METSÄHALLITUS
FORSTSTYRELSEN
MEAHCIRÁÐÐEHUS

Our Saimaa Seal LIFE 2020-2025

After-LIFE Plan

LIFE19 NAT/FI/000832
31.12.2025

Photo: Ilona Karjalainen

After-LIFE Plan

In the After-LIFE Plan we establish how the conservation activities initiated by the project will be continued and developed. The plan includes introduction to the Our Saimaa Seal LIFE Project, the main results of the project, and a continuity plan for actions after the project.

Editors: Jari Ilmonen & Katja Sandgren, Metsähallitus, Parks and Wildlife Finland in collaboration with project beneficiaries.

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Content

Our Saimaa Seal LIFE project

Reference: LIFE19 NAT/FI/000832

Title: Working together to save the Saimaa Ringed Seal in changing environment

Duration:1.9.2020-31.12.2025

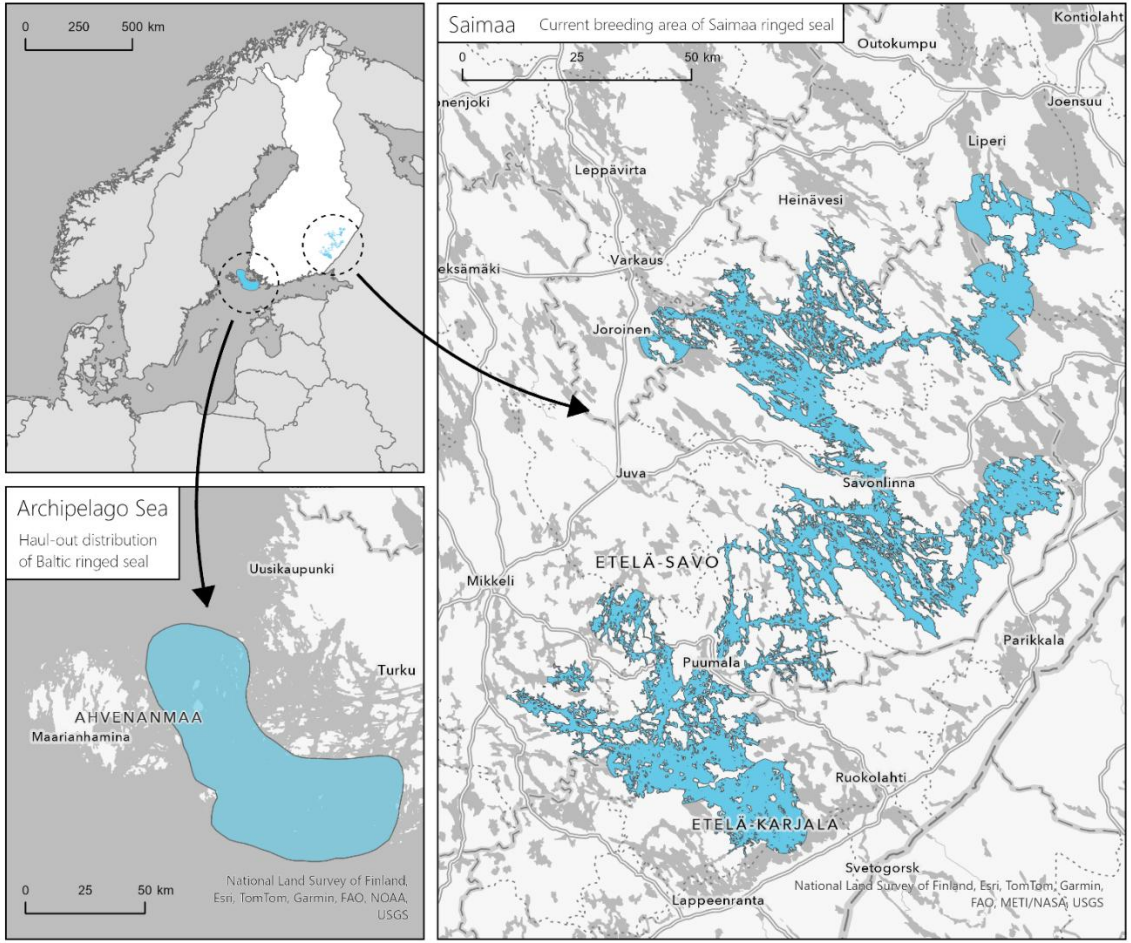
Costs: 6.96M€, EU funding 75%

Coordinating beneficiary: Metsähallitus, Parks and Wildlife Finland

Associated beneficiaries: 12 organizations

Location: Finland/Saimaa and Baltic Sea Southwest Archipelago/Åland

Project website:
metsa.fi/en/project/our-saimaa-seal-life/



Project implementation areas in Lake Saimaa and the Archipelago Sea. Map: Metsähallitus.

Our Saimaa Seal LIFE, project beneficiaries

Coordinating beneficiary	**Metsähallitus, Parks and Wildlife Finland (MHPWF)**
Associated beneficiaries	DocArt Etelä-Karjalan Virkistysaluesäätiö (EKVAS) Finnish Association for Nature Conservation (FANC) Finnish Food Authority (FFA) Government of Åland (Åland) Natural Resources Institute Finland (Luke) North Karelia Regional Centres for Economic Development, Transport and the Environment (POKELY) South Savo Regional Centre for Economic Development, Transport and the Environment (ESAELY) Turku University of Applied Sciences (TUAS) University of Eastern Finland (UEF) University of Helsinki (UH) World Wide Fund For Nature, WWF Finland (WWF)
Co-financers	Ministry of the Environment Nestori Foundation Raija and Ossi Tuuliainen Foundation Regional Council of South Karelia Yleisradio Oy (Finnish Broadcasting Company)

Project beneficiaries

Authorities, nature conservation associations, researchers, and hundreds of volunteers have worked together to promote the protection of the Saimaa ringed seal through various means. We have been engaged in systematic cooperation for a long time, and in the recent years the seal population has been increasing. However, the species is still threatened by climate change and excessive bycatch mortality. New methods are needed for conservation, and these have also been explored collaboratively in this project.

Project objectives

To enhance the implementation of the Saimaa ringed seal conservation strategy and action plan set in 2017. The project aimed that with the actions and means set; at the end of the project the population size will be 500-550. To reach this, the project focused on mitigating for the key threats for the seals by:

Preparing for the threats caused by climate change through man-made snowdrifts (C2), artificial nest development (A6), monitoring and improving health (A4, C6) and noninvasive population monitoring tools (A2, A3).

Enhancing the role of the volunteer work and network in the conservation of the Saimaa seal (C2, D2) (man-made snowdrifts and annual lair censuses).

Enhancing the surveillance of the restrictions set to protection of the Saimaa seal through educating the water district owners, building patrolling network among authorities (i.e., game and fisheries warden and police) (C3), increasing the use of seal-safe fishing gears (C4), and developing seal-safe fish traps for recreational fishermen (C5) (by-catch mortality).

Safeguarding genetic variability through translocations of individuals from core areas to the peripheral areas of the species' range (A1, C1) (lack of genetic variability)

Improving conservation of the species through land purchase/compensation payments and establishment of conservation areas on essential breeding grounds (B1) (human-induced disturbance).

Developing sustainable seal tourism together with local travel enterprises (C2, E1) (e.g., human-induced disturbance).

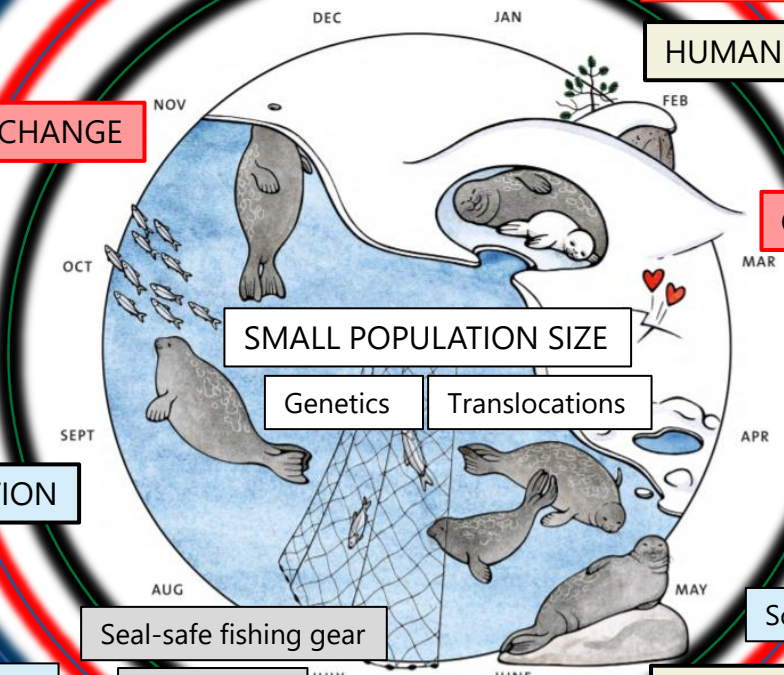
Multidisciplinary communication and stakeholder involvement (e.g., E actions).

