



LIFE Project Number

< LIFE14 NAT/EE/000126 >

Progress Report

Covering the project activities from 01/09/2015 to 30/11/2016

Reporting Date

< 31/12/2016 >

LIFE PROJECT NAME or Acronym

< LIFE Mires Estonia >

Data Project

Project location:	Estonia, NE and Central Estonia
Project start date:	< 01/09/2015 >
Project end date:	< 31/08/2020 > Extension date: < ND >
Total budget:	€ 2,815,576
EU contribution:	€ 2,100,713
(%) of eligible costs:	74,61

Data Beneficiary

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1. List of key-words and abbreviations (when appropriate)

ARHV – NGO Archaeovision
DL – deliverable
ELF – Estonian Fund for Nature
MoE – Ministry of Environment
MS – Milestone
ND – not determined
PR – public relation
RMK – State Forest Management Centre
Tartu Un – University of Tartu

2. Executive summary

2.1. General progress

The work conducted so far has led towards achievement of objectives of the project. Main emphasis has been on preparatory actions (field surveys on drainage systems, potential cutting areas, archaeology, evaluation of the state of target species) in order to compile and renew restoration and technical plans on project areas. Also, monitoring actions to determine conditions before restoration actions have started. Activities related to public awareness, and dissemination of project results has started successfully. All the work has been supported by smooth project administration and coordination.

2.2. Assessment as to whether the project objectives and work plan are still viable

Activities so far have supported fulfilment of project objectives and there has not been detected any need to change work plan. Completion of restoration plans has taken more time than expected but it does not hinder further activities as these cannot be started before completion of forest management actions which are expected to start in most of the areas in winter 2017/2018. Also, there is potential to increase restoration area and public awareness and dissemination activities have been already outnumbered some of the expectations.

2.3. Identified deviations, problems and corrective actions taken in the period

There are some technical aspects which have changed compared to information available in 2014 and 2015 when project application was prepared and revised based on questions by LIFE evaluators. Namely, there is no need to apply for terms of references for technical design and building permits from local municipalities in the course of restoration planning. Also, the situation has eased by Agricultural Board (responsible for amelioration systems) as the organisation has promised to exclude at least part of the restoration areas from official registry

of amelioration systems and therefore technical plans by licenced experts are not always needed. This has led to situation where ELF experts are allowed to compile restoration plans and technical design in most areas by themselves. Therefore, actions A1 and A2 are implemented simultaneously as in most cases there is no need for contractors licenced to compile detailed projects for closing or changing amelioration systems. Feedback for the work done by ELF's experts shows that there is enough competence for that and it will most likely save also costs for external expertise (the amount is yet uncalculable as proportion and costs of external work are unknown). On the other hand, this has increased workload and personnel costs (the latter could be compensated by shifting costs from A2 "External expertise" to A1 and A2 "Personnel costs") of ELF experts and deadline for restoration plans (Action A1) will be extended for few months. Still, it does not change the plan to get approvals for restoration actions by the end of 2017 as determined in project plan.

In the course of compilation of Soosaare and Tudusoo restoration plans it was suggested to increase restoration area compared to area in LIFE agreement. Still, in Tudusoo area the situation should be further clarified but in Soosaare the plan has been approved by Environmental Board and RMK. Extended project area has positive effect on 48.9 ha of 91D0*, 97.4 ha of 7110* and 5.0 ha of 3160 (in original application it was accordingly 40.4, 41.0, and 0.8 ha – thus total project area has increased by 69.1 ha; relevant information provided in Annex 3). Also, it is expected that costs are not higher than estimated based on prices of restoration work carried out by RMK.

Milestones within C2 are asked to be extended due to technical reasons described in paragraph 5.

3. Administrative part

Project manager (Jüri-Ott Salm) has initiated system for smooth change of information between project partners and staff. For that purpose, monthly partner meetings have been arranged, e-mail list has been established, and if needed, additional meetings have been held. By November 2015 steering group was established and two meetings have been organised (scheduled twice per year; protocols of meetings provided at Annex 9). Project manager has been available for interviews and inquiries, and provided presentation of project in different work-shops and conferences. Partner agreements were signed in Oct 2015 (Annex 10).

Project manager is assisted by ELF's executive committee members in implementation of tenders, contracting experts and tenderers, and other financial and organisational matters.

Project assistant (Kristiina Kübarsepp Sept 2015 to Oct 2015 and Aili Saluveer (since Oct 2016) has been working on digitalisation of field inspection work, maintaining technical documentation, preparation of inquiries and informative letters, agreements, organisation of meetings in ELF's premises, and taking care of the office for the project staff.

Project financial assistant (Heda Kalmus Sept 2015 to Nov 2015 and Kadri Kalmus (since Nov 2015) is involved in financial planning of the project, controls expenditure documents and provides financial reports of the project. Doing so, she is also providing assurance that project expenditures are in line with LIFE, EU and national provisions. She also has checked financial correctness of associated beneficiaries' financial reports and provided answers for relevant enquiries.

Public relations coordinator (Kertu Hool, Sept 2015 to Aug 2016; Tarmo Tüür, since Sept 2016) has established project web site in cooperation with ARHV and updates it with newest information. There has been a lot of information exchange with journalists and persons responsible for public affairs in local municipalities, at associated beneficiaries, other stakeholders. Articles and press-releases as well as news for social media have been prepared with assistance of PR coordinator. PR coordinator is also responsible for the overview of media coverage and relevant statistics. PR work has been assisted by temporary staff.

