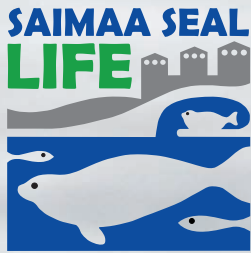


LIFE Saimaa Seal Safeguarding the Saimaa Ringed Seal



www.metsa.fi/saimaannorppalife
LAYMAN'S REPORT



LIFE Saimaa Seal (LIFE12NAT/FI/000367) was implemented in 2013-2018 as a LIFE project funded by the European Union.

The project was coordinated by Metsähallitus. The partners were South Savo Regional Centre for Economic Development, Transport and the Environment, University of Eastern Finland, Natural Resources Institute, Finnish Association for Nature Conservation, WWF Finland, Finnish Federation for Recreational Fishing, and University of Turku.

The project budget was 5.26 million euros, with EU funding accounting for 3.95 million euros of this sum. Part of the funding was provided by the Ministry of the Environment, the Rajja and Ossi Tuuliainen Foundation, and the Nestori Foundation.

LIFE is the European Union's financial instrument supporting environmental and nature conservation projects and thus supports implementation of the EU's environmental policy.

www.metsa.fi/saimaannorppalife

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LIFE Saimaa Seal – Helping the Saimaa Ringed Seal Together

The Saimaa ringed seal (*Pusa hispida saimensis*) is one of the rarest seals in the world. There are only about 400 of them in the world and the whole population lives in the Saimaa region. LIFE Saimaa Seal was a project funded by the EU which approached the protection of Saimaa ringed seals from a variety of different angles and sought solutions through the joint efforts of many partners.

The project implemented the strategy and action plan for the protection of the Saimaa ringed seal, which was drawn up in 2011 under the leadership of the Ministry of the Environment, in broad cooperation with the key stakeholders. When the strategy was updated in 2017, a significant amount of new research data produced in the project LIFE Saimaa Seal was utilised for planning and targeting the protection actions.

This Layman's report describes what was done in the project LIFE Saimaa Seal and how the joint efforts during the five-year project affected the life of the endangered Saimaa ringed seal and its living conditions.

The project actions are presented as part of the annual cycle of the Saimaa ringed seal's life. Terttu, a female seal born in Lake Haukivesi in 2008, makes observations from the perspective of a Saimaa ringed seal.



Terttu, Phs014*

- Born in Lake Haukivesi in 2008.
- Monitored by telemetry as a pup, which helped determine the range of the pups' movements. This data was used when specifying the areas that required fishing restrictions.
- Presumed to have spent her life in the Linnansaari National Park area, where she has been observed nearly every year.
- Gave birth to a pup in at least 2015, 2016 and 2017. The most recent pup, Kaisla Phs322, was born in a combination of a man-made snowdrift and an artificial nest.
- Seen in the same resting area as the male Pasi Phs022.

**Each Saimaa ringed seal individual can be identified by its unique fur pattern. The identified seals are given an ID code beginning with Phs. Their photos are available on the norppagalleria.wwf.fi website.*

The ringed seal gains weight in autumn

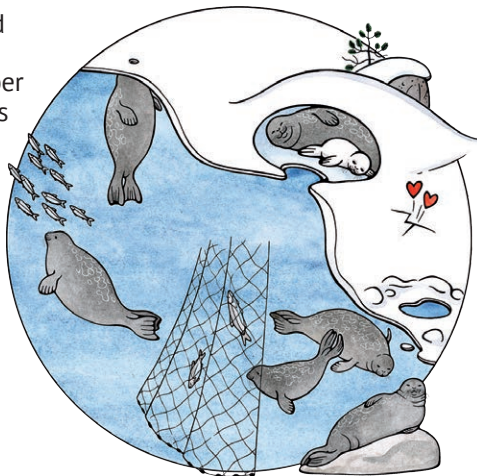
In autumn, the ringed seal eats a lot of fish to build up the blubber under its skin. It feeds on small fish that move about in shoals. Its favourite fish are vendace, roach, smelt and perch. It requires on average 2-3 kilos of food per day.

In the summer the ringed seal faces threats

When learning to live independently, the pup is in great danger of getting entangled in a fishing net or being caught in a fish trap. The use of fishing gear dangerous to ringed seals has been restricted in Lake Saimaa.