The results were utilized in the update of the Saimaa ringed seal conservation strategy and action plan (A8).

To ensure the transferability of the project, the actions of non-invasive population monitoring (A3), improving the breeding conditions (C2) were also implemented in the Baltic ringed seal in the Åland and Archipelago Sea.

OSS LIFE Project actions and the Year of the seal

The update of Saimaa ringed seal conservation strategy and action plan 2022 & 2027



CLIMATE CHANGE

BY-CATCH MORTALITY

SMALL POPULATION SIZE

Genetics

Translocations

COMMUNICATION

Conservation congresses, international collaboration

Sustainable seal tourism

School collaboration

CLIMATE CHANGE

COMMUNICATION

Sustainable seal tourism

Health status estimates

Animal welfare and veterinary care

Land purchase

HUMAN DISTURBANCE

New N2000 areas in Åland area/Archipelago Sea

Land-use planning

CLIMATE CHANGE

Artificial nests

Man-made snowdrifts

Under-water studies of lair sites

Novel population monitoring methods

Photo-ID

School collaboration

Sustainable seal tourism

HUMAN DISTURBANCE

COMMUNICATION

LIVE camera- Baltic ringed seal

BY-CATCH MORTALITY

Sustainable seal tourism

Movie of seals

Surveillance

Seal-safe fishing gear

Illustration: Tupu Vuorinen.

The year of the Saimaa ringed seal conservationist

Spreading information and promoting conservation through the year
Conservationists take part as experts concerning the planning of conservation strategy, movement and fishing restrictions, and land use planning.
Information about the seal is spread for residents, tourists, and hikers of the lake Saimaa region around the year.

Keeping track of the conservation success and making plans in the autumn

The health and mortality rate of the seals are monitored throughout the year. Found seal carcasses are collected and examined, for they provide important information. At the end of the year, the size of the winter population is estimated, and the results of the conservation acts are reported.

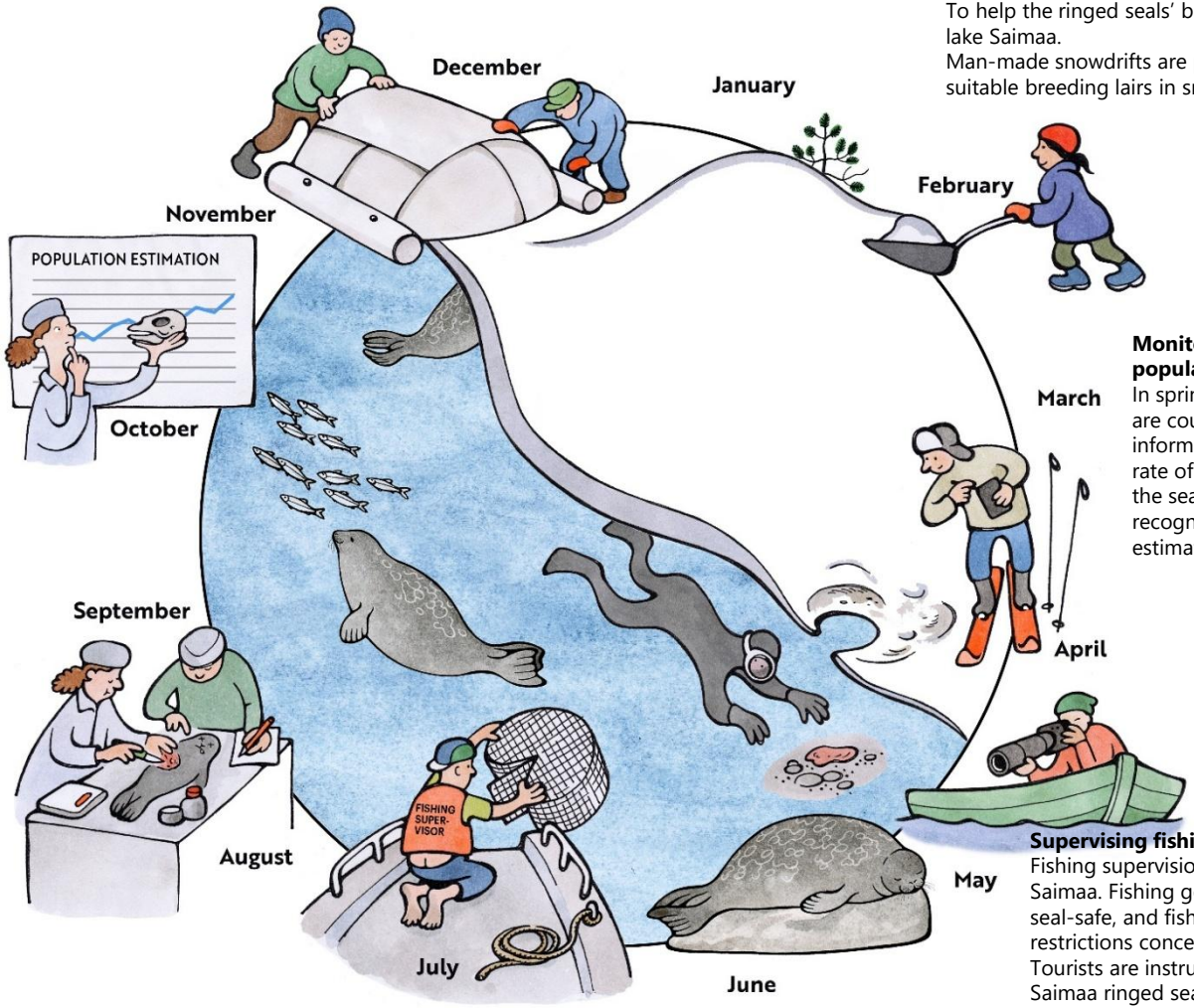


Illustration: Tupu Vuorinen.

Improving the breeding conditions in the winter
To help the ringed seals' breeding, artificial nests are set in lake Saimaa.
Man-made snowdrifts are plowed to make sure there will be suitable breeding lairs in snow dens during winter.

Monitoring the breeding success and population size in the spring
In spring, the breeding and haul-out lairs are counted. The lair sites are dived to gain information about the birth and mortality rate of born pups. During moulting season, the seals' fur patterns are photographed to recognize individuals; this also helps in estimating the population size.

Supervising fishing restrictions in the summer
Fishing supervision is executed on the whole lake Saimaa. Fishing gear is checked to ensure they are seal-safe, and fishers are surveyed they follow the restrictions concerning fishing with nets.
Tourists are instructed to take the presence of the Saimaa ringed seal into account when travelling in Saimaa region.

Our seals

Saimaa Seal (*Pusa saimensis*)

Endangered seal species endemic to Finland and living exclusively in the Saimaa lake system.

It became isolated from other ringed seals at the end of the Ice Age about 60 000 years ago.

With new scientific evidence, in 2025 it was recognized as its own species, whereas previously it was classified as a subspecies of the ringed seal.

The population declined to fewer than 150 individuals by the early 1980's due to factors such as hunting, mortality in fishing gear, and fluctuations in water levels during the breeding season, which destroyed lairs (dens dug in snowdrifts) and caused high pup mortality. Conservation measures were initiated at that time, and the population has grown slowly since then.

By 2025, the population size is 530 individuals, compared to 425 individuals at the start of the project.

Key threats still include bycatch mortality in fishing gear, climate change, human disturbance during breeding, the small population size, and loss of genetic diversity.

Baltic ringed seal *(Pusa hispida botnica*)

Classified as near threatened. In the new 2025 assessment by the Baltic Marine Environment Protection Commission (HELCOM), the southern populations are classified as endangered.

The ringed seal was previously the most abundant seal species in the Baltic Sea, but its population collapsed during the 20th century. The main reasons for this were overhunting and high levels of environmental pollutants.

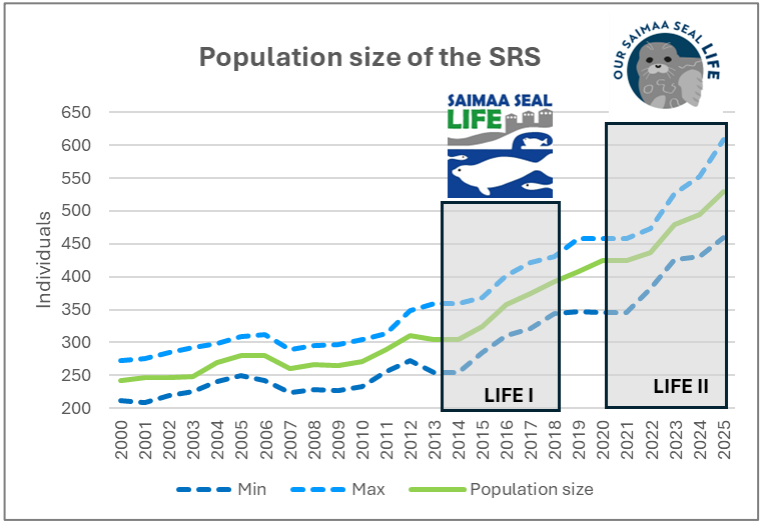
The small southern population in the Archipelago Sea (200-300 individuals), which is geographically separated from the main population in the Bothnian Bay, is particularly affected by the impacts of climate change, and all southern Baltic ringed seal populations are in decline.