In order to complete report on mire's ecosystem services, project manager has been responsible for compiling LIFE Indicators database, writing article about carbon in peatlands for magazine "Eesti Loodus" (Estonian Nature), providing relevant information in the course of compilation restoration plans, and participating in relevant information exchange.

In ARHV local manager (Kaarel Sikk) has been recruited and their part of project is coordination according to project plan.

This is also the case of Tartu Un. Only change has been the replacement of Tartu Un local manager (Riinu Rannap, Sept 2015 to Aug 2016; Voldemar Rannap, since Sept 2016).

4. Technical part

4.1 Progress per action

Action A1 Compilation or renewal of the restoration plans

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015

Foreseen end date: 30.06.2017 Anticipated end date: 30.06.2017

Name of the MS	Deadline	Actions (Status 30/11/2016)
Renewal and compilation of restoration plans has been initiated in all project areas	31/12/2015	Renewal and compilation of restoration plans has been initiated in all areas in time

Name of the deliverable	Deadline	Actions
Restoration plans compiled for restoration of hydrology - 3 sites (Ohepalu, Laukasoo, Tudusoo)	01/12/2016	Field work has been mostly completed in all areas. There are some small areas where additional site visits are needed in order to clarify some aspects (e.g. situation of drainage ditch in particular location). Please look also at next compartment.
Updated restoration plans for restoration of hydrology - 3 sites (Soosaare, Agusalu and Sirtsu)	01/12/2016	Field work has been mostly completed in all areas. Soosaare restoration plan completed (Annex 3). Still, analysis of field work has taken longer than expected and therefore restoration plans will be finalised in May 2017.
Updated restoration plans for all areas based on results from Actions A2, A3 and A4	31/05/2017	Work is implemented in the course of compilation of restoration plans. Soosaare is completed and only minor changes could be expected. In other areas meetings on these matters are scheduled.

Actions A1 and A2 are implemented simultaneously as in most cases there is no need for contractors licensed to compile detailed technical projects for closing or changing amelioration systems. Therefore, most of the needed information is already provided in restoration plans, making their compilation more time-consuming. This has led to increased work load of ELF's experts. It is expected that overall objectives and results will not be harmed by that. Exact

restoration plans exist for Soosaare ja Sirtsi mining area (Annex 3) and relevant approvals granted by Environmental Board and State Forest Centre granted, for all other project areas restoration plans exist in GIS version and work on final versions is still process. Also there are proposals to widen project areas in Soosaare (Annex 3) and Tudosoo area. The latter needs further clarification.

Action A2 Technical designs and building permits

Foreseen start date: 01.06.2016 Actual start date: 01.06.2016

Foreseen end date: 31.12.2019 Anticipated end date: 31.12.2019

Name of the MS	Deadline	Actions (Status 30/11/2016)
External assistants for technical design contracted and work started	31/05/2016	Not contracted as there is no need to involve external experts in all cases and work will be done mostly by ELF experts. Still, the need for contracting will be determined in the course of compilation restoration plans and contracts will be done in each case separately. It is expected that first ones will be made in spring 2017.
Expert and public meetings elaborated	31/10/2017	Meetings covering Soosaare project area implemented (30.09.2016), 1 meeting on Sirtsi mining area elaborated (including introduction of all restoration areas, 25.11.2016). Additional meetings planned to introduce exact technical plans.
1st review of technical design and permits based on monitoring results (Actions D1 and D2)	31/12/2017	Not relevant yet
2nd review of technical design and permits based on monitoring results (Actions D1 and D2)	31/12/2018	Not relevant yet

Name of the DL	Deadline	Actions (Status 30/11/2016)
Technical designs elaborated for all restoration sites and relevant permits provided	31/12/2017	Technical design is under process covering all project areas.
Reviewed technical designs and permits based on monitoring results (Actions D1 and D2)	31/12/2019	Not relevant yet.

It is expected that share of work by external experts will be lower than estimated. Still, it does not hamper to acquire permits for restoration actions as relevant work could be implemented by ELF's experts. Therefore, it is expected that personnel costs will be increased due to that and these could be compensated as costs for external expertise will be lower.

Action A3 Archaeological survey of the project sites

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015

Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the MS	Deadline	Actions (Status 30/11/2016)
Field survey plans completed	05/2016	Field survey plans were completed and were used for carrying out field surveys.
Field surveys finished in Sirtsu and Alam-Pedja areas	12/2016	Field surveys have been finished in Sirtsu and Alam-Pedja areas, reports will be finished in December 2016
Field surveys finished in all restoration areas	12/2017	Field surveys have been finished in most restoration areas, remaining surveys in Laukasoo, Tudusoo and Feodorisoo will be carried out in summer 2017.
Archaeological field monitoring elaborated in restoration areas and results are provided for public use and environmental awareness activities	07/2020	Not relevant yet.