The winter lair in the snow gives shelter

In the middle of the winter the Saimaa ringed seal remains hidden from the human eye. It keeps a few breathing holes open in the lake ice and occasionally takes a rest in the cave it has dug into a lakeshore snowdrift.



The ringed seal moults

The end of May is the moulting season for grown-up ringed seals. That is when they can be spotted lolling on lakeshore rocks. Do not disturb a seal drying its fur.

In late spring the pup leaves the mother

In mid-May the mother weans her pup, which was born in late winter, and the pup starts to live independently.

The pup is born

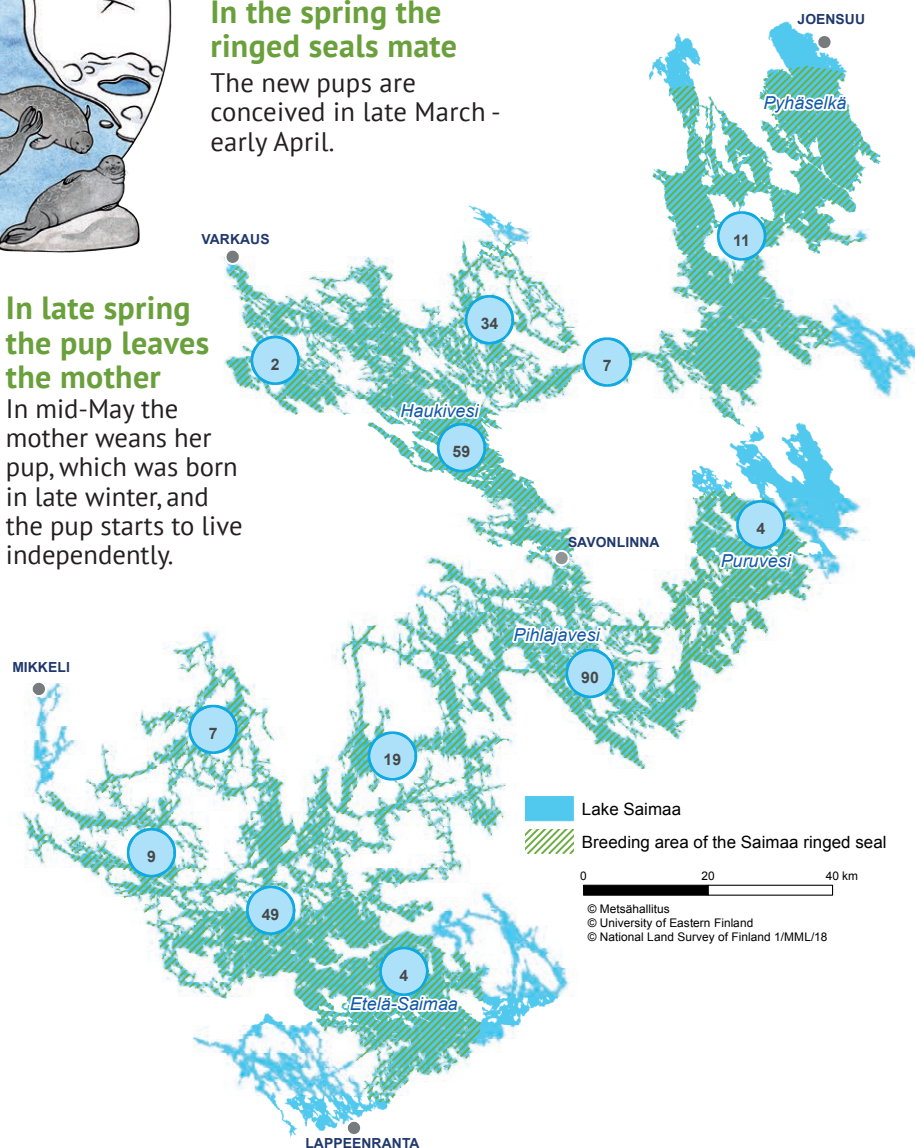
In late February, the seal mother gives birth to a pup in the lair dug into the drift of snow. At that time the mother and the pup need peace for suckling and are most vulnerable to disturbance.

In the spring the ringed seals mate

The new pups are conceived in late March - early April.

The year of the Saimaa ringed seal

THE CURRENT BREEDING area of the Saimaa ringed seal. The numbers describe the amount of man-made snowdrifts piled mostly by volunteers in 2018, due to weak snow conditions prior to breeding season.