In this project we tested the transferability of conservation and monitoring methods that have proven effective in Lake Saimaa to improve the status of the Archipelago Sea population.

Photos: Riikka Alakoski and Markus Ahola

Achievements of Our Saimaa Seal LIFE project (2020-2025):

- Due to the conservation measures implemented, the Saimaa ringed seal population increased from 425 to 530 individuals.
- We developed new conservation actions and population monitoring methods to address the challenges posed by climate change.
- We examined the health status of the Saimaa ringed seal and raised awareness of the importance of protection of the species.
- We monitored fishing restrictions and provided advice and guidance to safeguard the Saimaa ringed seals.
- We also worked actively to improve the knowledge and status of the Baltic ringed seal population in the Archipelago Sea.



SRS population size and the contribution of LIFE projects to its growth.

Key results of Our Saimaa Seal LIFE -project

- In 2025, the Saimaa ringed seal population reached **530** individuals, compared to 425 at the start of the project.
- Each year, more than **300** volunteers participated in lair censuses and the construction of man-made snowdrifts, contributing nearly 3,500 workdays in total.
- To improve breeding habitat conditions of Saimaa ringed seal, **1,130** man-made snowdrifts were created, 50% of which contained a birth or haul-out lair, resulting in a total of 171 pups born over five years
- Around 150 gill nets were replaced with **600** seal-safe fish traps.
- Through environmental education, we reached over **23,000** people, and the documentary film received more than 600,000 views.
- A livestream featuring Baltic ringed seals in the Archipelago Sea was viewed over **400,000** times during spring 2024.
- In the Archipelago Sea and Åland, the most important habitats for the Baltic ringed seal were identified, two new protected areas were established in the Åland archipelago, and the Baltic ringed seal was added as a protection criterion for four existing protected areas.

Photo: Miina Auttila, Metsähallitus

Conservation strategy and action plan of the Saimaa ringed seal after the LIFE and project actions

- The national conservation strategy and action plan was first set in 2011 to improve the conservation status of the species. To improve the implementation of the strategy, LIFE Saimaa Seal project (LIFE12 NAT/FI/000367) was implemented during 2013-2018, and the project results were utilized in the update of the strategy in 2017. Our Saimaa Seal LIFE project (2020-2025) built on the previous one and focused on the issues raised by it, and on updating the strategy. Majority of the actions were completely new, or substantially different e.g., new scale, target group, new kind of approaches/ tools developed compared to the previous LIFE project. The conservation strategy was updated during the project (2022), and we also provided policy recommendations for the next update, due in year 2027.
- In the following slides, we present the main results of the measures and measure combinations implemented in the Our Saimaa Seal LIFE project, as well as the possible After-LIFE plans for each measure. If an After-LIFE plan exists for the action, the responsible organization have been specified. Details regarding funding are provided on the pages 39-44.

Photo: Jari Ilmonen, Metsähallitus.

A1 Preparing a genetic rescue plan of Saimaa ringed seal
C1 Implementing genetic rescue plan by translocations
D1 Monitoring of the success of the translocations and veterinary care

- Our plan was to translocate 3-5 seals based on a genetic rescue plan (A1).
- The genetic rescue plan suggested that we translocate seal from the central Pihlajavesi population to both northern (Kolovesi) and southern (South Saimaa) peripheries of the SRS range.
- One male was translocated south and one female north in May 2023 and one additional female to north in May 2024 (C1).
- In addition, a male pup taken into care from Pihlajavesi was released to Kolovesi after 2 months of rehabilitation in August 2024 (see C6).
- Based on GPS tagging and photo-ID monitoring, the females translocated to Kolovesi have stayed there (D1). Breeding has not yet been confirmed. The male translocated south stayed in the area during the first summer, but was observed again in Pihlajavesi in 2025 photo-ID. The released pup has not been observed after release.
- Translocation seemed successful and is a possible conservation measure in the future, but currently there are no concrete plans for translocation of further individuals. Translocated animals will be monitored by photo-ID and genetic markers.

Photo: Marja Niemi, University of Eastern Finland

A2 Novel population monitoring tool using noninvasively collected DNA samples

- The Action was delayed due to technical challenges with protocol design and unforeseen effects of the exceptional Covid 19 pandemic on project staff and entire laboratory.

- After finding a working protocol, genotyping was performed for 500 individuals using DNA isolated from stored samples which cover majority of all the samples collected during the years. Individuals could be identified and data was also used for analysis of the Ne and N c of the population. Furthermore, we used the SNP data to produce a map of the predicted families of the seals that can be used in future for conservation purposes.

- Based on the results achieved, the method is applicable but there is also room for development. In future one can aim at optimizing the pools further simplifying the PCR part by reducing number of pools. The primers used are in the technical report and thus anybody can get the primers for making the PCR to get the amplicons. The assay format is simple, and the PCR amplicon pools can be sequenced in any laboratory with standard NGS machinery.

A3 Remote sensing approaches as a novel monitoring tool for ringed seals

- Saimaa: Fieldwork seasons 2021-2025 were successful. Photo-ID was used to select the translocated individuals (C1) in field 2023 and 2024. Furthermore, the translocated seals have been observed afterwards by using photo-ID (D1). Also, the seals using the artificial nests (D2) have been identified using photo-ID.
- Baltic Archipelago: Altogether 160 new seal individuals were identified, representing more than half of the known populatiuon in the area. The public live camera placed at popular haul-out sites by WWF proved very useful for identification, while also provoding the public a view to the seals´´ life.
- Thermal camera trials were not successful.
- Photo-ID will increase in importance in Saimaa when winters become more difficult for monitoring on ice. In the Baltic Archipelago it is already the only feasible way for monitoring of individuals.

- **The action will be continued.**
- UEF will continue to coordinate the photo identification work in Lake Saimaa with MHPWF, WWF and FANC and volunteers attending to the field work. Also, the identification work will be carried out in the future. MHPWF will continue submitting Saimaa ringed seal haul-out site data to the Finnish environmental administration's system for use in spatial planning.
- TUAS continues to gather observations of Baltic ringed seals in the Archipelago Sea and collects them sporadically during their other activities in the area.
- **Responsibility:** UEF, MHPWF, TUAS

Photo: Samuel Bloch.

A4 Health status and disease risk estimation

- Altogether 160 dead seals were examined by MHPWF, and the necropsies were conducted for 94 carcasses by FFA. The most common individual cause of death was entanglement in fishing gear (N=31). Before weaning, 64 pups were found dead, of which around 36% had died before birth and most of the remaining ones very soon after birth. The causes of death for unweaned pups generally remained undetermined. However, the genetic study (see A1) suggested that perinatal mortality might be higher in pups with less genetic variability. Based on health monitoring, no common diseases or infectious pathogens threatening the population were detected in Saimaa ringed seals.

- UEF: The key finding is that fetal mercury exposure is still significant, and the observed concentrations can have adverse effects, even though mercury levels have decreased in recent decades. Another key finding was that the placenta indicates the mercury load of the pup and that this tissue can be used to monitor chemical exposure in the population. The placentas collected in connection with nest censuses constitute valuable data on the basis of which the environmental toxic load of the Saimaa ringed seal population can be assessed in a timely manner. A report was conducted (Deliverable A4.1) in 2022 and a scientific article based on that published in 2024. UEF also identified 425 seal individuals of which 42% were co-occurring with others. Individuals had a variable number of associates (up to 10), and the duration of the co-occurrence ranged from one to seven years.