Name of the DL	Deadline	Actions (Status 30/11/2016)
Field survey plans on archaeology	05/2016	Field survey plans compiled and used for carrying out fieldwork. Report is published on project web site (https://soo.elfond.ee/projektist/aruanded/) and is annexed (annex 2) to the report.
Filed surveys (archaeology) special reports delivered for all restoration areas	10/2017	Not relevant yet, special reports for Sirtsu and Alam-Pedja areas will be compiled in December 2016.
Monitoring of the restoration work in order to preserve and determine archaeological values, report on activities provided	03/2020	Not relevant yet
Field survey reports, photos, press-releases on archaeology	05/2020	Not relevant yet

Most field surveys have been completed, monitoring of restoration works depend on action C1. Special reports (archaeology) will be compiled in December 2016 (Alam-Pedja and Sirtsu) and rest during 2017. To rise awareness of the project, restoration and cultural heritage of mires, people with different background were involved as volunteers during archaeological fieldworks. In addition to archaeology students, members of history and metaldetecting club

“Kamerad” attended. One field survey was done in cooperation with students of ecotourism from Estonian University of Life Sciences as part of the course teaching Estonian nature. Because of amount of old roads found in restoration areas during the survey the soilwork monitoring workload will probably grow slightly higher than expected. To suit the needs of volunteers and archaeologists (who wanted to return home for the nights) the fieldworks were mostly carried out as one day events without need for accommodation. Because of that the accommodation costs were significantly smaller and transportation costs higher than expected.

As several experts were involved as personnel then External assistance costs were reduced and shifted to personnel costs. Instead of GPS navigators a metal detector was purchased in order to carry out field work (GPS systems were available from other resources) and this provided valuable results and findings (e.g. new sites of iron melting, an old coin etc). These issues were consulted with monitoring team and positive reply was received.

A short article about the fieldwork conducted for the project will be published in Estonian popular annual archaeology magazine Tutulus 2016.

Action A4 Evaluation of initial state of target species in the project

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015

Foreseen end date: 31.03.2017 Anticipated end date: 31.03.2017

Name of the MS	Deadline	Actions (Status 30/11/2016)
Existing information of species at project areas collected	31/12/2015	Existing information on birds, amphibians, butterflies and dragonflies at project sites collected in 2015.
Habitat models built and utilized in restoration planning	31/03/2016	Habitat models for brown frogs (<i>Rana arvalis</i> , <i>R. temporaria</i>) and dragonflies (<i>Leucorrhinia spp.</i>) compiled (Annex 6). Due to the lack of previous information the habitat model for butterflies was not built.
Inventory of species by Tartu Un. and ELF completed	28/02/2017	The inventory of species was conducted in 2016. Additional information on target species will be collected in spring 2017 where it's needed (for updating restoration plans, to compare different years).
Report of this action will be compiled and implications utilized in further restoration planning	31/03/2017	The data collected in frame of inventories was and will be used for compiling of restoration plans. The report will be completed in March 2017.

Name of the DL	Deadline	Actions (Status 30/11/2016)
Report of evaluation of the initial state of target species in all 6 project sites	31/03/2017	The report will be completed in March 2017.

The inventory of species was conducted from April to July 2016 in all project sites. Altogether 13 experts of birds, amphibians and invertebrates as well as some volunteers participated. In addition, 7 conservation camps (in total 154 participants) were held to determine the presence of *Tetrao urogallus* in project sites (see also action C3 - Conservation work by volunteers).

Action C1 Restoration of hydrological regime

Foreseen start date: 01.04.2016 Actual start date: ND

Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the MS	Deadline	Actions (Status 30/11/2016)
Restoration of hydrological regime completed in abandoned peat mining areas (130 ha)	30/09/2017	Preparation in process
Restoration of hydrological regime completed in 2400 ha (50% of total restoration area)	30/09/2018	Not relevant yet
Restoration of hydrological regime completed in all project areas (in total 5800 ha)	30/09/2019	Not relevant yet
Additional work (if needed and based on inspection and monitoring) completed	30/06/2020	Not relevant yet

Name of the DL	Deadline	Actions (Status 30/11/2016)
Restoration of hydrological regime completed in all project areas (in total 5800 ha)	30/06/2020	Preparations in process to start up with restoration actions in Soosaare project area, and in Sirtsu mining area in winter 2016/2017.

Most restoration actions are expected to start in 2018 after approval of restoration and technical plans, and forest management actions. The latter depends on weather and warm winters could make cutting impossible and actions could be therefore postponed.

Action C2 Restoration of former peat extraction areas by Sphagnum mosses

Foreseen start date: 01.01.2017 Actual start date: ND

Foreseen end date: 31.08.2019 Anticipated end date: 31.08.2019

Name of the MS	Deadline	Actions (Status 30/11/2016)
Areas are levelled and dams established in order ensure favorable conditions for <i>Sphagnum</i> seeding and natural regeneration	31/05/2017	Restoration plan for the Sirtsu area prepared and in public consultation. Forest cutting by RMK expected in winter 2016/2017.
Restoration of vegetation in abandoned peat-extraction sites with Sphagnum mosses	31/08/2017	Restoration plan for the area prepared and in public consultation.

Name of the DL	Deadline	Actions (Status 30/11/2016)
Restoration of hydrological conditions in abandoned peat extraction fields in order to provide favorable conditions for mire regeneration and seeding <i>Sphagnum</i> mosses	31/08/2019	Restoration plan completed and in public consultation which is prerequisite for fulfilling the task.

