



LIFE Project Number  
**LIFE13NAT/EE/000082**

**MIDTERM Report**  
**Covering the project activities from 01/09/2014 to 31/01/2017**

Reporting Date  
**31/01/2017**

LIFE+ PROJECT NAME or Acronym

**Restoration of Estonian alvar grasslands, LIFE to alvars**

Project Data

<b>Project location</b>	ESTONIA
<b>Project start date:</b>	01/09/2014
<b>Project end date:</b>	01/09/2019
<b>Total budget</b>	3,725,865 €
<b>EC contribution:</b>	2,791,305 €
<b>(%) of eligible costs</b>	74.92 %

Beneficiary Data

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## List of abbreviations

AB – associated beneficiary;  
 CB - coordinating beneficiary;  
 EB – Environmental Board (coordinating beneficiary);  
 ESCCA – Estonian Seminatural Communities Conservation Association (associated beneficiary);  
 EULS – Estonian University of Life Sciences (associated beneficiary);  
 PM – project manager;  
 STMC – State Forest Management Centre;  
 UT – University of Tartu (associated beneficiary).

## 2. Executive Summary

Nordic alvar and precambrian calcareous flatrocks (habitat code 6280\*) or alvar grassland is the habitat type listed as priority habitat under Annex 1 of the Habitat Directive. Considering the distribution of this habitat in EU, Estonia has high responsibility in securing the conservation of it as one third of the total area of alvar grasslands in Europe is occurring in Estonia. Moreover, the scientific studies have shown that Estonian alvars represent its own characteristic subtype of habitat type, which slightly differs from those in Sweden. This means, that for maintaining the habitat type, we cannot solely rely on Swedish alvars but also ensure their persistence in Estonia. However, the situation of the habitat prior to the project was near catastrophic. Most of the ~9800 hectares of alvar grasslands in Estonia were heavily overgrown with shrubs (mostly juniper *Juniperus communis*) and trees (mostly pine *Pinus sylvestris*), while only ~2000 hectares were managed and in more-or-less satisfactory condition.

Alvar grasslands are semi-natural grasslands with thin lime-rich soil on a limestone bedrock. The plant and animal communities of open, good-quality alvar grasslands considerably differ from overgrown sites. With the cessation of traditional management and beginning of overgrowing, the abundance of habitat specialist species starts to decrease, whereas generalist species from surrounding landscapes begin to invade the habitat. In overgrowing grasslands, species richness starts to decrease gradually, with abrupt decreases following when the shrub cover exceeds 75%. Due to changing light conditions, shade tolerant species gain the dominance, while light-demanding specialist grassland species go locally extinct. Overgrowing can only be prevented if traditional management (i.e. grazing) is carried out every year. However, before it is possible to reintroduce grazing to currently overgrown sites, it is necessary to restore the habitats i.e. cut down trees and reduce the shrub layer to the coverage of up to 30% which is a resources consuming task for what the sufficient funds have not been available so far and large scale restoration methodology not tested in Estonia.

The necessity of large-scale restoration of alvar grasslands in Estonia is emphasized in scientific literature already from 1990-s. During last decade Estonian scientists and nature conservation associations have made several official complaints to respective Estonian environmental officials, as well as written number of newspaper and popular science articles for general public regarding the poor condition of alvar grasslands in Estonia and need for rapid start of restoration activities. In order to maintain the ecological connectivity and biodiversity of the alvar grassland habitat type in Estonia, a minimum of 7500 hectares of habitat area needs to be under annual grazing, as also targeted in Estonian Nature Conservation Development Plan until 2020.

The general aim of this project is to restore the most valuable, but overgrown alvar grassland areas on 2500 hectares and to create possibilities for local farmers to manage these areas after the restoration by grazing. This project involves alvar grasslands situated on both private and public lands, and emphasize is on a thorough involvement of private land-owners. Since the beginning of the project preparation, effort has been put on dissemination and increase of public awareness in Estonia by using media-channels as well as local discussion groups.

## 2.1 Paragraph summarising each chapter of the main report

Chapter 2 of the report briefly describes the problem targeted in the project and summarises its objectives. It also brings out key deliverables and milestones together with indicating the status of those at the time of report submission.

The introduction of the report describes the overall and specific objectives of the project together with expected longer term results, describes the project sites and indicates which habitat type and protected species are targeted. It also summarises main conservation issues being targeted and theoretical discrepancies.

Chapter 4 is concentrated to describe and evaluate the management system of the project including overview of project phases, project management process and major problems encountered. The partnerships of the project is analysed and the added value of each beneficiary described. The effectiveness of the communication with the Commission and Monitoring team is also illustrated here.

The first subchapter of the 5<sup>th</sup> chapter goes into details in terms of the progress of each action of the project, bringing out the respective accomplishments. It describes the activities undertaken and indicates outputs achieved in quantifiable terms explaining also the role of different beneficiaries. Each task is compared with planned output and time schedule.

The second subchapter summarises the objectives of the dissemination and provides the description of dissemination activities in quantifiable terms illustrated by the list of respective deliverables.

The 3<sup>rd</sup> subchapter of the 5<sup>th</sup> chapter focusses on the evaluation of the project implementation. The success of the methodology applied is discussed, results of actions conducted brought out and the cost-efficiency of actions analysed. The results achieved are compared against the objectives, the successes and lessons learned so far are described.

The next subchapter analyses the long-term benefits and sustainability of the project together with indicating possible long term indicators of the project success.

The 6<sup>th</sup> chapter explains the background of the financial report and summarises the budget spent so far.