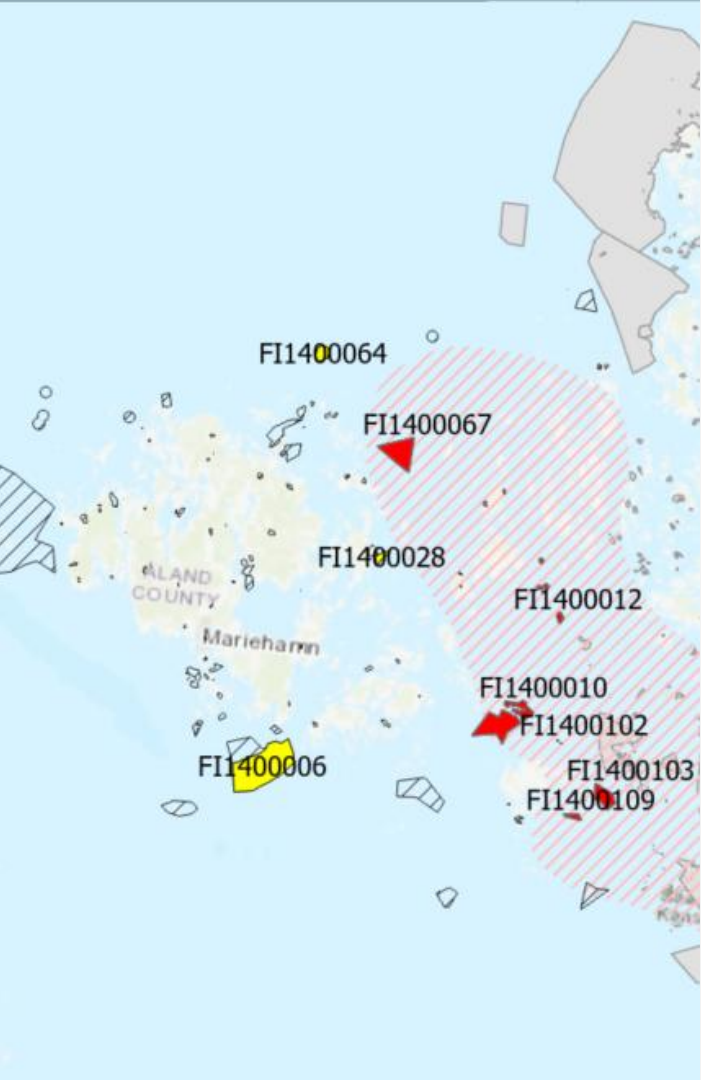
- The results of the health monitoring have been presented in national and international events. Furthermore, MHPWF established an open-access data service, Norppatilanne (www.metsa.fi/norppatilanne), designed to enhance transparency and facilitate data-driven conservation efforts.
- **The action will be continued**. During the project, sending fresh unfrozen carcasses to the FFA for necropsy was piloted. This practice will be continued for cases where experience indicates the greatest diagnostic benefits including annually some pups that die before weaning and individuals whose cause of death is suspected to be disease. In addition, the enhanced diagnostic procedures introduced during the project will be maintained as part of the long-term health monitoring of the Saimaa ringed seal population by MHPWF and FFA. The placentas and tissues from carcasses will be continued to be collected by MHPFW and stored by MHPWF and UEF for possible further analysis on environmental toxins. In addition, UEF will continue to collect the Photo-ID data (see A3) for further network analyses.

- **Responsibility:** UEF, FFA, MHPWF

A5 Development of the artificial nests

- During the project, altogether 120 nests have been installed in Lake Saimaa. Altogether six different nest models have been tested, and three models appear good for further use. The nest models developed in the project are durable, easy to install, and safe for seals.
- In the Archipelago Sea the first pup was born in an artificial nest in 2023, and a report on practical instructions for Saimaa has been published. Results for the artificial nests are presented in more detail in Action C2 and D2.
- **The action will be continued.**
- The development work of artificial nests in Lake Saimaa will be continued by UEF (with whole conservation action coordinated by MHPWF) based on the experiences gained together with the implementation and monitoring work (C2, D2).
- The existing artificial nests will be maintained and monitored by TUAS and development of the nest structures and more deployments are planned.
- **Responsibility:** UEF, MHPWF, WWF, TUAS

Photo: Riikka Alakoski, Metsähallitus



A6 Identifying suitable areas for new Natura 2000 sites for ringed seal conservation in Åland Archipelago

- First, TUAS identified the most important haulout areas in the Archipelago by field work during 2021-23.
- The Åland Government prepared a management plan for the Baltic ringed seal in the whole area and prepared for new conservation areas, and update for existing sites.
- As a result, the species was added as a conservation objective for three key Natura 2000 sites within the most important haulout/moulting area, and identified three more sites where the species had been observed to occur. The Standard Data Forms for the sites were formally updated.
- **The action wil be continued.**
- Development of marine protected area network, including ringed seal sites, continues in Biodiversea LIFE IP project.
- **Responsibility:** Åland, TUAS

A7 Management plans

- In the Our Saimaa Seal LIFE project, the management plan for Kolovesi-Vaaluvirta-Pyttyselkä Natura 2000 -area and management plan for Linnansaari Natura 2000 –area were updated (Responsible MHPWF). The plans were approved by Metsähallitus in 2023 and guide activities for several years. The aim is to reconcile the needs of nature and cultural heritage protection, recreational use, and nature tourism over the next 10–15 years. One of the main objectives of managing and using both Kolovesi and Linnansaari National Parks is to ensure the growth of the Saimaa ringed seal population and to maintain the area as a suitable habitat for seal reproduction as a whole.

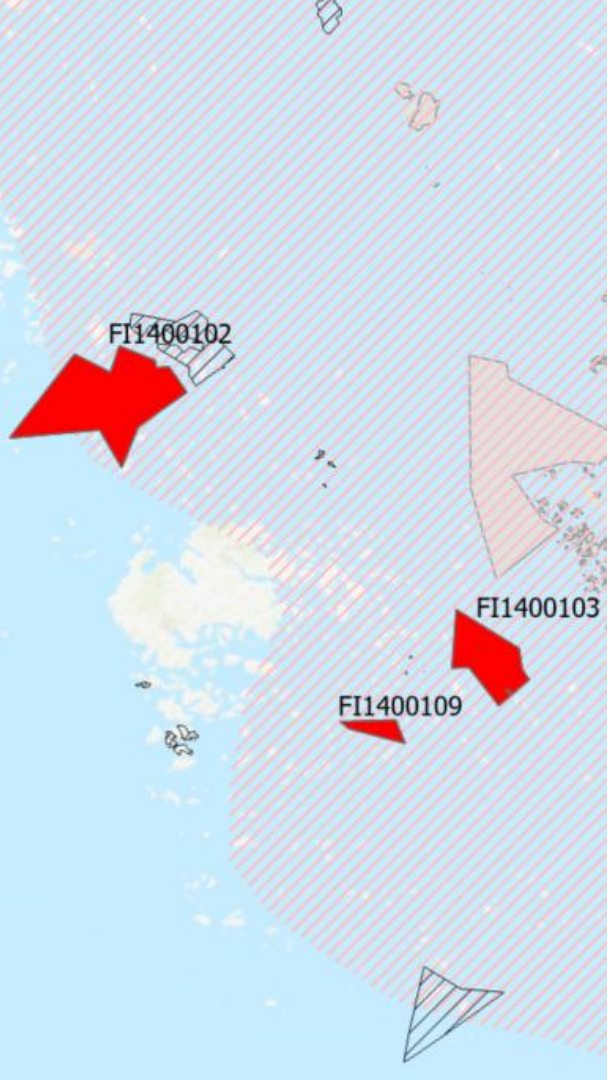
- Management plans guide the activities in the area for several years. These plans, which cover a period of 10–15 years, are prepared as required by legislation, but also updated whenever necessary.

Photo: Saara Lavi

A8 Updating the Saimaa ringed seal conservation strategy and action plan

- The conservation strategy and action plan for Saimaa ringed seal, updated during the project (responsible ESAELY) describes the actions needed for the sufficient conservation measures for the species. The Ministry of the Environment approved the conservation strategy and action plan prepared by the working group in Autumn 2022. Since then, the working group has continued its work, i.e. monitored the implementation of the action plan and discussed the need to update the content of the measures. The updated strategy and action plan will be completed next in 2027. Results and knowledge gained during the Our Saimaa Seal LIFE project has been utilised in composing needs for updating the document, and the suggestions presented below have been presented to the working group in late 2025:
- The updating of the Saimaa Fishing Restriction Regulation has been initiated. The aim is to have the new regulation enter into force in spring 2026, when the current regulation will expire.
- A lack of resources has been observed particularly in fisheries control. The problem is illegal fishing gear, and it is important to detect it in time before seals potentially die in it. Communication also needs to be further developed.
- The growing year-round use of cottages near Saimaa ringed seal nesting areas creates conflicts with conservation, prompting discussions between authorities and municipalities, but further measures and improved cooperation are still needed.