It has been clarified that field preparation should be better done in summer in order to avoid frozen surface for building peat dams. After that the area is ready for *Sphagnum* reintroduction. Therefore, we ask to extend deadline of 1st milestone to 31/08/2017 and 2nd to 30/11/2017.

Action C3 Conservation work by volunteers

Foreseen start date: 01.07.2016 Actual start date: 01.01.2016

Foreseen end date: 31.12.2019 Anticipated end date: 31.12.2019

Name of the DL	Deadline	Actions (Status 30/11/2016)
Implementation of conservation camps (50 events)	31/12/2019	There have been held 7 conservation camps helping to determine the presence of <i>Tetrao urogallus</i> in all project sites, except Soosaare. In total 154 participants.

Action was successfully implemented and there is great interest by participants to get involved in further work. Also there was good media coverage of the work and the project. Involvement of volunteers into conservation actions is a powerful tool both for rising environmental awareness and implementing certain tasks.

Action D1 Hydrological, botanical monitoring and remote sensing

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015

Foreseen end date: 30.08.2020 Anticipated end date: 30.12.2020

Name of the MS	Deadline	Actions (Status 30/11/2016)
Monitoring actions started to evaluate the conditions of project sites before restoration work, all sites	30/04/2016	Planning monitoring actions has been started and equipment partly purchased.
Monitoring report evaluating the conditions before restoration work	30/06/2017	Not relevant yet
Monitoring report evaluating 1st phase of restoration	30/06/2018	Not relevant yet
Monitoring report evaluating 2nd phase of restoration	30/06/2019	Not relevant yet
Final monitoring report	31/05/2020	Not relevant yet

Name of the DL	Deadline	Actions (Status 30/11/2016)
Monitoring to evaluate conditions and success before	31/08/2020	Piezometers and drone purchased for monitoring activities. Another drone is in building process.

and after restoration work, relevant reports provided		Monitoring transect established in Soosaare project area, including plant cover and vegetation survey and hydrology.
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In other areas than Soosaare and Sirtsu mining area monitoring systems will be completed in spring 2017, considering also outcomes of A4.

Action D2 Monitoring of the effects of project actions at target species

Foreseen start date: 01.01.2017 Actual start date: ND
 Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the DL	Deadline	Actions (Status 30/11/2016)
Guidelines for restoration activities to establish favorable conditions for target species	31/05/2020	Relevant information collected under action A4.
Monitoring reports evaluating the effects of restoration work on target species	31/05/2020	Not relevant yet.

Discussion on development of methodology started in October 2016.

Action E1 Networking with other LIFE and NON-LIFE projects related to wetlands

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015
 Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the DL	Deadline	Actions (Status 30/11/2016)
Study-tours implemented (2x).	31/12/2016	Study tour to Finland 12.-16. Sept 2016, to Sweden 9.-14. Oct 2016. Relevant reports (Annex 4) provided at project web-site at https://soo.elfond.ee/projektist/aruaned/
Conferences organized (3x).	01/05/2020	Field conference to mark International Bog Day was held in Laukasoo project area on July 24 th , 2016, main topic archaeological values in mires and introduction of archaeological work. 20 participants.
Participation at conferences (5x).	01/05/2020	3.-5. Nov 2015 - „ LIFE to Ad(d)mire “ final seminar in Sweden, poster presentation by M.Kohv; 8.-10. Apr 2016 – training on cultural heritage in Lahemaa NP (Estonia) by P-Pungas-Kohv, no presentation; 28.-29. June 2016 „Small Unmanned Aerial Systems for Environmental Research“ and visit to Moor LIFE 2020 , UK, presentation by M.Kohv: 9.-11. June 2016 “Text as a clue on Landscape” (Estonia), presentation by P. Pungas-Kohv; 5.-9. Sept 2016 PECSRL (Austria), presentation by P. Pungas-Kohv; 4.-6. Oct 2016 Cumbria Bog LIFE , UK), presentations by P. Pungas-Kohv and M. Kohv.

Opening events of case-study areas are carried out (5x).	31/05/2020	Not relevant yet.
Final event of the project is organized (1x).	15/06/2020	Not relevant yet.

Potential and interest to participate in bigger number of conferences is expected, also there is enough financial resources planned for that actions and costs have been lower than expected. In study tour there were participants from Ministry of Environment, State Forest Management Centre, Environmental Board, UnTartu and ELF which allowed to share knowledge from LIFE projects (Boreal Peatland Life - Restoring the Natura 2000 network of Boreal Peatland Ecosystems LIFE08 NAT/FIN/000596; LIFEPeatLandUse - Quantification and valuation of ecosystem services to optimize sustainable re-use for low-productive drained peatlands“ LIFE12 ENV/FI/000150; [LIFE to Ad\(d\)mire - Restoring drained and overgrowing wetlands](#) LIFE08 NAT/S/000268) and initiate further information exchange. Also journalists were involved and information spread to wider audience. In Estonia another LIFE funded project on mire restoration under NABU and Tallinn University started (“Reduction of CO2-emissions by restoring degraded peatlands in Northern European Lowland”, abridged “LIFE Peat Restore”, LIFE15 CCM/DE/000138) – contacts with the project team have been established and further cooperation is expected.

