Kulotuskoulu) project of the Finnish Forest Centre in Southeastern Finland Restoration fires in Repovesi National Park (3,5 ha 2022)	2022 - 2023	Finnish Forest Centre, Metsähallitus
42.	**Esker habitats**	To protect and promote species living in esker habitats	Restoring esker habitats (2022 1 ha area in Rautavaara) (Helmi-project)	2022 - 2023	Centre for the Economic Development, Transport and the Environment
43.	**Deciduous trees**	To increase (rare) deciduous tree species and to promote species that benefit from them	UPM plans to double the number of broadleaved trees in its forests in Finland. 2022 instructions and training. Now followed by implementation. A significant amount (20 000) of black alder (*Alnus glutinosa*) for distribution to UPM's and customers' forests in 2022. Helmi-project (field inventories and treatment procedures in several target areas)	**2022** -	UPM's own nursery in Joroinen, Centre for the Economic Development, Transport and the Environment
44.	**Janakkala Roitonsuo**	To restore the former peat production mire	2022 wetland design	**2022** -	
45.	**Harviala mire restoration**	To restore a drained mire	2022 the mire was restored by filling the ditches and removing the canopy. The bog in the northern corner remains to be restored.	**2022** -	Wepa, UPM Fibres
46.	**UPM stream water programme**	To restore Finnish stream water habitats and connectivity	The program aims to release and/or restore 500 km of stream waters by 2030. UPM Forest is in charge of restoring smaller forest streams, UPM Energy is in charge of releasing dammed rivers. Reporting will be carried out under the programme, and new separate habitat projects are no longer updated in this document.	**2023** -	UPM Energy, Centre for the Economic Development, Transport and the Environment, Several local associations
47.	**Connecting with local bird specialists**	To safeguard nesting of predatory birds while harvesting. To support bd via nesting habitats for birds.	We aim to minimize the conflict between nesting birds of prey and wood harvesting. By establishing the connection between the local bird specialists and our personnel, we can find out the nesting state of a predatory bird nest more directly than before. The same connection can be used to communicate suitable sites for nesting boxes. We can also co-operatively plan and build new habitat for the nesting water birds by restoring and repurposing old peat production sites.	**2023** -	BirdLife Finland

48.	**Sharing our species observations**	To expand the public species data base.	We have recorded species observations from threatened species to our own system that are not made public. By building a protocol to share these observations, we can do our own share in helping the scientists to, e.g., better evaluate the status of forest species in Finland.	**2023** -	The Finnish Biodiversity Information Facility
49.	**Pollinators during forest regeneration**	To develop and adopt forestry practices that better support insect biodiversity	Open areas in forests have real potential to work as habitats for pollinators. The result will be the best-of-the-art guide on how to support pollinator insects in forestry. We managed a pilot site according to the guide, and monitor the results to adopt the best practices.	**2023** -	Tapio consulting Oy
50.	**Scenario modelling for the deadwood**	To evaluate the company targets for deadwood and deciduous trees	With computer models, we get to see how the amount of deadwood will develop in company-owned forests. This gave us the possibility to evaluate and adjust both our practices and our set targets.	2023 - **2024**	Luke Natural Resources Institute, Finland
51.	**UPM Forest Habitat Programme**	To restore habitats across of UPM-owned forests	The program aims to restore 3000 ha of peatland and manage/restore 100 sites to promote biodiversity by 2030. Themes include, e.g., peatlands, sunlit environments and nutrient-rich forests Reporting will be carried out under the programme, and new separate habitat projects are no longer updated in this document.	**2024 -**	Several local NGOs Centre for the Economic Development, Transport and the Environment
52.	**NorthDIVeRSITY**	To develop new DNA-based biodiversity monitoring methods	The project aims to develop methods to utilize environmental DNA (eDNA) to monitor biodiversity in the northern climate. Implementing such methods can potentially lead to reduced costs and increased coverage in biodiversity monitoring. One of the case studies involves a site from UPM stream water programme. We study how removal of migration barriers affects the biodiversity.	**2024 -**	Luke Natural Resources Institute, Finland; EU Interreg Aurora; UPM Energy
53.	**Efficient culvert fixing**	To develop an improved practice to remove migration barriers	There are thousands of culverts in Finnish forest road network that cause a migration barrier in the forest streams. This prevents the movement of aquatic species affecting the biodiversity. We pilot a new methodology which aims to remove these barriers with never-before-seen cost and time efficiency.	**2024 -**	
54.	**Pienvesi-Helmi II**	To develop management practices for large areas To support education on sustainable forestry	With our collaborators, we make a comprehensive management plan to a complete drainage basin in Karkkila, Finland. A physical course is planned that showcases these management choices and sustainable forestry in general.	**2024 -**	Finnish Freshwater Foundation, Western Nyland Water and Environment Association (LUVY ry), Finnish Forest Centre

Threatened species occurrences on company owned forests (based on data of Finnish biodiversity info facility):

IUCN-category	Number at the end of 2024
LC	209
NT	827
VU	736
EN	290
CR	7