## 2.2 The list of the deliverable products of the project

<b>Name of the Deliverable</b>	<b>Code of the associated action</b>	<b>Deadline</b>	<b>Status 31/01/2017</b>
Booklets are written and designed	E 4	01/06/2016	Completed in Nov. 2015
Project home page published	E 7	01/06/2016	Available since Sept. 2014

Report: Assessment of project development by external experts I	C 1	01/09/2016	Completed in time
Report: added-value products working group work results	E 8	01/06/2017	In progress
Report: results of networking with other projects	F 2	04/09/2017	In progress
Report: Assessment of project development by external experts II	C 1	03/09/2018	Not relevant yet
Best practice guidelines are updated	E 5	31/12/2018	Not relevant yet
Report: description of restoration works carried out on project areas. Map of restored sites	C 1	31/12/2018	Not relevant yet
Report: results of monitoring of biodiversity on restored sites	D 1	01/03/2019	Not relevant yet
Report: results of the monitoring of restoration success	D 2	01/03/2019	Not relevant yet
Report: results of the socio-economic impact monitoring	D 3	01/03/2019	Not relevant yet
Report: summary of dissemination work carried out during the project	E 1	01/03/2019	Not relevant yet
Layman's report is completed	E 9	03/06/2019	Not relevant yet
Report: Financial audit	F 1	31/10/2019	Not relevant yet
After-Life Conservation Plan	F 3	01/12/2019	Not relevant yet

### 2.3 The list of the milestones of the project

<b>Name of the Milestone</b>	<b>Code of the associated action</b>	<b>Deadline</b>	<b>Status 31/01/2017</b>
Project coordinators are hired	F 1	01/09/2014	Achieved in time
Participating on kick-off meeting	F 1	01/12/2014	Achieved in Oct. 2014
Public meeting I is organized	E 1	31/12/2014	Completed in Dec. 2014
2 articles are written to the	E 1	31/12/2014	Achieved in

local newspapers			Oct. 2014
Visual materials for the exhibition/learning centre are designed	E 1	02/02/2015	Completed in Jan. 2016
Visual materials for training are printed and exhibition/learning centre established on reference areas	E 1	01/05/2015	Indoor portable information boards est. in Jan. 2016; Interactive study tool establishment in final stage
Public meeting II is organized	E 1	31/12/2015	Completed in Apr. 2016
4 articles are written to the local newspapers	E 1	31/12/2015	Achieved in May 2015
Networking with other projects I visit completed	F 2	31/07/2016	Completed in Apr. 2016
All the participants are trained to carry out restoration work	E 2	31/08/2016	Achieved in Apr. 2016
Educational trip for land-owners	E 6	31/08/2016	Completed in time
All restoration contacts are signed	A 1	01/12/2016	In final stage
Contracts are signed with farmers to carry out grazing in restored sites	C 2	01/12/2016	Achieved in time
The booklets are printed and delivered to the local businesses	E 4	01/12/2016	Achieved in time
Information boards are placed on each project area.	E 3	31/12/2016	In progress
4 articles are written to the local newspapers	E 1	31/12/2016	Achieved in May 2016
Public meeting III is organized	E 1	31/12/2016	Completed in Jan. 2017
Networking with other projects visit II completed	F 2	31/07/2017	In progress
Public meeting IV is organized	E 1	31/12/2017	Not relevant yet
4 articles are written to the local newspapers	E 1	31/12/2017	In progress
Seed sowing is carried out	C 4	01/12/2018	Not relevant yet
Public meeting V is organized	E 1	31/12/2018	Not relevant yet

Restoration work is finished	C 1	31/12/2018	Not relevant yet
4 articles are written to the local newspapers	E 1	31/12/2018	Not relevant yet
2 articles are written to the local newspapers	E 1	30/06/2019	Not relevant yet
Participating on end of the project meeting	F 1	30/09/2019	Not relevant yet

### 3. Introduction

Nordic alvar and precambrian calcareous flatrocks (habitat code 6280\*) or alvar grassland is the habitat type listed as priority habitat under Annex 1 of the Habitat Directive (92/43/EEC). Alvar grasslands are semi-natural meadows with thin lime-rich soil on a limestone bedrock. One third of the total area of alvar grasslands in Europe occurs in Estonia. This habitat type is the second in terms of vascular plant species richness per area unit in Estonia being important for both endangered protected and typical species of that grassland habitat.

Alvar grasslands have decreased significantly in their total area in Estonia due to cessation of traditional of management (livestock grazing) and subsequent overgrowing. In 2013 only around 2000 hectares i.e. less than 30% of Estonian alvar grasslands were under annual management which is necessary for long-term persistence of this habitat type. Unmanaged sites have been heavily overgrown with shrubs and trees. In order to maintain the ecological connectivity and biodiversity of the alvar grassland habitat type in Estonia, a minimum of 7500 hectares of habitat area needs to be under annual grazing, as also targeted in Estonian Nature Conservation Development Plan until 2020. This project aims to restore 2500 hectares of alvar grasslands in Estonia together with ensuring the following continuous traditional management of these areas and rising the awareness of different interest groups influenced by the project implementation. Many of the project areas are visited by tourists. By connecting educational and recreational side of the alvar grasslands, it is possible to increase the knowledge of the general public about the importance of maintaining this habitat type in Estonia.

The specific goals of this project are:

- Restoration of 2500 ha of alvar grasslands and introduction of effective large-scale restoration methods;
- Establishing necessary infrastructure for continuous management (grazing) of the restored 2500 ha of alvar grasslands;
- Direct large-scale involvement of private land owners;
- Introduction of the values of alvar grassland habitat type to the land-owners who have alvar grasslands at their property, dissemination at the local community level and raising awareness of Estonian general public;
- Assessing the success of the restoration through scientific monitoring and assessment of the socioeconomic impact.