- **The action will be continued:** The strategy and action plan is the key guidance to conservation of the Saimaa Ringed Seal, and it will be updated in 5-year intervals in the foreseeable future.
- **Responsibility:** Working group for the Conservation of the Saimaa Ringed Seal



B1 One-off compensations and establishment of conservation areas for ringed seal in Åland Archipelago

- Three new Natura 2000 sites were prepared and proposed for the conservation of the Baltic ringed seal during the project, covering 3063 ha in total.
- Two of the sites were established on estates owned by the Åland Government.
- Altogether 170 ha of new land and water areas were purchased by the Åland Government to
  - Extend one of the sites with islands and skerries important for haulout and moulting
  - Establish a new Natura 2000 site comprising both water and land area
- Development of protected area network continues in Biodiversea LIFE IP project.
- **The action wil be continued.**
- Development of marine protected area network, including ringed seal sites, continues in Biodiversea LIFE IP project.
- **Responsibility:** Åland, TUAS

C2 Restoration of the breeding habitat of the ringed seal in the changing climate
D2 Monitoring the nesting success in artificial nests and in man-made snowdrifts

- (C2) In total, 1130 man-made snowdrifts have been piled and 120 artificial nests installed in 2021-2025.
- MHPWF has established a volunteer coordinator network of approximately 50 local people or organizations annually responsible for their own areas and groups for piling man-made snowdrifts. This includes UEF, WWF and FANC that have their own regional areas of responsibility where they have gathered groups. Man-made snowdrifts are now piled throughout the whole breeding area of the seals mostly by volunteers, whose number has increased substantially during the project.
- TUAS: For the breeding season 2023 a total of 13 artificial nests were deployed (four models). Promisingly, seals were sighted in a few sites during the deployment of nests. In addition, the first pup was born in an artificial nest box in the Archipelago Sea in spring 2023.
- (D2) Saimaa Lake: The main results are in the report on the efficiency of the restoration methods of the seal's breeding habitat (Deliverable D2.2). As a summary around 50% of man-made snowdrifts and artificial nest were used by seals and ca. 180 pups were born in or used those as a shelter during the project.
- Archipelago Sea: Four artificial nests were deployed for breeding season 2022 (in late December 2021) and 13 nests prior to breeding season 2023 (in January 2023) to possible breeding sites. At one of the sites a seal pup was born Feb 22nd 2023.

Photo: Jari Ilmonen, Metsähallitus.

C2 Restoration of the breeding habitat of the ringed seal in the changing climate
D2 Monitoring the nesting success in artificial nests and in man-made snowdrifts

- **The actions will be continued.** In Saimaa, the annual construction of man-made snowdrifts will continue as an established conservation measure, and artificial nests will be maintained as part of the long-term efforts to safeguard the seal's breeding habitat under the coordination of MHPWF. The volunteer network will be sustained, and the digital materials and practices developed during the project will continue to be used.
- In the Archipelago Sea, permissions were acquired for maintaining the already deployed artificial nests and for deploying more in the future. Monitoring of their usage is continued with wildlife cameras and visits after breeding season. Artificial nests are listed as a conservation action in the draft of new national MSFD programme of measures, but at the moment, no funding is secured.
- Nesting success of the Saimaa ringed seal will continue to be monitored annually, including the man-made snowdrifts and artificial nests. After the lair census, underwater surveys will also continue in the pupping sites. A network of volunteers participating in the censuses will be sustained. UEF will continue the monitoring of artificial nest usage with game camera traps.
- The existing artificial nests will be maintained and monitored by TUAS and development of the nest structures and more deployments are planned.
- **Responsibility:** MHPWF, UEF, WWF, FANC, TUAS

Photo: Samuel Bloch

C3 Development of the control over regulations protecting the ringed seal
D3 Monitoring of the efficacy of the improved surveillance co-operation

- C3: To enhance the local and regional surveillance network, joint surveillance training sessions with local and regional authorities and voluntary monitors were carried out all over Saimaa in 2021-2025 during June-August, reaching 30-40 persons annually.

- D3: Based on monitoring data, it seems that gill net fishing is declining, and fyke net fishing is becoming more popular among professional fishers. The proportion of non-safe, illegal smaller fish traps is decreasing among laymen and only a few per cent of the checked traps do not fulfill the criteria for seal-safe devices. This is probably due to both visible control and education. The wardens have discussed about the restrictions with 270 citizens during the monitoring events. During the pilot, five ghost nets, 34 crayfish traps and two fish traps were recovered. Several of the recovered gears contained dead or live fish and crayfish, demonstrating that abandoned fishing gear can remain actively entangling wildlife for many years.

- **The action will be continued:** C3 and D3: There remains a clear need for continued fisheries monitoring and enforcement. In 2026 this work will be carried out by MHPWF. Systematic monitoring for compliance of the fishing regulations in Saimaa is of utmost importance for the conservation of the Saimaa Ringed Seal, and MHPWF will look for solutions to implement monitoring in a more permanent way, as well as influence other stakeholders and authorities for arranging a permanent, wider range of active monitoring bodies in the area.
- D3: Based on the pilot, WWF Finland plans to develop ghost net detection into a form of community-based conservation and citizen science, encouraging boaters and fishers to participate in locating lost fishing gear. Crowdsourcing the search for ghost nets has high potential among fishermen. In spring 2026, the ghost net search methodology will be presented at the Vene 26 Båt boat show, the largest international boating event in Finland.
- **Responsibility:** MHPWF, WWF

Photo: Jyrki Anttila, Metsähallitus.

C4 Campaigns for increasing the use of seal-safe fishing gear
C5 Seal-safe fishing gear for non-commercial fishermen

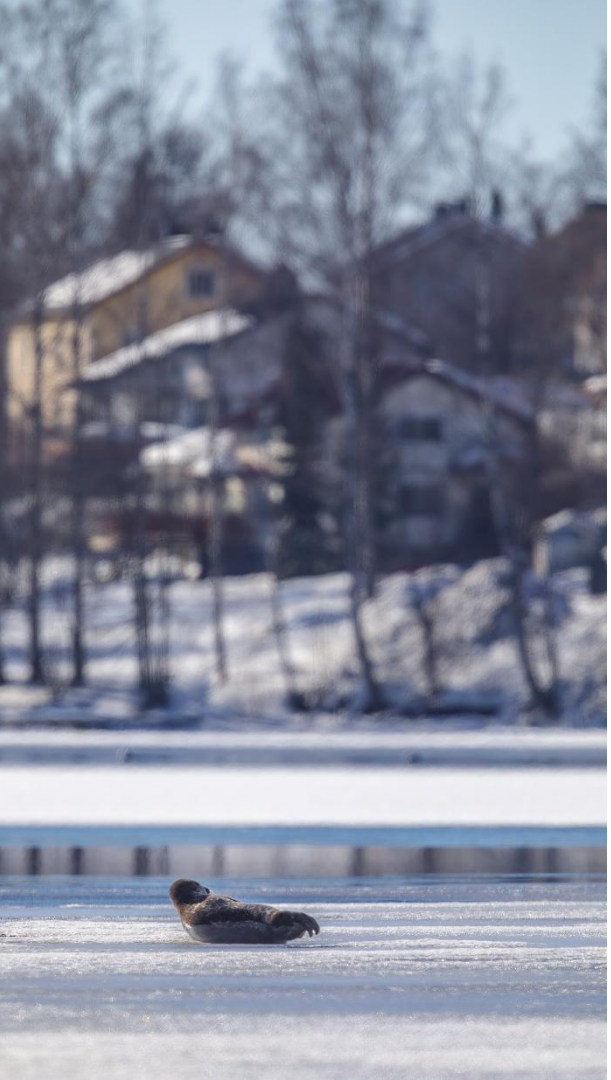
- C4: FANC has offered Saimaa area fishermen a positive incentive to stop using dangerous fishing nets, by organizing workshops for building seal-safe fish traps and handing over fish traps free of charge and distributing fishing brochures. For example, FANC has organized 135 fish trap workshops for the public, volunteers and school children, and for the members of the water district owners' associations. Totalling 1011 fish traps were built in the workshops. At "seal safe fishing" summer events obsolete fishing nets were collected from the fishermen (an estimated 150 fishing nets in total) and 596 seal-safe fish traps have been handed over free of charge to the fishermen of the event areas.
- C5 (Luke, MHPWF): A new type of fyke-net for non-commercial fishermen was developed and tested, and proven to be efficient for catching perch, which is among the most desired fish species for non-commercial use. According to the tests with fyke-nets used for commercial fishing, the income for fishing could be reduced even by 20-50%, if more seal-safe grates than the ones previously used would be used. This is an important result for the parties working on the Decree on fishing in Saimaa. Evidently, balancing between the economical viability of commercial fishing in Saimaa and conservation of the Saimaa ringed Seal is necessary.
- **The action will be continued.**
- C4: Material about seal-safe fishing and instructions for building a seal-safe "Saimaa" fish trap remain available on FANC's website, free for anyone to make use of. Similarly, printed fish trap brochures continue to be distributed at public events, and slideshow about seal-safe fishing, or parts of it, continue to be showcased during e.g. lessons and lectures. Workshops for building seal-safe "Saimaa" fish traps may continue to be organized upon request.
- C5: The fyke-net for non-commercial fishing is still expensive (>1000€) and difficult to handle compared with cheap and easy gill nets (30-100€), but we expect that further development by commercial manufacturers will decrease costs and increase the ease of use for the device. Fyke-nets used for commercial fishing in Saimaa need further development to increase their safety to seals, and Luke will continue the development with fishermen.
- **Responsibility:** C4 FANC, C5 LUKE and MHPWF

A screenshot of the fishing brochure produced by FANC during the project.