Seals breed in winter and need a peaceful environment

Man-made snowdrifts and artificial nests to protect pups

Heavy snowfall during the winter is essential to successful breeding for Saimaa ringed seals. The mother gives birth and nurses her pup in

a lair dug into a snowdrift. During the winter, adult seals also rest in protective snow nests. Climate change and the resulting warmer winters represent a major threat to the seal. Without the protection of the lair, the pup is exposed to cold, predators and other disturbances after its birth in February-March.

The project LIFE Saimaa Seal developed methods to increase the seal's breeding success during mild winters. One successful method proved to be the construction of man-made snowdrifts before the start of breeding season if the snow had not formed sufficient drifts naturally. The project developed a volunteer network that

MIINA AUTTILA



DEPENDING ON THE annual snow condition, man-made snowdrifts were built in part of the Saimaa region or comprehensively throughout the entire Saimaa ringed seal breeding area.

MIINA AUTTILA



UEF / SAIMAANNORPPATUTKIMUS



“Wow, it’s great to see some new trends in home design! It’s even got a roof made of reeds!”

DURING WINTERS WITH little snowfall, seals cannot find durable snowdrifts for breeding. The project also experimented with building artificial nests made from, for example, reeds.

THE SNOW CONDITIONS in Saimaa have changed during Terttu’s life, and natural snowdrifts are no longer as likely to develop. Terttu was daring enough to try an artificial nest that was a combination of a man-made snowdrift and common reed in 2017 and she subsequently gave birth to a pup there.

made it possible to build man-made snowdrifts at short notice throughout the Saimaa region. During the project, over 1,000 snowdrifts were built by more than 300 volunteers. The results speak for themselves: 75 % of the man-made snowdrifts were used by a seal and more than 70 % of the pups observed over this 5-year period were born in man-made snowdrifts.

Providing guidance to decrease human induced disturbance

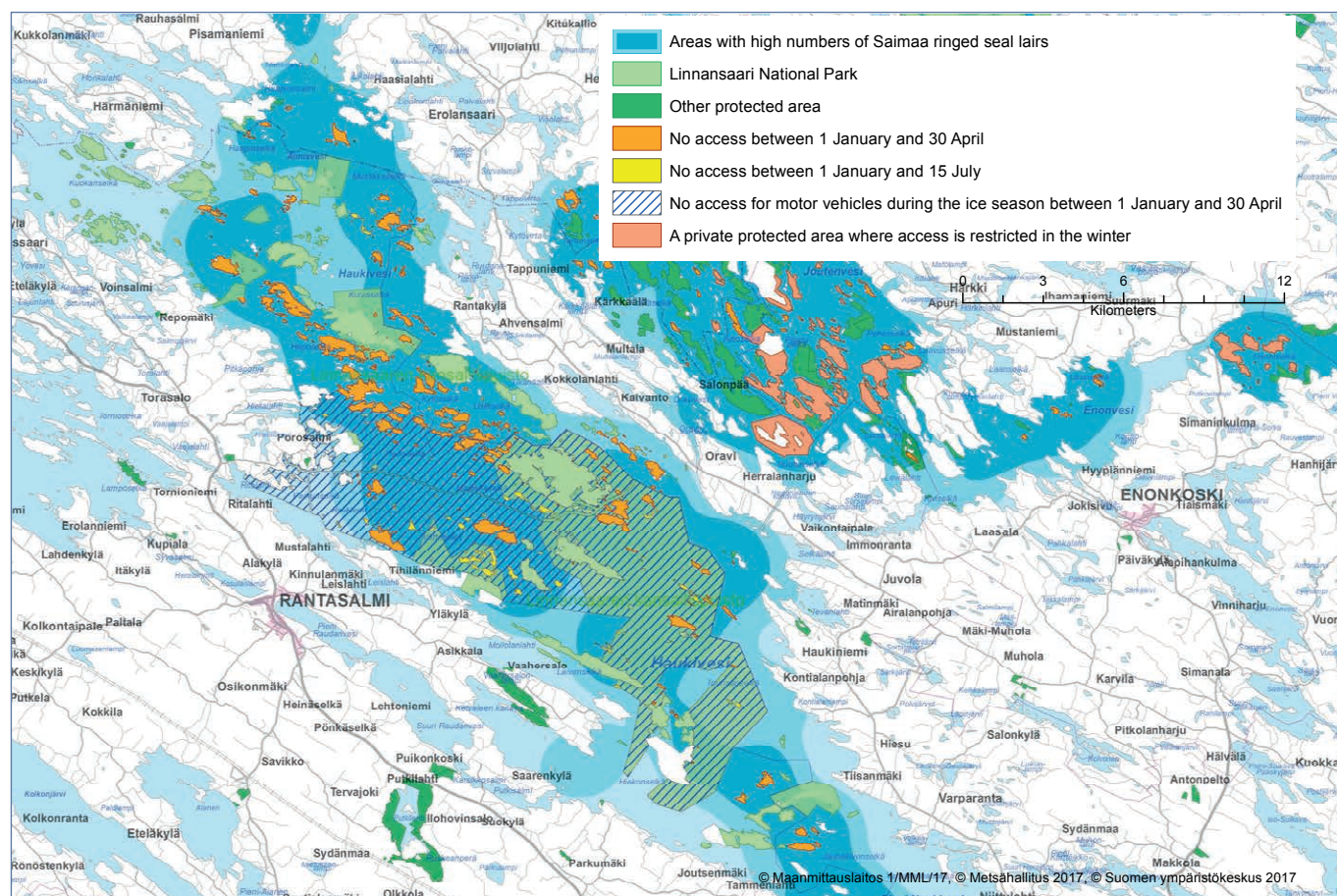
Saimaa ringed seals are at their most vulnerable in late winter when the mothers nurse their pups in lairs dug in snow drifts. When hearing noises from outside the lair, the