In order to restore the alvar grassland, it is necessary to cut down trees and thin out shrubs until the recommended canopy cover margin is reached (up to 30% of coverage). Restoration is traditionally done without modern machinery but this method is time consuming and expensive. During this project the restoration operations are carried out using suitable

communal and forestry machinery. When restoring heavily overgrown sites (canopy cover more than 90%), seeds of characteristic alvar grassland species are collected from nearby sites and sown to the restored site for quicker recovery of grassland vegetation. In order to ensure the long-term persistence of the restored area, as well as guarantee the desired recovery of vegetation, it is important to establish grazing facilities (fences, cattle grids, freshwater access facilities) and start grazing activities as soon as possible after the initial restoration.

There are 23 different areas involved in the project from the islands of Saaremaa, Muhu and Hiiumaa and two areas from the mainland of Estonia. Protected species like *Sisymbrium supinum*, *Liparis loeselii*, *Thesium ebracteatum*, *Pulsatilla patens*, *Encalypta mutica*, *Phengaris maculinea*, *Crex crex*, *Sylvia nisoria*, *Epipactis palustris*, *Cephalanthera longifolia*, *Cladium mariscus*, *Scabiosa columbaria*, *Allium vineale*, *Orchis militaris*, *Tortella rigens*, *Gymnadenia conopsea*, *Cerastium pumilum*, *Platanthera chlorantha*, *Hornungia petraea*, *Maculinea arion*, *Epipactis atrorubens*, *Anthyllis coccinea*, *Herminium monorchis*, *Dactylorhiza baltica*, *Lanius collurio*, *Liparis loeselii*, *Dactylorhiza incarnata*, *Ophrys insectifera*, *Orchis ustulata*, *Cypripedium calceolus*, *Asplenium ruta-muraria*, *Listera ovata*, *Platanthera bifolia*, *Asplenium trichomanes*, *Orchis mascula*, *Polystichum lonchitis*, *Cephalanthera rubra*, *Dactylorhiza incarnata subsp. cruenta*, *Brachythecium turgidum*, *Hornungia petraea* etc. are found in the project areas.

In addition to direct benefit to the biodiversity, the project facilitates rural development and the overall life quality and potential of the areas both for locals and visitors. Most direct socio-economic impact of the project is the restoration and management work targeted to the locals. Through the project many entrepreneurs and farmers carry out the activities like chopping trees and bushes, building fences and gates, bringing their cattle to graze in restored areas etc. Moreover, a lot of those activities are carried out during autumn-winter season when the need for labour in traditional agricultural sector is rather low. Therefore the project also facilitates the local employment. It also creates indirect value for the locals who provide services for the visitors by restoring traditional landscape that attracts more tourists to the region. Indirect influence by the increased number of livestock also brings greater demand for the services needed like producing fodder for winter feeding, building fences, providing veterinary and butchering services etc. Other important socio-economic aspect of the project is raising the awareness of the locals, project participants, landowners and visitors about the value of alvar grasslands. Different activities are carried out during the project to ensure that as many people as possible would be included. Also the training provided to the participants (farmers, agricultural companies, restoration workers etc.) creates additional socio-economic impact in terms of new knowhow that could reach also out of the frames of this particular project.

## 4. Administrative part

### 4.1 Description of the management system

#### 4.1.1 Description of project management

In the beginning of September 2014 EB hired two project managers of which one is full-time (Mrs Annely Esko) and another part-time (Mr Bert Holm) employee. At the same time the associated beneficiaries appointed their coordinators and started to build up a team for the implementation of project activities. At associated beneficiary UT Mrs Aveliina Helm (part-time employment) is responsible for the implementation of their project tasks. The representative of ESCCA in the project is Mr Jaak-Albert Metsoja who is responsible for the project management by this associated beneficiary (part time job for the project). At associated beneficiary EULS Ms Kadri Tali is responsible for the implementation of project tasks (also part time job). At each associated beneficiaries the coordinator is responsible for the direct implementation of the project activities and for the project management also (reporting, following the budget etc.). Bookkeeping has been provided by the bookkeepers of each organisation. The roles of the project team members have not changed since the Progress Report I (April 2016).

In EB the roles of full time (PM I) and part time project manager (PM II) are defined in their personal job descriptions. The field of project activities of PM I is broader, the daily communication with landowners, farmers restoring the project areas, preparation of the respective contracts, controlling the restoration quality and media communication are her main responsibilities. The job of the PM II is more technical involving double checking of the project documentation, preparation and verification of different documentation (reporting guidelines, public procurement documents, contracts with farmers etc.), preparing the reports to financiers, fieldwork, verification of cost documents, budget control etc. In addition to two project managers different specialists of EB are involved in the project activities on demand. They give their input to the project in the frames of their everyday work.

The project team functions efficiently. Each associated partner implements its activities according to the description of the project verified by the representatives of coordinating beneficiary. The co-operation between project partners is also fruitful. The main method to update the state and the developments of the project and to concretize the plans and personal roles is to organise a special kick-off meeting held at the beginning of each year to revise the progress and to clear all the goals by project partners that have to be achieved during current year together with giving an overview to the rest of the team on the most recent project activities of each partner. Another, more flexible method to ensure the fluent development of the project is to contact the representatives of associated beneficiaries by e-mail or phone regularly.

#### 4.1.2 Principle stages in project management

Generally the project period covered can be divided into two phases: a) general planning and preparation phase and b) implementation phase of the direct restoration/conservation actions.

The implementation of both phases has been directed by continuous management actions and disseminated through consistent publicity activities.