Action E2 Elaboration of project information boards and establishment of LIFE trail with notice boards

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015
Foreseen end date: 30.06.2018 Anticipated end date: 30.06.2018

Name of the MS	Deadline	Actions (Status 30/11/2016)
LIFE-trail technical project completed	31/01/2016	Completed in October 2016 as there were amendments related to information received from study tour to Finland and finding protected species at the site.
Texts for information boards in 6 project areas are compiled and edited	31/05/2016	Template for the information board was developed and it is in the finalizing stage for Soosaare area (Annex 7). The rest will be finalized and established in the course of restoration plan as several informative materials are related to these.
Life trail is completed and opening event is carried out	15/06/2018	Not relevant yet.

Name of the DL	Deadline	Actions (Status 30/11/2016)
LIFE-trail with wheelchair access (ca 700 m) - information boards (10 for trail + 6 for project case study areas), photos, study materials	15/06/2018	Technical Project of LIFE trail completed incl. the technical solution for information boards in study trail (Annex 5); also general themes are worked out for Tudu and Seljamäe walking trails. Information board developed for Soosaare area

(E3), interviews, articles (E3) are delivered.		and will be established at the site by January 2017.
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Before building LIFE trail can start, restoration work will be implemented at the area. Restoration plans for that purpose are in process. It is expected that work on study trail can be started in summer 2018 and finalized in autumn 2018.

Action E3 Study materials and days about mires

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015

Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the MS	Deadline	Actions (Status 30/11/2016)
6 Wikipedia articles and 10 study videos about LIFE-project case study areas and mires in general are carried out.	01/04/2017	Wikipedia articles were published in Jan 2016 and are updated continuously (links to articles on project site https://soo.elfond.ee/taastamisalad/). Tender for study videos implemented and scenarios completed for 5 films, also filming has been done; post-productions for 5 films will be done during December, 2016.
Study-program and worksheet (3 levels of difficulty; in 3 languages; usable by smartphone, by tablet or as a print-out) for LIFE-trail.	01/04/2017	During the preparation of information boards for Tudu and Seljamäe, study-programs and worksheets are also in the stage of preparation. The final version will be available by completion of LIFE-trail in 2018.
Leaflet (1000 pcs) published and ready for distribution	31/03/2018	Work on design and content started in Sept 2016.
Meta-data collected for preparing informative and study materials.	01/01/2019	Collection of meta-data has been started, incl. 5 interviews related to Ohepalu, Tudu, Sirtsu and Laukasoo mires (total duration 9h). Survey of ca 70 publications from the area of fictional literature (+ several lyrics, doc-films etc.). Based on the material a database of Estonian fictional literature was created on project webpage and it is updated continuously. Collected information from online databases, of cultural heritage will be presented in project webpage in Dec, 2016. The work with collecting the meta-data is continuously under attention.
Teacher training (2x) with program prepared and carried out; content, photos, study materials about restoration areas.	01/10/2019	Not relevant yet.
Fairy-tale book (1000 pcs)	28/02/2020	Not relevant yet.
Articles (5x) are published; LIFE-project is introduced in	31/03/2020	1. NG I article is published in Feb 2016 (Annex 8);

Estonian media, including national TV and radio.		<ol style="list-style-type: none"> 2. An article in <i>Eesti Loodus</i> published in August 2016 (special number related with mires) (Annex 8); 3. an article prepared for <i>Akadeemia</i> is published in Dec. 2016 4. All other media-appearance related with the project please find in Annex 8
Wild hiking trips (20x during the project) in project areas	31/05/2020	Not relevant yet.
Study-days for 64 classes/groups in LIFE-trail.	15/06/2020	Not relevant yet.

The content of collected data has been presented to public in several ways: “Soode kasutus eesti ilukirjanduses” (*The coverage of mires in Estonian fictional literature*)” presentation on Wetland day (2. Feb 2016); “Peibutav ja pelutav soo” (*Temptations and fears of mire*) public interview in UT nature museum (1st of June 2016); “Väike sooretk läbi eesti ilukirjanduse” (*Little hiking trip in Estonian fictional literature*)” (presentation on conference “Text as a clue on Landscape” 9.-11. June, 2016); *Impression about mires in the Estonian Fictional literature* (presentation on PECSRL conference, 5.-9. Sept 2016); Estonians and mires: changes in the relationship (poster on Cumbria LIFE conference 4.-6. Oct 2016).

Action E4 Project web-page

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015
Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the DL	Deadline	Actions (Status 30/11/2016)
Web-page is continuously updated and will be put up for the public use 15.01.2016.	15/01/2016	Web-page – soo.elfond.ee – established.
Continuous up-dating of the web-page	31/08/2020	Web-page is available from January 2016 and is updated continuously.

Number of site visits from the start of project web site in January 2016 to 30th of November 2016 was 11 766. Web visitor’s statistics provided in Annex 1.

Questions and answers for section *frequently asked questions* are compiled by whole project team as an extra material for informative purposes. The material is presented on web-page in Dec 2016 (*in Estonian*).

Action E5 Layman' report

Foreseen start date: 01.01.2020 Actual start date: ND
Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the DL	Deadline	Actions (Status 30/11/2016)
Layman Report	30/06/2020	Not relevant yet.