C6 Creating best practices and animal welfare network for injured and distressed Saimaa ringed seal individuals

- The network of trained volunteer vets was established and two training events for local vets were organized.
- In summer 2024, a small pup in poor condition was captured and rehabilitated at MHPWF facilities for two months, after which it was in sufficiently good condition to be released back into the wild. This extended rehabilitation period provided significant practical learning on seal handling and the recovery of malnourished Saimaa ringed seals.
- One movable seal treatment unit was established and an additional indoor treatment facility was equipped within MHPWF premises in Savoninna.
- Handbook was completed in December 2025. It consists of a comprehensive version intended for those involved in the care of Saimaa ringed seals, including detailed treatment guidelines, and a shorter version (Deliverable C6.1) designed for the general public to support the assessment of assistance needs and provide guidance on appropriate actions.
- **The action will be continued.** The care network established during the project, as well as the capacity to provide short-term care in MHPWF facilities, will be maintained and kept operational after LIFE. The new facilities are a considerable upgrade for seal handling and treatment.
- **Responsibility:** MHPWF

Rehabilitated pup waiting for fish on the day of release. Photo: Miina Auttila, Metsähallitus.



D4 The socio-economic impacts and ecosystem services of the project

- Luke: According to surveys data collected during the project in conclusion, all analyses show support from the public to conservation of the Saimaa Ringed Seal, which was also estimated to have a significant monetary value. However, there is more support and higher cost-benefit ratio for moderate than high increase of conservation measures, moderate increase including e.g. extending the gill net fishing ban for one month to the end of July.

- **The action will be continued.** Work on publishing the two manuscripts will continue and, ideally, be brought to completion: "Balancing conservation and recreation: Impact of Saimaa ringed seal protection on the recreational use of Lake Saimaa in Finland" and "Comparing the costs and benefits of conservation: The case of the endangered Saimaa ringed seal". Once the manuscripts are published, the results will be communicated to a wider audience.
- In addition, the results are utilised in the discussion for updating the decree on Fishing in Saimaa in spring 2026.

- **Responsibility:** Luke

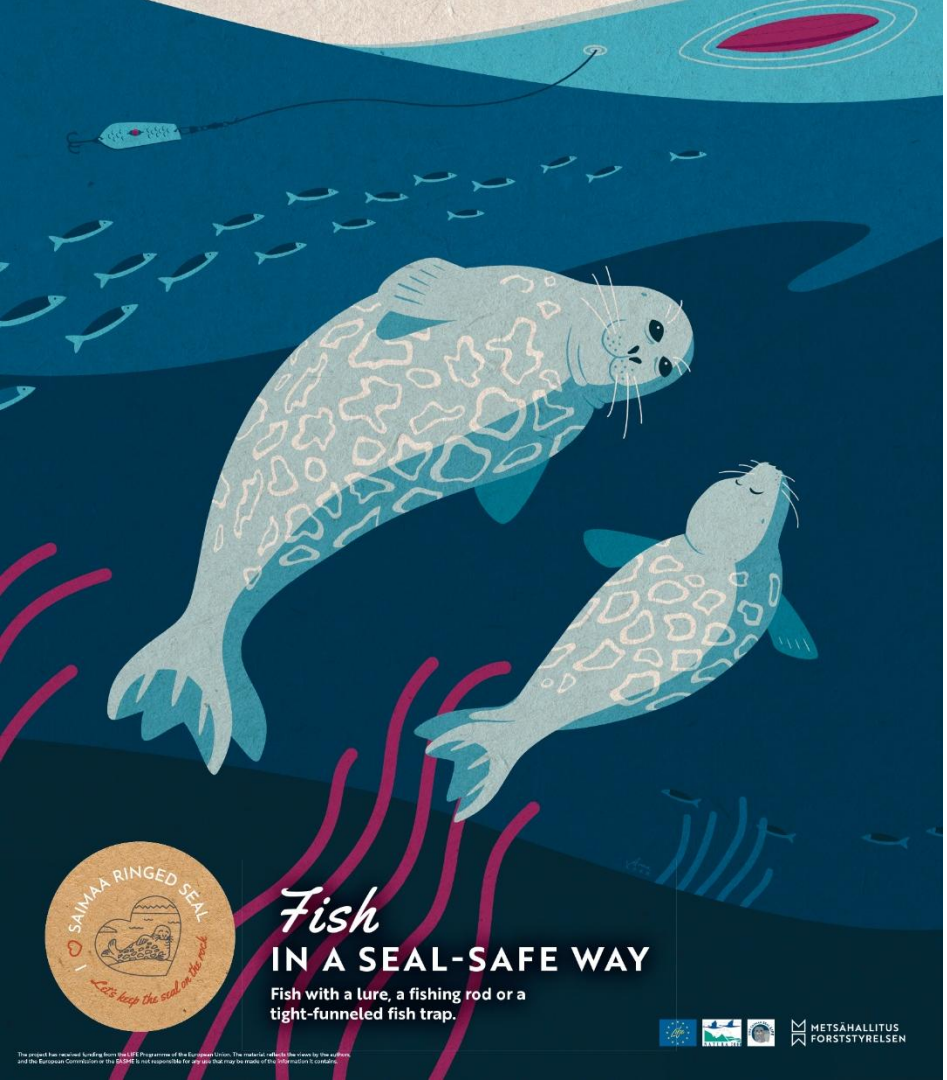
Photo: Timo Seppäläinen

D5 Evaluation of the development of the sustainable seal tourism and attitudes of nature tourism operators and nature tourists

MHPWF evaluated via different stakeholder groups related to nature tourism the development of the sustainable seal tourism and effectiveness of the informative actions of the project.

- Among **nature tourism companies a survey** (conducted two times) the second repeating survey at the end of the project examined the changes in knowledge, attitudes and activities of the target group during the project. Based on the results, businesses receive good information about the seal, and the Saimaa ringed seal is a significant draw. Many companies have incorporated the seal into their business activities and made use of the seal-friendly tourism information package.
- An online questionnaire for **participants of seal safaris offered by the nature tourism companies** was produced in order to examine how the seal information offered by the project to the nature tourism operators was conveyed to their customers. The survey was conducted after the development and publication of the principles of sustainable seal tourism. In the survey, 80% stated that the Saimaa ringed seal was an important or the most important reason for visiting the area. In the same survey, seal-watching tours were considered a significant way to communicate about the Saimaa ringed seal and the need for its protection.
- The views of **nature tourist** was evaluated as a part of the visitor study of the Linnansaari National park (conducted two times). The effects of the project on the seal-awareness of the nature tourists were evaluated. According to a visitor survey, the Saimaa ringed seal is well-known among park visitors. The majority of respondents feel they have sufficient knowledge of how to act in a seal-friendly manner when moving around Saimaa. Observing the seal is one of the planned activities for many visitors, and for a small portion, it is even the most important one.
- Maintaining this level of awareness requires active communication and collaboration with businesses to ensure that entrepreneurs and citizens remain well-informed. These are implemented mainly by MHPWF among other duties.

Photo: Ulla Keituri



Dissemination and communication of the project results after the LIFE

- The main results and the possible continuation of actions E1–E6 after the LIFE project are presented on the following pages.
- On the left the drawing created by Anna Pakkanen. The project produced four illustrations promoting seal-friendly tourism, which were made into posters and postcards in two languages. Each illustration is accompanied by guidelines intended for the public.

E1 General media work, informing public & Layman's report

- News related to the Our Saimaa Seal project have been very popular and have gained good coverage in national media. We published **55 press releases**, producing **over 700 media hits**.
- Information was disseminated e.g.by organizing 15 'Our Saimaa Ringed Seal' concerts. Risks related to wintertime activities for the Saimaa ringed seal's breeding were discussed e.g., at snowmobile club meetings.
- The number of volunteers in FANC's "Saimaa seal groups" in South Karelia and South Savo, combined, has grown from 28 people to 206 people during the project. There have been 57 events for volunteers.
- FANC set up exhibitions in four cities and organized events e.g. titled "Seal Pup's Birthday" and "Seal Pup's Autumn Party" in various cities in the Lake Saimaa region.

- **After the LIFE.** The materials produced in the project, including *Principles of Seal-Friendly Tourism in the Saimaa Area* (MHPWF), *The Peace-Loving Saimaa Ringed Seal: How to Move on the Waters and Ice of Saimaa* (ESAELY), and the *Layman's Report*, will be available on the project website for five years after the project ends.
- FANC's Saimaa seal groups for volunteers remain active, and new members continue to sign up. Materials for the second temporary exhibition, or parts of the exhibition, remain in use at e.g. public events. Annual Lake Saimaa family days are planned to be continued when applicable. For example, in February 2026, program for the "Seal Pup's Birthday" event was utilized in a slightly modified form, when a similar event was organized for political decision-makers at the Parliament House. FANC's project web page remains online for dissemination of project themes, actions and results.
- **Responsibility:** MHPWF, FANC

Photo: Tiina Linsén, Metsähallitus

E1 General media work, informing public & Layman's report

- Informative signboards at recreational harbors were installed around Lake Saimaa, and at the popular Sarviniemi destination in Greater Saimaa were built a 1.5 km accessible trail along the lakeshore, as well as other structures and signboards to support hiking. The signboards and trails will be maintained and renewed as needed after the project.
  Responsibility: MHPWF, EKVAS.