General planning and preparation phase started actually already before the project start date, during project application preparation. By submission date of the application private landowners of ca 260 units of land had signed approvals to participate in the project. This needed a huge effort and a lot of personal communication and organising several public meetings for landowners to convince them to join. Also work with media was essential to convince the private land owners and to explain the values of alvar grassland areas when those are restored and traditionally managed by herding. This is also illustrated at the project homepage where the media coverage prior to the project is listed.

This phase continued with the start of the project when the next task was to establish more direct contacts with landowners, livestock breeders possibly interested in continuous management of the restored alvar grassland areas followed by establishing the contacts with entrepreneurs interested in the implementation of practical restoration activities. Soon after the beginning of the project the project team of EB prepared the contract forms and guidelines for farmers intending to join the project activities in private land and the maps of the project areas to illustrate where the restoration activities will be take place. Also the respective arrangements were agreed with State Forest Management Centre responsible for the restoration activities in state owned land. During that period at least one or two meetings per month were organised to discuss the implementation of the project with different interest groups or officials. Several public meetings with local landowners were organised also during the first months of the project introducing the project participation possibilities. The activities of that phase were mainly carried out in the frames of the Action A 1, Preparation the agreements with farmers, and F 1, Project management, but as several actions of the projects are directly connected with each other it is possible to point out also other actions like C 1, C 2, E 1, E 2 and E 6 that directly benefitted from general planning and preparation phase.

At some point when the practical restoration was initiated different interest groups started to find each other with less effort from the side of coordinating beneficiary as it became clear that this kind of large scale alvar grassland restoration is actually possible and it creates benefits for landowners, livestock breeders and local entrepreneurs. From that point there is less effort invested in general planning that is now concentrated to implement rather specific actions like planning grazing materials purchase and infrastructure establishment, different procurements and the implementation of restoration activities.

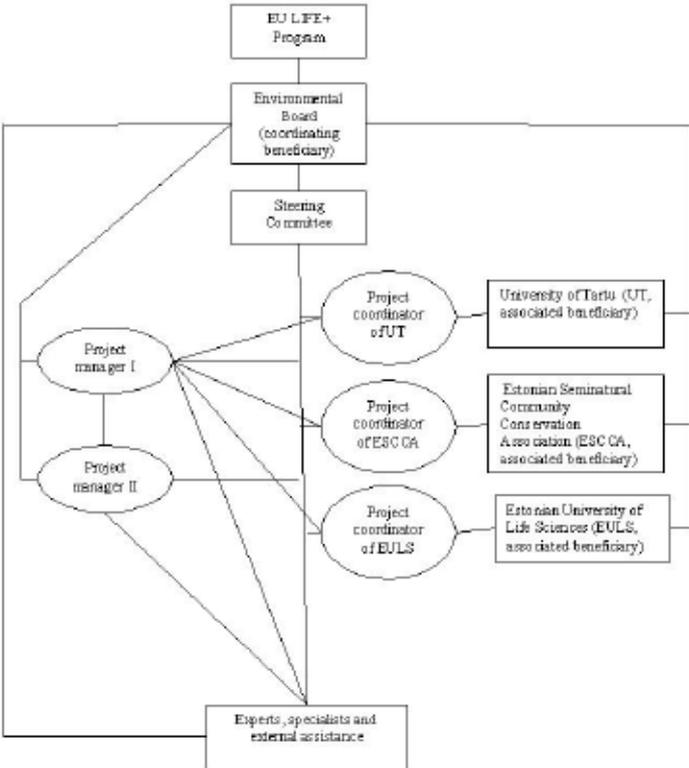
Implementation phase of the restoration/conservation activities started actually much earlier than initially planned. During the project application preparation it was foreseen as the habitat restoration will start at the end of 2015. As the interest from the side of livestock breeders and landowners was greater than expected the first training introducing the restoration methods was organised already at the end of 2014. Soon after that the first habitat restoration contracts were signed and the work was initiated. This phase has lasted since the beginning of 2015 and has been rather time consuming from the side of coordinating beneficiary work load but also very efficient. By now practically the whole area of private land to be restored is covered with the respective contracts and the respective work initiated or finished. This phase lasts partly until the end of the project as some conservation activities like re-introduction of grazing are foreseen until then and to be continued after the project. The main activities of that phase are C 1 Restoration of habitat, C 2 Re-introduction of grazing, C 3 Re-construction of access roads and C 4 Restoration of habitat through seed sowing. The main supportive actions

carried out simultaneously are D 2 Restoration success monitoring, E 6 Work with landowners and E 8 Working group for promotion of added-value products from alvar grasslands. During that phase regular on site meetings have been organised with restoration workers or entrepreneurs and land owners which were focused on specific issues like more efficient trees or bushes removal, proper electrical fence establishment, grazing pressure optimisation etc. The result of those meetings at project sites could usually be turned into something tangible already at the very nearest future after the respective meeting.

Simultaneously to both phases we have carried out the dissemination actions. This also started more actively at the very beginning of the project. Due to the large public interest we decided to launch the project homepage sooner than initially planned right after the project started (Act. E 7) and also published the respective Facebook page. By now we have had more than 45 newspaper or journal articles or blog posts and several TV broadcasts (Act. E 1) on the project activities since the beginning of LIFE to alvars. We also have carried out 4 excursions for landowners (Act. E 6) and several other to various target audiences and several oral presentations on the project topics. There has been established quite wide range of contacts with other LIFE+ projects (Act. F 2) to disseminate the results and learn from the experiences of the others. All that described above would have not been achieved with continuous implementation overall management activates from each side of the project consortium.