seal escapes into the water through an ice hole in the lair. Repeatedly escaping into the water disrupts feeding and causes stress which, in the worst case, may be fatal to the pup.

Year-round inhabitation is increasing on the shores of Saimaa, which also means more movement near the seal's breeding area during the winter. By selecting their route and form of transportation correctly, people can significantly reduce the disturbance caused to seals. The project produced a large amount of communication materials aimed at helping people avoid unnecessary activity in important Saimaa ringed seal breeding areas: videos, tip lists, and maps have been shared

on websites and social media. This material will also be utilised after the project ends.

INFORMATION ABOUT the location of lairs collected during the annual lair count was used to perform a geographical information analysis that describes the importance of different parts of Lake Saimaa as seal breeding areas. The analysis was used as the basis for compiling guide maps for the different basins of Lake Saimaa. They show the areas where Saimaa ringed seal lairs are most common and where movement in winter is most likely to disturb seal breeding.



Spring is moulting season

Research data to find the best conservation methods

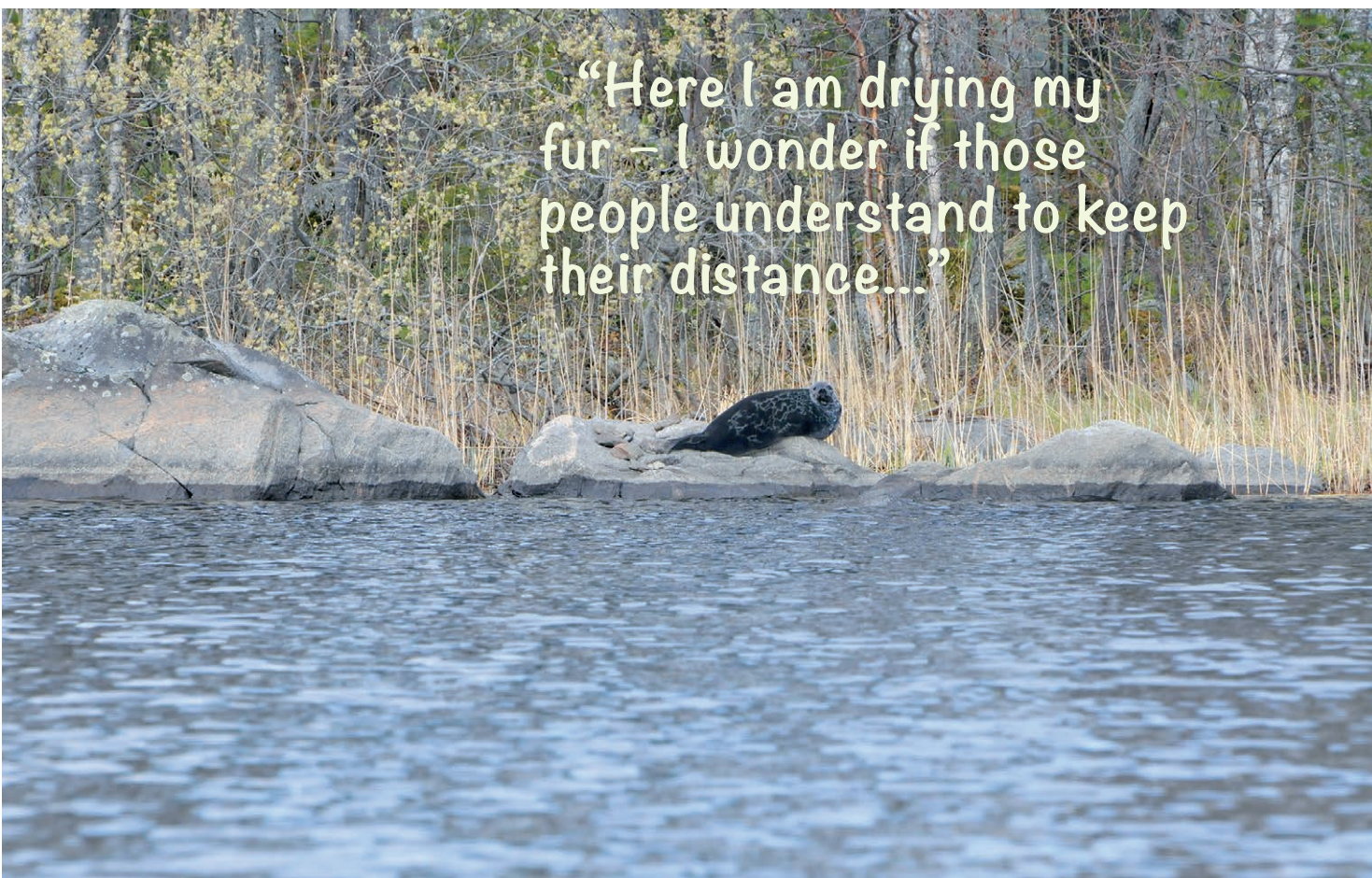
In order to properly target Saimaa ringed seal protection actions, we need quality, up-to-date research data and monitoring of the seal's habits, its habitat, and factors that threaten the species. Field research requires a permit and it must be carried out in a way that causes minimal disturbance to the Saimaa ringed seal.

The project LIFE Saimaa Seal produced a diverse range of new data. The survival of new-born pups

and the factors that disturb them were studied by means of game cameras located near their lairs. Telemetry tracking was used to survey the movements of female Saimaa ringed seals during the breeding period. Annual lair census provide the basis for assessing the size of the seal population, and the accuracy of this count was improved with underwater surveys at lair sites. Studies also focused on examining the types of recreational fishing in Saimaa ringed seal habitats and attitudes towards the protection of seals – both historically and during the project.

Guidance for boaters and other lake users