- Principles of sustainable seal tourism and the seal-friendly logo (illustration Anna Pakkanen) were created. Cooperation with tourism operators will be continued among other duties by MHPWF. Entrepreneurs which are certified for engagement to the Principles of seal-friendly tourism in Saimaa area can use the seal-friendly tourism logo. The entrepreneurs are listed at the Finnish project page: https://www.metsa.fi/projekti/yhteinen-norppamme-life/saimaan-matkailuyrittajille-norppaystavallinen-matkailu/

Photo by EKVAS, Saimaa Seal info tables.

E2 Multidisciplinary learning module on ringed seals - seal education for children and youth

- Saimaa ringed seal lessons were held by FANC 207 times in kindergartens and schools, reaching a total of over 4,500 people. In addition, the mobile "Norpan Saimaa" exhibition toured public venues in the Saimaa region, where it was displayed in 41 locations and seen over 17,000 people.
- In the WWF-designed multidisciplinary learning module on biodiversity, primary school pupils explored biodiversity from different perspectives and practiced age-appropriate skills through various themes. The module includes materials from WWF, FANC, MHPWF, and other online sources to support teaching. With the help of these materials, schools can implement a module that aligns with the objectives of the national curriculum, where pupils from grades 1 to 6 explore topics such as the Saimaa ringed seal and its conservation, as well as the protection of endangered species more broadly.
- The materials designed and produced for the content of the multidisciplinary learning module have reached an estimated 48 380 students across Finland.
- The materials and multidisciplinary learning module have been promoted in 9 teacher training events reaching total of 808 people.

Photo: Hanne Kosonen, FANC.

E2 Multidisciplinary learning module on ringed seals - seal education for children and youth

- **The action will be continued.**
- FANC's seal brochures, story leaflets, teaching material and other environmental education materials continue to be distributed both online on FANC's website and in a printed format, and also showcased at events. Similarly, FANC continues seal lessons and seal puppet shows in kindergartens and schools, and takes part in environmental education events discovered during the project. The mobile exhibition, or parts of it, may also be showcased at future events.
- WWF's Environmental Education Materials are available nationwide on the WWF website and are updated as necessary. The three-poster series produced during the project will continue to be distributed by mail to schools and educational institutions that order them. An additional edition of the poster series will be published in the near future due to high demand. We hope for possible further funding for this, as well as for the mailing of the poster series.
- **Responsibility:** WWF, FANC

Photo: Hanne Kosonen, FANC.

E3 Movie called “Biggest Eyes of Lake Saimaa (the working title of the film)”

- The film “*Operation Saimaa Seal*” produced in the project was a nominee for the European Wildlife Awards in 2025. In Finland, the film has received over 600,000 views and, in addition, it has been screened at several film festivals and international distribution has begun.
- The documentary by Petteri Saario tells the story of the endangered Saimaa ringed seal and its unique habitat in Lake Saimaa, as well as the researchers, authorities, and volunteer seal protectors dedicated to it, and their pioneering work and efforts to save one of the rarest mammals in the world in the face of frighteningly rapid climate change.
- The documentary was a one-off measure, but the international distribution and national streaming will continue in Finland’s leading domestic streaming service called YLE Areena.

Photo: DocArt

E4 Live camera Archipelago Sea

- WWF's Nature Live broadcast featuring Baltic ringed seals in the Archipelago Sea was organized. During spring 2024, the camera was viewed 492,000 times.
- TUAS utilized the livestream for individual identification and population assessment of Baltic ringed seals.
- Remote-controlled cameras turned out to be very efficient in collection of photoID-data.
- Expanding the usage of similar equipment in monitoring to all main ringed seal haulouts (5-10 sites) in the Archipelago Sea is planned for future projects.
- *On the right a print screen of the Nature Live broadcast "Saaristomeren norppalive".*

E5 Transferring the lessons learnt, international co-operation and networking with other projects

- The project results and lessons learnt have been disseminated very efficiently, in total in 118 events potentially reaching more than 53 000 people either live or online. These include 8 international conferences and LIFE networking. In addition, FANC has arranged ~around 400 events, including environmental education activities, reaching thousands of people. Transferability was further ensured through trainings for veterinarians on Saimaa ringed seal care, joint fishing restriction enforcement events with fishing associations, and capacity-building for municipalities on incorporating seal conservation into land-use planning. The key results of the project, for example principles of seal friendly tourism and guidelines to seal safe fishing gear, are linked to the project's and beneficiaries' websites available for stakeholders.
- Potential for cooperation at both national and international level was identified in the project facilitation workshops. Consequently, a new LIFE project was conceived as a result of the second project facilitation workshop.
- The species videos were produced presenting our key conservation activities and conservation work for both the public and the authorities, as well as the scientific community.
    - Protecting the Saimaa ringed seal: Man-made snowdrifts (youtube.com)
    - Protecting the Saimaa ringed seal: Lair counting (youtube.com)
    - Protecting the Saimaa ringed seal: Lair site diving (youtube.com)
    - Protecting the Saimaa ringed seal: Photo-ID method (youtube.com)
    - Protecting the Saimaa ringed seal: Examining carcasses (youtube.com)
    - Protecting the Saimaa ringed seal: Artificial nests (youtube.com)

- Networking and transfer of knowledge and project results will continue.
- **Responsibility:** MHPWF, UEF, LUKE, TUAS

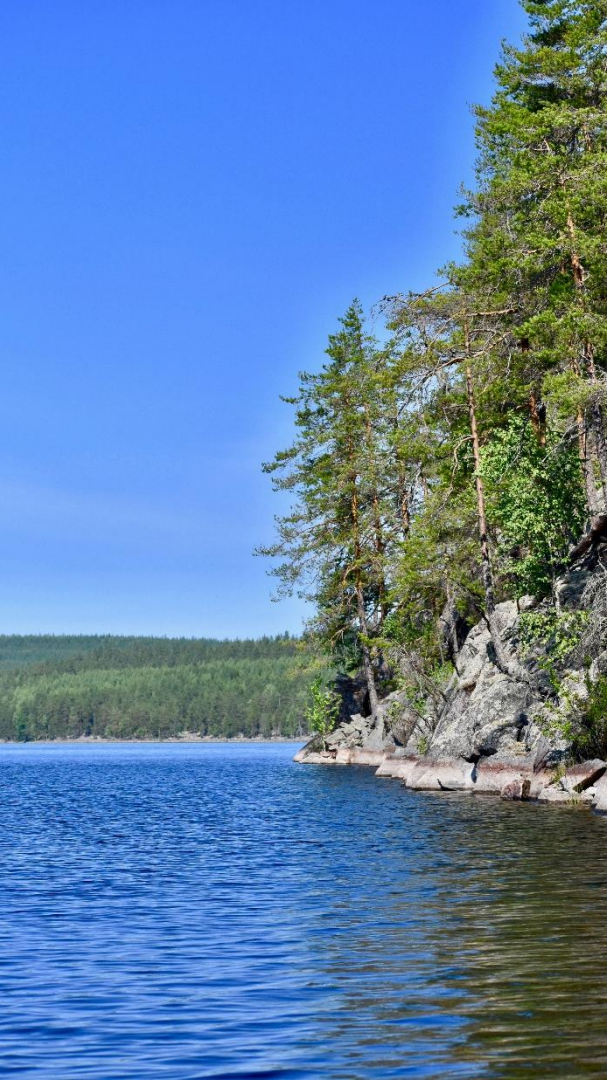
E6 Conservation conferences of the endangered animal populations

- First international conference was arranged in March 2023 in Hämeenlinna, Finland. This was the second meeting of Rare Pinniped Conservation Network (50 participants in person and 14 online from around ten different countries, three-day conference). Saimaa ringed seal conservation was visible with posters, videos (movie night) and oral presentations.

- The second workshop (Monitoring the health of pinnipeds) was held in connection with the international 25th Biennial Conference on the Biology of Marine Mammals in Australia. Altogether 17 people from 6 countries participated in the workshop. Four key notes were heard before the discussion, including protocols for Baltic seal health monitoring and Saimaa ringed seal protocols.

- **The action will be continued:** The RapCon network is still ongoing, and Finnish experts are well informed on the planned activities of the group. The network shares a Facebook site where members can info on the recent activities around the conservation work of endangered pinnipeds.