**4.1.3 Organigramme illustrating the project management structure and the team**

Project management structure and the team are illustrated below. Project management structure has not changed since the beginning of the project.



## 4.2 Evaluation of the management system

### **The general advancement:**

According to the project description the Milestones and Deliverable characterising the general management of the project correspond to Action F.1 Project management:

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Project coordinators are hired	01/09/2014	Completed in time
Participation on kick-off meeting	01/12/2014	Achieved in Oct. 2014
Participating in end of the project meeting	30/09/2019	Not relevant yet
<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Report: Financial audit	01/08/2019	Not relevant yet

The management team of the project was formed during the first months after the project started. The partnership agreements were signed at the end of 2015 and submitted with the Inception Report. The project has advanced positively during the first half of it and generally follows the project proposal. In terms of concrete conservation actions the project has developed faster than expected. As the Action C 1 Restoration of the habitat started earlier than initially proposed we had to finish the booklets (Act. E 4) also earlier not to miss the opportunity to educate the public and disseminate the results simultaneously with the restoration actions in the landscape. The advancement of the project has created quite large media interest so we have published substantially more articles in the newspapers (Act. E.1.) than initially foreseen. Generally all actions planned to be initiated by now have started. However, there have been some drawbacks and problems with the technical implementation of few actions (see below). As those problems have only delayed and not terminated the implementation of some actions, we have all reasons to believe that achieving the objectives of the project in the manner and on the conditions declared in the proposal is realistic and feasible.

### **Problems encountered:**

The main problems faced since the beginning of the project that could be characterised as technical difficulties possible to correct. Those have been the following:

The first one concerned the Action C 3 Re-construction of access roads. Initially it was planned to re-construct ca 10 km of access roads of the project areas in 2015. The method of reconstruction is planned to be paving of the excising road with lime-stone gravel. It is obligatory to carry out the public procurement to find external assistance to carry out this work. We started with this action in summer 2015 by selecting two roads (ca 2 km in total length) in the Vanamõisa-Suure-Rootsi project area (area no 13 according to the Annex 1 of the Inception Report) and preparing the public procurement documentation. By the deadline of the procurement in September we received only three biddings and all were from the companies located in the mainland. No local companies with lower transportation costs and access to the local gravel pits took part of the procurement for some reason. Therefore the price of the re-construction would have been unreasonably high. The corrective measure taken is that the re-construction of access roads is postponed until the detailed technical

documentation specifying the methods and materials to be used and calculates the precise volumes of materials needed will be completed. This work was initiated in the second half of 2016 and we plan to complete it in spring 2017. We assume to be able to organise the public procurement of access roads reconstruction in spring 2017 and at the moment we assume that we will be able to submit the respective deliverable on time. Specified materials and “to do” list together with precise volume calculations enables possible bidders to evaluate the price of the work as correctly as possible. At Muhu island an old gravel quarry will be re-opened in 2017 that probably will reduce the price of material transportation also. Therefore we plan to re-construct all the access roads of the project areas at once which could also reduce the price of that work and some work load of respective coordination also. Until then postponing the re-construction of those roads does not prevent the habitat restoration nor the reintroduction of grazing. The access is just not comfortable for visitors and some places sometimes, especially when precipitations occur, are impenetrable for regular cars.

The second drawback concerned the Action E 3 Establishment of notice boards. The establishment of information boards was initially planned be carried out periodically depending on the advancement of habitat restoration. In 2015 we decided to order 18 information boards for different project areas where the habitat restoration was initiated. The contract for the information boards design, printing and establishing together with manufacturing the wooden stands for the boards was signed through the public procurement in October 2015. The first alarming sign was very slow work progress of the contractor as the company was unable to deal with several tasks at the same time. The result was a delay of approximately 2.5 months (until Feb 2016) in filling the contract. As the quality of wooden stands did not meet the technical requirements of the public procurement we had to terminate the contract without accepting any part of it (printed information boards or wooden stands). The quality of the information boards was acceptable but as those constituted in the same entirety of the public procurement with the wooden stands we could not accept the information boards either. The contractor refused to collect and utilise the wooden stands and information boards so EB had to organise the collection, transport and storage of this property as legally EB is not the owner of those materials but responsible for the preservation until the contractor claims those back. As we terminated the contract no financial loss was incurred to the project. The solution is that we allocated the design and printing of the information boards separately from the manufacturing of wooden stands. Collecting the respective information and photos, the design and printing of the information boards will be the task of associated partner University of Tartu. For that some funds (18 000 €) are allocated from the respective budget of EB to UT (ca 10900 eur under Personnel Costs and ca 7100 under External Assistance costs). The respective amendment of the Partnership Agreement between EB and UT was signed in January 2017 (see Annex 1). As they have the most competent team of scientist in Estonia dealing with the alvar grassland studies we have a reason to believe that this will result in high quality information materials on alvar grassland areas of the project. For manufacturing of the wooden stands a detailed technical documentation was ordered from engineering company describing both the design of the stands and the materials to be used in installation. This will exclude any possible debates and delays during fulfilling the contract of wooden stands delivery. For that a separate procurement will be organised. In the beginning of 2017 EB initiated a procurement process to order all the necessary information boards all together and to erect the boards by the start of the tourism season in early summer 2017.