The moulting season for adult Saimaa ringed seals lasts from May until early June. During this time, they may lie on rocky shorelines all day long. This is the easiest time to see the seals, which makes May a busy time for entrepreneurs organising seal watching tours. The project involved cooperation with tourism operators to develop sustainable nature tourism. Videos and brochures were produced to encourage travellers and local residents to take seals into consideration when boating during the spring.



“Here I am drying my fur – I wonder if those people understand to keep their distance...”

MERVI KUNNASRANTA

Pups learn to live independently in the summer

New methods for seal safe fishing

Getting caught in fishing gear is the single largest cause of early mortality among Saimaa ringed seals that we can influence. Efforts to reduce by-catch mortality was one of the most important objectives of the LIFE Saimaa Seal project, and the problem was tackled in many ways.

During the project, dozens of water area partnerships signed an agreement to limit net fishing in their area. In order to supplement the agreement areas, the Government

issued a decree that limits net fishing in Lake Saimaa between 15 April and 30 June. Use of the fishing traps that are most dangerous to seals is also forbidden throughout the year in the area indicated in the decree. Movement data obtained from the telemetry study was utilised when specifying the areas where fishing is restricted.

Finland has a long tradition of fishing for domestic needs, so setting limits to protect the Saimaa ringed seal is an issue that causes some debate. The project focused on communication and encouraged fishers to catch fish with seal-safe methods: for example,

by using traps equipped with a narrow opening instead of dangerous nets. A diploma of seal-friendly fishing was granted for those who are committed to seal-safe fishing. The project made it possible to hire a dedicated game and fisheries warden for Lake Saimaa. The warden distributed information about seal-safe fishing and supervised traps to ensure that they comply with regulations. In cooperation with professional fishermen, the project developed a new fyke model with bars to keep seals out. This makes professional trap fishing possible during the summer months without endangering seals.