- **Responsibility:** UEF



Funding of the after-LIFE management and dissemination

- The tables on the following pages show how the measures are to be continued, which parties are responsible for them, and the funding known at this stage, at least for the next five years or, if a more precise period for the use of the funds is known, it has been specified in the table.
- The € symbols describe the measure's funding requirements:
    - € = less than EUR 10,000
    - €€ = EUR 10,000 – EUR 99,999
    - €€€ = EUR 100,000 – EUR 499,999
    - €€€€ = EUR 500,000 – EUR 999,999
    - €€€€€ = more than EUR 1,000,000

Photo from Kolovesi by Riikka Alakoski, Metsähallitus.

Funding of the after-LIFE management

€ = <10 000 €
€€ = 10 000 € - 99 999 €
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€€€€ = 500 000 € - 999 999 €
€€€€€ = >1 000 000 €

Code and Action	Continuity: Actions that will be continued after the project	Responsible organisation	Funding and budget *
A3 Remote sensing approaches as a novel monitoring tool for ringed seals	The action will be continued. UEF will continue to coordinate the photo identification work in Lake Saimaa with MHPWF, WWF and FANC and volunteers attending to the field work. Also, the identification work will be carried out in the future. MHPWF will continue submitting Saimaa ringed seal haul-out site data to the Finnish environmental administration's system for use in spatial planning. TUAS continues to gather observations of Baltic ringed seals in the Archipelago Sea and collects them sporadically during their other activities in the area.	UEF MHPWF TUAS	**€€€** **€€** **€€**
A4 Health status and disease risk estimation	During the project, sending fresh unfrozen carcasses to the FFA for necropsy was piloted. This practice will be continued for cases where experience indicates the greatest diagnostic benefits including annually some pups that die before weaning and individuals whose cause of death is suspected to be disease. In addition, the enhanced diagnostic procedures introduced during the project will be maintained as part of the long-term health monitoring of the Saimaa ringed seal population by MHPWF and FFA. The placentas and tissues from carcasess will be continued to be collected by MHPWF and stored by MHPWF and UEF for possible further analysis on environmental toxins.	UEF FFA MHPWF	**€** **€€** **€€**
A5 Development of the artificial nests	The action will be continued. The development work of artificial nests in Lake Saimaa will be continued by UEF (with whole conservation action coordinated by MHPWF) based on the experiences gained together with the implementation and monitoring work (C2, D2). The development of artificial nests for marine conditions is planned, however no funding is secured at the moment.	UEF MHPWF WWF TUAS	**€€** **€** **€**

**The funding known at this stage, at least for the next five years or, if a more precise period for the use of the funds is known, it has been specified in the table.*

Funding of the after-LIFE management

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Code and Action	Continuity: Actions that will be continued after the project	Responsible organisation	Funding and budget*
A6 Identifying suitable areas for new Natura 2000 sites for ringed seal conservation in Åland Archipelago B1 One-off compensations and establishment of conservation areas for ringed seal in Åland Archipelago	Development of marine protected area network, including ringed seal sites, continues in Biodiversea LIFE IP project.	Åland, TUAS	A6 **€€**, B1 **€€**
A8 Updating the Saimaa ringed seal conservation strategy and action plan	The strategy and action plan is the key guidance to conservation of the Saimaa Ringed Seal, and it will be updated in 5-year intervals in the foreseeable future. Costs are limited to annual venue rental, as every second meeting is held remotely. Participating organisations cover their own personnel costs.	Working group for the Conservation of the Saimaa Ringed Seal (appointed by the Ministry of the Environment)	**€**
C2 Restoration of the breeding habitat of the ringed seal in the changing climate D2 Monitoring the nesting success in artificial nests and in man-made snowdrifts	In Saimaa, the annual construction of man-made snowdrifts will continue as an established conservation measure, and artificial nests will be maintained as part of the long-term efforts to safeguard the seal's breeding habitat under the coordination of MHPWF. The volunteer network will be sustained, and the digital materials and practices developed during the project will continue to be used. Nesting success of the Saimaa ringed seal will continue to be monitored annually, including the man-made snowdrifts and artificial nests. After the lair census, underwater surveys will also continue in the pupping sites. A network of volunteers participating in the censuses will be sustained. UEF will continue the monitoring of artificial nest usage with game camera traps. The existing Archipelago Sea artificial nests will be maintained and monitored by TUAS. More deployments are planned but currently lack funding.	MHPWF FANC WWF UEF TUAS	C2 **€€€**, D2 **€€€** C2 **€** D2 **€** C2 **€€** D2 **€€** C2 **€** D2 **€€** D2 **€€** (if funding is secured)

Funding of the after-LIFE management

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Code and Action	Continuity: Actions that will be continued after the project	Responsible organisation	Funding and budget*
C3 Development of the control over regulations protecting the ringed seal D3 Monitoring of the efficacy of the improved surveillance co-operation	C3 and D3: There remains a clear need for continued fisheries monitoring and enforcement. In 2026 this work will be carried out by MHPWF. MHPWF will look for solutions to implement monitoring in a more permanent way, as well as influence other stakeholders and authorities for arranging a permanent, wider range of active monitoring bodies in the area. D3: Based on the pilot, WWF Finland plans to develop ghost net detection into a form of community-based conservation and citizen science, encouraging boaters and fishers to participate in locating lost fishing gear. Crowdsourcing the search for ghost nets has high potential among fishermen.	MHPWF WWF	**€€€** **€€**
C4 Campaigns for increasing the use of seal-safe fishing gear C5 Seal-safe fishing gear for non-commercial fishermen	C4: Material about seal-safe fishing and instructions for building a seal-safe "Saimaa" fish trap remain available on FANC's website, free for anyone to make use of. Printed fish trap brochures continue to be distributed at public events, and slideshow about seal-safe fishing, or parts of it, continue to be showcased during e.g. lessons and lectures. Workshops for building seal-safe "Saimaa" fish traps may continue to be organized upon request. C5: The fyke-net for non-commercial fishing is still expensive (>1000€) and difficult to handle compared with cheap and easy gill nets (30-100€), but we expect that further development by commercial manufacturers will decrease costs and increase the ease of use for the device. Fyke-nets used for commercial fishing in Saimaa need further development to increase their safety to seals, and Luke will continue the development with fishermen.	FANC Luke	**€** **€€€**
C6 Creating best practices and animal welfare network for injured and distressed Saimaa ringed seal individuals	The care network established during the project, as well as the capacity to provide short-term care in MHPWF facilities, will be maintained and kept operational after LIFE. The new facilities are a considerable upgrade for seal handling and treatment.	MHPWF	**€**

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Funding of the after-LIFE management

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€€€€€ = >1 000 000 €

Code and Action	Continuity: Actions that will be continued after the project	Responsible organisation	Funding and budget*
D4 The socio-economic impacts and ecosystem services of the project	Work on publishing the two manuscripts will continue and, ideally, be brought to completion "Balancing conservation and recreation: Impact of Saimaa ringed seal protection on the recreational use of Lake Saimaa in Finland" and "Comparing the costs and benefits of conservation: The case of the endangered Saimaa ringed seal". Once the manuscripts are published, the results will be communicated to a wider audience.	Luke	**€** (2026-2027)
E1 General media work, informing public & Layman's report	Maintaining project´s website five years after project ends. Informative signboards and trails will be maintained and renewed as needed after the project ends. FANC's Saimaa seal groups for volunteers remain active, and new members continue to sign up. Materials for the second temporary exhibition, or parts of the exhibition, remain in use at e.g. public events. FANC's project web page remains online for dissemination of project themes, actions and results.	MHPWF MHPWF, EKVAS FANC	**€** **€** **€**

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Funding of the after-LIFE dissemination

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€€€€€ = >1 000 000 €

Code and Action	Continuity: Actions that will be continued after the project	Responsible organisation	Funding and budget*
E2 Multidisciplinary learning module on ringed seals - seal education for children and youth (FANC, WWF)	FANC's seal brochures, story leaflets, teaching material and other environmental education materials continue to be distributed both online on FANC's website and in a printed format, and also showcased at events. Similarly, FANC continues seal lessons and seal puppet shows in kindergartens and schools, and takes part in environmental education events discovered during the project. The mobile exhibition, or parts of it, may also be showcased at future events. WWF's Environmental Education Materials are available nationwide on the WWF website and are updated as necessary. The three poster series produced during the project will continue to be distributed by mail to schools and educational institutions that order them.	FANC WWF	**€€** **€**
E5 Transferring the lessons learnt, international co-operation and networking with other projects	Networking and transfer of knowledge and project results will continue.	MHPWF, UEF, Luke, TUAS	**€€** (total budget)
E6 Conservation conferences of the endangered animal populations	The RapCon network is still ongoing, and Finnish experts are well informed on the planned activities of the group. The network shares a Facebook site where members can info on the recent activities around the conservation work of endangered pinnipeds.	UEF	**€**

**The funding known at this stage, at least for the next five years or, if a more precise period for the use of the funds is known, it has been specified in the table.*

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Photo: Hanne Kosonen, Finnish Association for Nature Conservation.