The latest problem is that we have not been able to initiate the restoration in the project area of Hanila (area no 11) so far. There have been several attempts at different levels (direct approach to the landowners, by involving the local officials of EB, by asking local

municipality leader to convince the landowners etc.) to convince the private landowners to agree with the habitat restoration and the following grazing but without remarkable success. We even found the livestock breeder who was interested in grazing the restored area but one or two agreements with small cadastral units is not enough to initiate the restoration. The main problem is that the most of landowners of that area are not locals and visit their properties only during summer vacation. They are used to the landscape appearance there and they value the privacy created by the overgrown alvar areas around their summer cottages. Another reason could be that there is no ongoing grazing which makes people more cautious towards the re-establishment of such kind of traditional landscape management. Some landowners have also pointed out that they are against because the existence of the NATURA 2000 area limits their rights, e.g. to establish new buildings next to the sea, and if their activities are restricted they counteract to the nature protection initiatives too. The latest meeting with local stakeholders was held on 17th of January 2017 and despite the positive feedback from the local municipality officials and environmental specialist no further success was made in terms of the agreements with landowners.

By now we have made the conclusion that further persuasion of the landowners of Hanila should be suspended not to lose more time and a compensatory area for the habitat restoration located nearby to start the restoration and to be able to re-establish the grazing during the lifetime of the project. For that purpose we have selected an alvar grassland complex approximately 6 km south from the initial Hanila project area (see the map in Annex 2). This new location belongs to the same NATURA 2000 site (Väinamere hoiuala, EE0040002) like the initial Hanila project area. The land belongs to the corporation dealing with producing wind energy which would create a novel approach if the traditional land management and modern electricity production is joined in the same area. The area itself is also attractive in terms of dissemination as it situates next to the road which is used by all the tourists visiting Saaremaa island. We have had the first contact with the representatives of the land owner who has expressed the interest in joining the project activities and enabling the grazing after the habitat restoration is carried out. We also have the potential livestock breeder interested in grazing in this land after the restoration. The total area of alvar grassland habitat that could be restored there at the first place is around 11 hectares. Before taking any further actions we would like to have the clearance from the Commission side if such kind of modification is acceptable.

Regardless of abovementioned difficulties we can assure that the overall goals, general work plan, the budget and the implementation of other actions of the project are not at risk.

#### **The partnerships and their added value:**

From associated beneficiaries there are one or two persons more actively involved in the everyday activities of the project. In case of ESCCA the implementation of project tasks is the responsibility of the member of board who is also coordinating the whole process of practical and technical project implementation from their side. His responsibility is also giving the input to the reports and following the project budget of ESCCA. On demand another specialist has been involved in training for farmers events. The main added value of ESCCA in terms of project team is the background of botany in case of specialists involved and nature protection NGO dealing with seminatural meadows conservation issues and also with the practical restoration of different seminatural habitats. This means both theoretical knowledge and practical skills that could be used in implementation of the project activities.

In case of Tartu University there is a project coordinator who follows the budget and schedule and gives an input to the reports together with organising the fieldwork. She is also capable to give input to substantive matters at the field of ecology and monitoring the wildlife response to the restoration. The main added value of this partner is a strong ecological background at the field of scientific studies of alvars grasslands of those persons working at the project. Tartu University also has the means of dissemination of the project results to a large number of students.

From associated beneficiary Estonian Life Science University there is one person involved in the project being responsible for the implementation of both practical tasks and the reporting. The main added value of EULS in terms of project team is the practical experience in seminatural grasslands restoration and theoretical knowledge in the ecology of the plant species connected with alvar grasslands. EULS also has the means to disseminate of the project results to a large number of students.

The added value of EB is a wide variety of different nature protection specialists who could be involved in the project on demand and the previous experience in implementing LIFE+ projects as CB.

**Communication with the Commission and Monitoring team:**

The communication with the Commission has taken place in the form of reporting and answering the questions that needed to be clarified after the report submission. The feedback concerning reports from the Commission side has been constructive and prompt. The response to the letter (Ares(2016)4110252 - 04/08/2016) concerning the Progress Report I is given in Annex 3.

The role of External Monitoring Team in advancement of the project is valuable. The visits to evaluate the project advancement have been regular. If there have been issues than need to be clarified the project managers of EB have not hesitated to contact the External Monitoring Team. This kind of communication has been more frequent before the submission of reports when the draft versions of the report have been sent to the monitoring team for comments prior to submitting the final version to the Commission. The feedback of External Monitoring Team has been quick, informative and useful.

## 5. Technical part

### 5.1 Technical progress per task

#### 5.1.1 Action A.1: Preparation of agreements with farmers

Milestone	Deadline in Proposal	Status 31/01/2017
All restoration contracts signed	01/12/2016	57 signed

Preparation of agreements with farmers started right after the first training for farmers was organised by ESCCA in November 2014. As the interest towards starting with the restoration activities as soon as possible was great from the side of farmers we started with restoration contracts sooner than initially proposed. Since the last report we have signed 17 contracts. The total number of 57 contracts are signed by EB. Five more contracts are in the technical preparation phase for signing. Therefore we can conclude that the progress of that action in terms of private owned land has been satisfying and we assume to finalise this action by the end of February 2017. Some of the state owned land (300 hectares) is also covered by the restoration contracts signed by EB which means that the total area that will be covered with the contracts signed by EB will be around 1350 hectares. Much of that work was done by the PM I of EB. However, since the beginning of the project the livestock owners interested in restoration and re-introduction of grazing in some particular areas also took the initiative in getting the landowners' clearances and gained several by themselves.

In state owned land the respective contracts are prepared by the SFMC who is responsible for alvar grassland restoration in this land. The SFMC signs the land lease contract with livestock keeper to ensure the management of the area and after that usually organises the public procurement to find the subcontractor to carry out the habitat restoration. The goal for SFMC to cover with restoration contracts is ca 1150 hectares of which ca 900 hectares have the restoration contract by now. The rest of the contracts will be agreed during the year 2017 as the restoration process of SFMC is gradual (1-2 restoration procurements each year).