W-KUVA

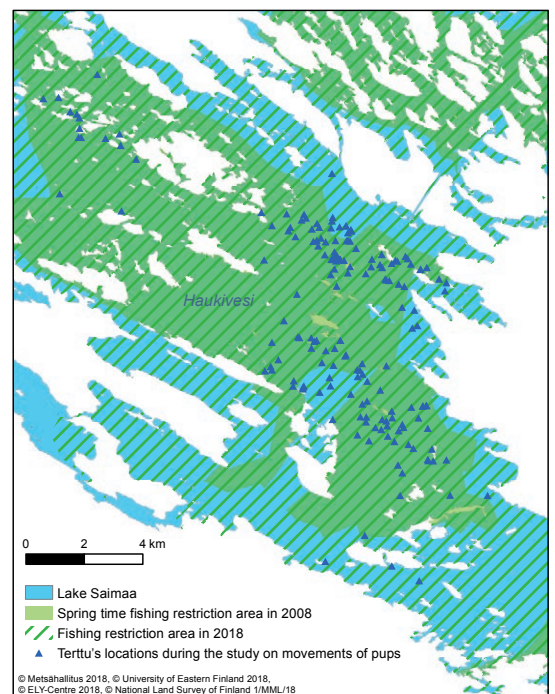


MORE THAN 500 fishers took advantage of a campaign to exchange their nets for seal-safe fishing traps.

KUVAT: SAARA LAVI



A TRAP IS safe for seals when the maximum width of the opening is 15 cm, even when stretched. The size of the opening can be reduced with a cable tie.



BORN IN HAUKIVESI basin in 2008, Terttu was part of a study during the year she was born. The study examined the movements of pups in order to, for example, specify fishing restriction areas. Even the researchers were surprised by the range of the pups' movements. Terttu's locations during the research period are shown as points on the map.



SEAL CRUISES AND camps taught children and young people about the life of the Saimaa ringed seal.

Seal ambassadors and summer camps

Saimaa ringed seal protection is very dependent on the activities of individual people. As a result, diverse communication about seals, their habits and protection needs was one of the main focuses of LIFE Saimaa Seal. The aim was to tell local and holiday residents how they can take seals into consideration when fishing in Lake Saimaa or when moving around during the breeding and moulting seasons. Information was shared by means of various campaigns and events, as well as through traditional and social media.



DURING THE PROJECT, a new seal-safe fyke model was developed to meet commercial fishing needs.

Approximately 4,000 households that own a lakeside cottage or live in important Saimaa ringed seal breeding areas received a letter about the topic.

The events and campaigns directed at schoolchildren reached over 10,000 youngsters in Saimaa area. Seal ambassadors visited schools, summer events and fairs. Children and young people learned about the seal's home waters and living habits in workshops, at camps and on cruises to Linnansaari national park. A story book entitled "The seal pup and the snowman" introduced the youngest children in the family to the life of the seal.



A NEW EXHIBITION describing Lake Saimaa's nature and the success story of Saimaa ringed seal conservation opened at Saimaa Nature Centre Riihisaari in Savonlinna.

The shores of Lake Saimaa are quiet in the autumn

Planning guidance and new protected areas

Land use planning for Saimaa shore areas can significantly reduce disturbances to the Saimaa ringed seal and facilitate the seal's return to former breeding sites. The instructions compiled during the project help municipalities in Saimaa take seal breeding areas into consideration in planning and when issuing building permits. A management plan prepared for two

nature conservation areas reconciles Saimaa ringed seal protection with other use of the areas, such as recreational needs. Regulations governing human movement and other activities were issued for five state-owned nature reserves.

LIFE Saimaa Seal also made it possible to acquire new protected areas. A total of 710 hectares of water areas, islands and islets located in Puumala's Katosselkä and Lietvesi and in Savonlinna's Pihlajavesi were added to the existing conservation areas.



SIRPA PELTONEN



PASI RYHÄNEN

The end of the year – the end of the project

The future of the Saimaa ringed seal is being built now

As a result of long-term protection actions, the size of the Saimaa ringed seal population has begun to grow slowly. During the project LIFE Saimaa Seal, the number of seals has increased from about 310 to about 370. Right now, the future of the Saimaa ringed seal looks brighter than it has for a long time, but further actions are needed in order to preserve the species in Lake Saimaa. The threat of extinction is still significant.