Action F1 Project administration and coordination

Foreseen start date: 01.09.2015 Actual start date: 01.09.2015
Foreseen end date: 30.08.2020 Anticipated end date: 30.12.2020

Name of the DL	Deadline	Actions 01.09.2015 - 30.11.2016

Public tenders for Actions A2, C1, C2, E1, E2, E3, F1, F2 completed	30/06/2020	Implemented tenders: minibus and insurance (Action F1); office equipment (3 laptops E3, F1), MapInfo software (F1), piezometers (D1), smartphones and tablets (E3,F1), snowshoes (20pc)(E3), article in National Geographic (E3), drone (D1), headphones and microphone for field excursions (E3), different consumables.
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Milestones	Deadline	Actions 01.09.2015 - 30.11.2016
Project is coordinated according to the project plan and budget, reports provided and approved	31/08/2020	Actions are implemented according to Project plan and budget. Deviations indicated in prg 3.3. do not cause delays concerning implementation of concrete conservation actions (C1, C2, C3). I progress report prepared.
Project reports delivered and approved by the contracting authority	31/08/2020	I progress report was completed in Dec 2016.
Steering group meetings organised and project actions approved	31/08/2020	18.12.2015 I meeting; 7.06.2016 II meeting Actions and plans approved.
Report on mire's ecosystem services and assessment of benefits of carbon sequestration by restoration activities	31/12/2019	Relevant data has been collected and also article published in Estonian nature magazine "Eesti Loodus" together with researcher from Un of Tartu regarding carbon balance of Estonian peatlands.

Full-time project manager (Jüri-Ott Salm) recruited from the start of the project. Responsible for overall project performance, relevant control and monitoring done via direct meetings with experts responsible for different actions or partner meetings. Coordination of restoration actions and information exchange between RMK, Environmental Board, local municipalities, landowners. Organisation and participation at meetings with relevant stakeholders (6.09.2016 for RMK, Agricultural Board and Environmental Board), public meetings to introduce restoration plans (Soosaare RP in 30.09.2016, Sirtsu 25.11.2016). Implementation of project management meetings on monthly bases, relevant protocols available.

Action F2 Final audit of project activities

Foreseen start date: 30.08.2018 Actual start date: ND
Foreseen end date: 30.10.2020 Anticipated end date: 30.10.2020

Name of the DL	Deadline	Actions (Status 30/11/2016)
Project audit	21/08/2020	Not relevant yet

Action F3 Elaboration of After-LIFE conservation plan

Foreseen start date: 01.01.2020 Actual start date: ND
Foreseen end date: 30.08.2020 Anticipated end date: 30.08.2020

Name of the DL	Deadline	Actions (Status 30/11/2016)
Elaboration of After-LIFE plan	21/08/2020	Not relevant yet

4.2 Envisaged progress until next report

Actions		2015		2016				2017				Envisaged progress until the next Progress report due by 31/12/2017	
		3 T	4 T	1 T	2 T	3 T	4 T	1 T	2 T	3 T	4T		
Overall project schedule	Proposed			Start date				PR1		PR2		Carry on according to the project agreement.	
	Actual	O	■	■	■	■	■	■	■	■	■		■
O - Start date	Actual	O											
PR1 - Progress Report no 1			■										
PR2 - Progress Report no 2													
A1	Proposed	O	■	■	■	■	■	■	■	■	■	■	Completion of restoration plans for all project areas
	Actual	O	■										
A2	Proposed				O	■	■	■	■	■	■	■	Carry on with technical design and applying approvals from relevant authorities.
	Actual				O	■							
A3	Proposed	O	■	■	■	■	■	■	■	■	■	■	Completion of archaeological field surveys and reports (excluding monitoring activities)
	Actual	O	■										
A4	Proposed	O	■	■	■	■	■	■	■	■	■	■	Carry out analyses of results of inventories and make additional inventories in some specific project areas.
	Actual	O	■										

Actions		2015		2016				2017				Envisaged progress until the next Progress report due by 31/12/2017	
		3 T	4 T	1 T	2 T	3 T	4T	1 T	2 T	3 T	4T		
C1	Proposed				O	■	■	■	■	■	■	■	It is expected to start up with conservation work in winter 2016/17 in 2 sites.
	Actual												
C2	Proposed							O	■	■	■	■	Forest cutting, closing ditches, levelling the area in order to be prepared for <i>Sphagnum</i> reintroduction.
	Actual												
C3	Proposed					O	■	■	■	■	■	■	Volunteer camps organised based on needs from other actions.
	Actual			O	■	■	■						
D1	Proposed	O	■	■	■	■	■	■	■	■	■	■	Continue and initiate monitoring based on project plan.
	Actual	O	■	■	■	■	■						
D2	Proposed							O	■	■	■	■	Start-up based on project plan.
	Actual												
E1	Proposed	O	■	■	■	■	■	■	■	■	■	■	Activities based on project plan.
	Actual	O	■	■	■	■	■						
E2	Proposed	O	■	■	■	■	■	■	■	■	■	■	Preparing materials for Tudu study-trail; put up information boards for project areas
	Actual	O	■	■	■	■	■						
E3	Proposed	O	■	■	■	■	■	■	■	■	■	■	Collection of data related with cultural heritage, update database; preparation materials for study-program; start with wild hiking trips, update Wikipedia articles, finalizing leaf-let and study-videos.
	Actual	O	■	■	■	■	■						
E4	Proposed	O	■	■	■	■	■	■	■	■	■	■	Update web site with latest information on project activities and issues related to use and protection of mires. Technical development and design improved if needed.
	Actual	O	■	■	■	■	■						
E5	Proposed												No actions, yet.
	Actual												
F1	Proposed	O	■	■	■	■	■	■	■	■	■	■	Project coordination according to project plan and work references.
	Actual	O	■	■	■	■	■						
F2	Proposed												No actions, yet.
	Actual												
F3	Proposed												In meetings where project will be discussed or presented concept of After-LIFE plan will be introduced, also.