In addition to signing the restoration contracts we prepared several technical documentation in the frames of preparatory actions as well which are not listed in the project proposal. In order to being able to carry out the public procurement of grazing materials we ordered the technical documentation of portable livestock shelters, cattle grids and portable water tanks which could be considered as additional deliverables of the project. Preparing that documentation was essential to purchase the most suitable, functional and high quality materials or appliances for reintroduction of grazing in restored alvar grassland areas. This documentation also benefitted the process of respective procurements by decreasing the possibilities of potential technical misunderstandings. Additional costs incurred (2460 euros of external assistance funds Act. C 1) are not expected to restrict the implementation of activities or exceed the total budget planned for action C 1 in any way.

### 5.1.2 Action C.1: Restoration of the habitat

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Restoration work finished	31/12/2018	930 ha restored
<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Report: Assessment of project development by external experts I	01/09/2016	Completed in time
Report: Assessment of project development by external experts II	03/09/2018	Not relevant yet
Report: Description of restoration works carried out on project areas	31/12/2018	Not relevant yet

The restoration is carried out in two phases: the first phase involves cutting down and removing the woody biomass from the areas. We have managed to carry out this phase on ca 1720 hectares by now (1000 ha state owned land; 700 private land). The second phase will usually be carried out after one year has passed since the end of the first phase when the stumps height of bushes and trees is corrected after the first grazing season. This has been carried out on ca 930 hectares which means the area where the restoration has already finished and joined the continuous management scheme. In addition there is ca 220 hectares on private land and ca 300 hectares on state owned land where the restoration has started but neither restoration phases have been completed yet. By the reporting date restoration work was initiated at 24 different project areas out of 25. With the last project area (Hanila) we have been facing problems in encouraging the landowners to join the project. The compensatory measures proposed are described in chapter 4.2.

At the end of March 2015 Mr Ejvind Rosen and Mr Sven Pettersson from Sweden visited 11 project areas where the restoration was initiated by that time. The experts collected the necessary information for the 1st report on the assessment of project development by external experts which was completed on time. The respective report is available at the homepage of the [http://www.keskkonnaamet.ee/public/LIFE\\_TO\\_ALVARIS/Estonian\\_alvars\\_Report\\_March\\_2015\\_.pdf](http://www.keskkonnaamet.ee/public/LIFE_TO_ALVARIS/Estonian_alvars_Report_March_2015_.pdf) and as an Annex 4 of this report.

Another expert from Sweden, Sven-Olov Borgegard visited the project areas and the facilities of livestock keepers grazing the project areas from 18th to 22nd of May 2015. The expertise of Mr Borgegard manure handling and the welfare of the livestock. The conclusions drawn as the result of that visit are summarized in the respective report available at the project webpage [http://www.keskkonnaamet.ee/public/LIFE\\_TO\\_ALVARIS/Manure\\_handling\\_report\\_C1.pdf](http://www.keskkonnaamet.ee/public/LIFE_TO_ALVARIS/Manure_handling_report_C1.pdf) and attached to this report as Annex 5.

### 5.1.3 Action C.2. Re-introduction of grazing

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Contracts signed with farmers to carry out	01/12/2016	Achieved in time

If the grazing is not initiated right after the removal of evergreen bushes and trees during the habitat restoration the deciduous bushes start to proliferate. Therefore the grazed area has to expand generally following the progress of habitat restoration. In the areas, where the restoration is still in process we also have signed necessary agreements with farmers to start with grazing after the restoration. This is a prerequisite for the restoration activities to start.

By the reporting date the alvar grassland area where the grazing has been reintroduced was approximately 930 hectares which have also joined the management subsidy scheme. As grazing contracts in terms of continuous management are signed usually in May this area will expand substantially for those alvars restored from autumn 2016 to spring 2017 for the year 2017. Therefore this year EB needs to carry out additional international public procurement to purchase the fence materials and other grazing related appliances. In January-February 2017 PM I and PM II prepare the public procurement documentation for the cattle fence materials, cattle shelters, portable watering facilities etc. needed for the year 2017. The deadline of the contract will be the end of April and the shipping of the fence materials will probably take place during the first half of May enabling to start with grazing soon enough.

By now we have purchased 50 generators together with a battery and some equipped also with a solar panel for the electrical fences, 15 portable livestock shelters, 25 sets of livestock collection pens, established 49 freshwater accesses or facilities, installed 17 cattle grids, established 141 km of electrical fences and 179 access gates. According to the experience gained in the basis of actual needs of livestock breeders of the project areas we can predict that we probably do not need to build so many kilometres of electric fences as was foreseen in the proposal writing stage. The main reason is more efficient dissemination and convincing resulting in larger pasture plots which supports faster recovery of the meadow plant species through better dispersal means. Initially we assumed that the fences need to follow more the borders of cadastral units. Therefore we have been able to establish some fences in better quality to assure the sustainability of the grazing in difficult conditions. For example, in some project areas of Hiiumaa (Vohilau-Kallaste, Heltermaa-Vahtrepa, Aruküla, Sarve, Paope and Käina lahe-Kassari) and Muhu (Lõetsa, Nõmmküla-Üügu and Simisti-Võiküla) a wolf problem occurred after the re-introduction of grazing resulting in several kills of livestock. As the sustainability of further grazing was under pressure in these areas we have established so called wolf-proof fences (see Annex 6 for photos) to prevent the damage on livestock. Those have more electrical lines (5 instead of 2) than the regular electric fence or the metal net instead of lines and the wolf is unable to enter those pastures. So finally we will probably establish less kilometres but the fences established are in general in better quality and the grazing of all restored areas is also guaranteed. As the length of the fences will probably be shorter and the fences do not copy the borders of cadastral units that much we probably also do not need to establish the initially predicted number of access gates. In terms of other supplies we have established larger number of cattle grids as those have proved to be effective in terms of both keeping the livestock in pasture plots and comfortability of the visitors of the areas. Those have been also cheaper than initially predicted. We also have already reached the initial number of electrical generators but there is a need for additional ones. We will not be able to purchase that many of the portable cattle shelters as initially proposed because those are much more expensive than planned and the practical need for those has been smaller. The realistic number of shelters established will be around 20-22. To compensate the issue of higher price we have been critical in evaluation the need for the portable shelters and where it has not been indispensable we have left some smaller plots of trees growing inside the pastures next to the