Advancing climate change means more mild winters with little snow, which makes breeding conditions difficult and creates the need for man-made snowdrifts and artificial nests. However, solutions have been found when snow is scarce in the winter, and we can facilitate breeding by means of methods and networks developed in the LIFE project. Continuing the artificial nest development work is particularly important in terms of preparing for winters without snow.

The small, fragmented population complicates Saimaa ringed seal breeding and slows the species' return to former habitats. The return of the population to areas bordering on the Lake Saimaa area, where seals had been absent over the past decades, puts local people in a new situation: the return of the seal requires conservation actions that reconcile



TASAVALLAN PRESIDENTIN KANSLIA

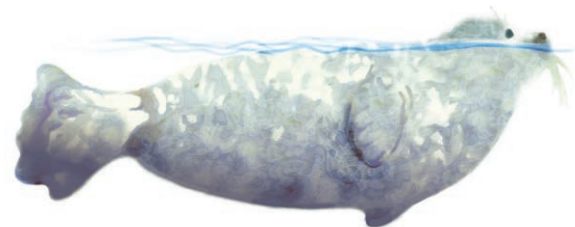
IN SPRING 2018, the President of the Republic of Finland took part in a lair count: protecting the Saimaa ringed seal has become a cause supported by the entire country.

traditional lifestyles, increasing winter tourism, recreational activity and fishing. It is important to include local people when planning these actions and in decision-making.

However, there is a strong desire to protect and safeguard the future of the Saimaa ringed seal. According to a survey carried out in the project, 96 % of residents in the Lake Saimaa area consider seal conservation to be very or quite important. An amazing

example of the shared will to protect the species is the group of more than 450 volunteers who worked on behalf of the Saimaa ringed seal by building man-made snowdrifts and participating in lair counts during the project. Many water area partnerships have voluntarily restricted net fishing in their areas, and a large group of fishers has decided to leave their nets at home in seal habitats. Working together ensures that seals will continue to dive in Lake Saimaa in the future!

“I hope we have a real winter next year and plenty of high snowdrifts. But it’s good to know, there are people willing to help, if we don’t.”



Achievements of the Saimaa Seal LIFE project

- The new research data produced in the project was used when updating the Ministry of the Environment's strategy and action plan for the protection of the Saimaa ringed seal and the decree on fishing restrictions.
- More than 4,000 people who own a building on the shore of Lake Saimaa received a letter containing information about the Saimaa ringed seal and how to take the species into consideration at different times of the year.
- Approximately 710 hectares of new protected areas were acquired in the Lake Saimaa area.
- Management plans were prepared for two Natura 2000 areas.
- The markings of the protection and restriction areas was improved on the terrain.
- A total of 1,000 man-made snowdrifts were built to improve breeding habitat for the Saimaa ringed seal, and more than 260 pups were born in the shelter of these drifts.
- Artificial nests were developed for winters with little snow, and a pup was born in both of the models tested.
- Underwater surveys at the lair sites of the Saimaa ringed seal significantly increased the accuracy of annual population estimates.
- More than 450 volunteers participated in work on behalf of the Saimaa ringed seal by, for example, building man-made snowdrifts and performing lair census.
- A new seal-safe fyke model suitable for commercial fishing was developed for Lake Saimaa.
- A campaign targeting people who fish for domestic needs resulted in over 500 fishing nets being exchanged for safe traps.
- More than 3,000 devices were distributed to narrow the openings in old traps and make them seal-safe.
- Diplomas of seal-friendly fishing were granted to more than 500 fishers.
- Seal ambassadors who visited summer events met and talked to approximately 7,000 people about the Saimaa ringed seal and its protection.
- A dedicated game and fisheries warden was hired for Lake Saimaa to distribute information and supervise fishing gear to ensure that it complies with regulations.
- More than 80 children participated in seal camps.
- The seal ambassadors for schools visited about 120 schools and held a seal-themed class for over 200 children in grades 3 and 4.
- A new exhibition was opened at Saimaa Nature Centre Riihisaari in Savonlinna to tell the story of Lake Saimaa's nature and protection of the Saimaa ringed seal.
- The importance of preventing disturbance during the breeding and moulting periods was highlighted by publishing user-friendly instructions, brochures and social media videos.
- More than 1,400 people followed the Year of the Saimaa Ringed Seal project site on Facebook.



RAISA TILIKAINEN