4.3 Impact

Project actions so far have supported collection information about target species, their presence and location which allows to plan restoration in a way that benefits both for species and habitats, and enables to develop relevant methodology to reduce potential negative impacts for these species in course of restoration activities. In all project areas, except Soosaare, a massive search for *Tetrao urogallus* was organized in order to detect suitable habitats for this species. This was implemented with the help of volunteers – while allowing to complete this vast task on 85 km² it also provided possibility for all interested to get actively involved and raise public awareness via media coverage. Soosaare restoration plan has been completed and introduced publicly (public meeting, media coverage), restoration area could be increased almost 2-fold compared to initial plan. Study visits and networking with other LIFE and non-LIFE projects have provided valuable opportunities to gain knowledge about restoration as well as sharing our knowhow. There has been great attention to get media coverage for project actions, also activities are presented on project web-site - to raise awareness about the value of priority habitats, Natura 2000 and threatened species.

Use of drones for monitoring project actions has raised interest from restoration experts in other LIFE projects (e.g. [Moor LIFE 2020](#), [Cumbria Bog LIFE](#)) and organisations dealing with restoration issues (e.g. Metsähallitus in Finland). Relevant meetings with experts have been held in course of different conferences and study tours.

Põltsamaa municipality nearby Soosaare project area is willing to combine conservation actions with youth summer camp (pupils of local highschool) which could be an excellent opportunity to get young generation involved in nature conservation issues (e.g. help in construction of peat dams). There was readiness for financial contribution. Still, it is open when event could be organized as it depends on schedule of Soosaare restoration actions.

Table of indicators provided in separate fail.

Actions support fulfilment of Estonian Nature Conservation Strategy until 2020 and prioritized action framework for Natura 2000. Also, in January 2016, MoE adopted Action Plan for Protected Mires with a great emphasis on mire restoration – current LIFE project supports achievement of the aims of the plan. Actions support fulfilment of national action plan for *Tetrao urogallus*.

4.4 Outside LIFE

International Wetland day, 2nd of Feb 2016, was organised in Tartu (Estonia) by ELF as part of LIFE funded project LIFE13 NAT/LV/000578. This provided opportunity to introduce current LIFE project as well as to introduce and discuss about other topics related to wetlands than just restoration.

Project manager participated at expert meeting (29.9.2016 in Tartu) of the project CAOS - Climate Smart Agriculture on Organic Soils where EU and national policy implications on peatlands were discussed.

Some project experts (E. Leibak, M. Kohv, J.-O. Salm) from ELF are members of the Peat roundtable coordinated by department of Mineral Resources in MoE of Estonia. There have been two meetings where restoration of degraded peatlands was also under discussed and visits to restoration sites are organised. Events were useful to share experience and learn from activities. Also LIFE Mires Estonia project has been introduced in these events (meetings were held in 26.-27. Nov 2015 and 9.-10. Nov 2016).

Project experts have participated at conferences related to environmental education (e.g. conference organized by Environmental Board in Tartu, “*Keskkonnahariduse väljakutsed muutuv maailmas*“(Challenges of environmental education in changing world) in order to gain and share knowledge of current LIFE project and its educational activities.

Coverage of mire restoration issues in nature magazine Eesti Loodus which was wider than project context and was supported by project staff – as the project has increased the popularity of topic. There was special number on mires in August 2016 (initiated by experts working on the LIFE Mires Estonia) and in addition in following numbers there were articles related to effects of drainage.

5 Financial part

5.1 Costs incurred

Budget breakdown categories	Budgeted costs in €	Costs incurred from the start date to 30/11/2016 in €	% of Budget
1. Personnel	946 150	230 310	24,34
2. Travel and subsistence	103 775	24 497	23,61
3. External assistance	1 273 412	4 057	0,32
4. Durable goods			
Infrastructure	71 040	0	
Equipment	109 250	39 097	35,79
Prototype	0	0	
5. Land purchase / long-term lease	0	0	
6. Consumables	16 550	48 842	295,12
7. Other Costs	119 910	20 935	17,46
8. Overheads	175 489	23 086	13,16
TOTAL	2 815 576	390 824	13,88

Costs related to minibus purchased by ELF in the course of the project rules are reported under Travel (fuel costs) and under Other costs (car accessories, spare parts and repairs). Initially these were planned under Travel costs but as running costs of the minibus are still unknown it is more transparent to report all costs and not to rely on 0.25 EUR/km.

Also, costs related to meetings organized for public consultation are reported under Other costs. These were initially not planned in the project but appeared to be needed in order to pay rent for the rooms, provide snacks for participants, and buy space for public announcements in media. These costs are covered under ELF from travel and other costs for study tours (E1) as these were smaller than planned.

Based on organisations’ internal accounting policies (*in Estonian: Raamatupidamise siseeeskiri*) the registration limit for durable goods/equipment in Un Tartu is 5000 euros and in ELF 2000 euros. Because these accounting rules several items (laptops, drones, photocameras, piezometers, iPads, smartphone, tablet computer, headphones and microphone for field excursions; GPSs, metal detector) had to be shifted to Consumables although these were budgeted under Durable goods/Equipment. Therefore the costs of Consumables are higher than in original budget.

These changes are in line with LIFE Grant Agreement General Conditions - ARTICLE II.22 – BUDGET TRANSFERS, and based on that there is no need for amendment of the Agreement. Partners follow closely shift of funds between budget categories. These issues were consulted with monitoring team and positive reply was received.

Action number and name	Budgeted costs	Budgeted hours	% of Budget spent	% of hours spent
Action A1 "Compilation or renewal of the restoration plans. "	32 730	1608	81,55	89,19
Action A2 "Technical designs and building permits"	156 126	720	5,03	63,06
Action A3 "Archaeological survey of the project sites"	24 715	760	45,03	53,95
Action A4 "Evaluation of initial state of target species in the project"	84 600	4352	66,95	89,16
Action C1 "Restoration of hydrological regime"	1 016 922	0	0	0
Action C2 "Restoration of former peat extraction areas by Sphagnum mosses"	45 200	0	0	0
Action C3 "Conservation work by volunteers"	85 328	2480	15,63	18,47
Action D1 "Hydrological, botanical monitoring and remote sensing"	152 480	6208	24,66	5,40
Action D2 "Monitoring of the effects of project actions at target species"	185 985	10368	0	0
Action E1 "Networking with other LIFE and NON-LIFE projects related to wetlands"	64915	856	46,26	50,47
Action E2 "Elaboration of project information boards and establishment of LIFE trail with notice boards"	107 130	1416	2,75	12,20
Action E3 "Study materials and days about mires"	197 006	6680	17,74	20,40
Action E4 "Project web-page"	53 280	2992	30,13	32,64
Action E5 "Layman' report"	5000	0	0	0
Action F1 "Project administration and coordination"	410 670	21680	31,74	28,33
Action F2 "Final audit of project activities"	18 000	0	0	0
OVERHEADS	175 489	0	13,16	0
TOTAL	2 815 576	60120	13,88	26,71

ANNEXES.

List of deliverables with short description

1. Web page (E4). Project web page has been established and continuously up-dated. Web page is in English and Estonian. It is divided into different sub-pages, providing information about concrete project actions, reports, news, project areas (including links to Wikipedia articles), project staff, database on cultural values (e.g. literature), overview about the need for restoration actions. There is separate sub-page for gallery.
2. Field survey plan on archaeology (A3). There are two versions – one for internal and another for public use as there is information which should be kept from potential illegal intervention. (*both are in Estonian*) The report provides overview about archeological findings in the project areas or in surrounding area based on relevant databases; methodology for actions under A3, and action plan (potential research sites).
3. Restoration plans (A1). Soosaare (approved by Environmental Board) and Palasi (part of Sirtsu nature reserve, in public consultation) restoration plans completed (*in Estonian*). Plans include introduction to project activities, description of the site (hydrology, target species, habitats, archaeology, cultural heritage), planned activities (forest management, closure of drainage system), time-schedule and expected costs, monitoring actions, results of public consultation and approvals, additional descriptive information. Also proposal to widen project areas in Soosaare included as a separate document. Additionally are included GIS files about restoration actions, potential forest management areas and ditches to be closed (file types for MapInfo or QGIS software).
4. Study tour reports (E1). Reports of study tours to Sweden and Finland provide overview of main findings from the events based on activities on a daily schedule, list of participants, information about other LIFE projects cooperated. (*in Estonian*)
5. LIFE trail technical project including approvals from local municipality and Environmental Board. Project consists of technical figures and details which enables to carry out public procurement and implement reconstruction of the existing trail and related infrastructure. (*in Estonian*)
6. Habitat models for brown frogs (*Rana arvalis*, *R. temporaria*) and dragonflies (*Leucorrhinia spp.*). Documents include analyses based on literature reviews and existing databases about these species, based on that potential habitat sites are determined in project areas. (*in Estonian*)
7. Text for information board in Soosaare mire. In other areas text will be similar and final versions will be completed parallel with restoration plans. Final layout will be completed in the end of December 2016. Information board provides short information about the project, funders, mires and the need for restoration actions, specific information about the site and restoration actions with illustrative figures. (*in Estonian*)
8. Articles published (E3). National Geographic Estonia – article provides information about mire habitats and their importance, and LIFE Mires Estonia project actions. Eesti Loodus (Estonian Nature) – perception of mires in Estonian literature. In addition, there were 66 articles or other form of media (e.g. Radio and TV) published related to the project (list with auditorium provided) (*in Estonian*)
9. Partner agreements. The documents are based on LIFE version for the partnership agreements, including general information about the project and finances, duration, responsibilities, reporting and money transfers, auditing, sanctions, and finalization of

the agreement. Both agreements are signed digitally and relevant proof is provided. (*in Estonian*)

10. Protocols of steering group meetings including list of participants and memo of main discussion points. In addition, there are presentations but these are not provided within this report. (*in Estonian*)