borders of the restored areas to provide natural shade. There are also some areas in case of which we have initially planned to establish a cattle shelter but have not able to deliver as it is forbidden due to building restriction zones. In these areas the need for shelter is also covered by leaving natural shade. In addition there are some areas restored by SFMC in case of which the livestock breeders establish the fences etc. with their own finances. By now we have covered the need of livestock breeders for the supplies for grazing reintroduction in approximately 1400 hectares of the project area. The procurement planned for 2017 covers the respective need in additional 400 hectares. In around 200 hectares the livestock breeders have had no need for the additional support from the project. There is still budget left also for the rest 500 hectares in project areas

In despite of the changes in the numerical targets of the supplies for re-introduction of grazing we can assure that the respective budget of consumables and infrastructure is sufficient to assure the sustainability of the grazing of the areas restored during the project.

#### 5.1.4 Action C.3. Re-construction of access roads

<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Report: Map and description of work of re-constructed access roads	01/12/2018	In progress

Initially it was planned to re-construct ca 10 km of access roads of the project areas in 2015 but this was unsuccessful (see also chapter 4.2). It is obligatory to carry out the public procurement to find external assistance to carry out this work. We started with this action in summer 2015 by selecting two roads (ca 2 km in total length) in the Vanamõisa-Suure-Rootsi project area (area no 13 according to the Annex 1 of the Inception Report) and preparing the public procurement documentation. By the deadline no local companies with lower transportation costs and access to the local gravel pits took part of the procurement and the price biddings were unreasonably high. The corrective measure taken is that the re-construction of access roads is postponed until the detailed technical documentation specifying the methods and materials to be used and calculates the precise volumes of materials needed will be completed. This work was initiated in the second half of 2016 and we assume to be able to organise the public procurement of access roads reconstruction in spring 2017. Therefore we plan to re-construct all the access roads of the project areas at once which could also reduce the price of that work and the some work load of respective coordination also. Until then postponing the re-construction of those roads does not prevent the habitat restoration nor the reintroduction of grazing. The access is just not comfortable for visitors and some places sometimes, especially when precipitations occur, are difficult to pass by regular cars.

#### 5.1.5 Action C.4. Restoration of habitat through seed sowing

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Seed sowing carried out	01/12/2018	In progress

During the summer of 2015, the survey of seed donor sites was carried out on alvar grassland habitats in the vicinity of project sites Kurese (project area no 3) and Neeme (area no 23). UT

identified suitable sites in 3 hectares which were further surveyed for suitability during the summer of 2016 and where seed collection and hay collection tests were carried out.

In 2016, seed collection techniques were tested and further elaborated in selected donor sites. Seeds were collected for analyzing the species composition and amount of viable seeds. Seed samples were germinated in the laboratory of University of Tartu and the process of identifying the emerging seedlings is currently ongoing (January 2017). Hay transfer was tested, but not yet applied because the recipient sites were not yet fully restored for the summer of 2016. Demonstration of seed-collection technique was carried out in Neeme project site and newspaper “Saarte Hääl” published an overview of seed-sowing activities to the general public also (<http://www.saartehaal.ee/2016/09/01/loopealsete-taastajatele-tuli-appi-seemnekogumismasin/>).

Main activities in the frames of this action will take place during 2017, when selected recipient areas have been prepared for seed sowing. The work will altogether last until summer 2018 followed by drawing the conclusions and analysing the effectiveness of the action.

### 5.1.6 Action D.1. Biodiversity monitoring

Deliverable	Deadline in Proposal	Status 31/01/2017
Report: Results of monitoring of biodiversity on restored sites	01/03/2019	In progress

The data collection for the respective report was replicated in the unrestored and also carried out in restored sites in summer 2016. Biodiversity survey was carried out on all project areas, altogether on 25 sites. On each site, permanent plots have been established, where vascular plant diversity, butterfly diversity, management, disturbance regime and environmental indicators were quantified and soil samples for soil chemistry analysis were collected. The fieldwork also engage checking the markings of the permanent plots and estimating the visual changes in the management and disturbance indicators following the restoration activities. On seed sowing sites (Kurese, Neeme), permanent observation plots (additional to those already present) were established in summer 2016 to monitor the changes after the seed sowing. During the site visits the specific work-sheet are filled to collect the necessary data for the deliverable report. The report of the monitoring results is written by the UT after the monitoring is finished in all the project areas.

### 5.1.7 Action D.2. Restoration success monitoring

Deliverable	Deadline in Proposal	Status 31/01/2017
Report: Results of the monitoring of restoration success	01/03/2019	In progress

The restoration success is monitored constantly by the PM I and PM II of the coordinating beneficiary. There have been continuous fieldwork to assess the restoration quality in each month. The terms of the habitat restoration contracts demand that the contractor shall inform EB when the first hectare of the alvar grassland is restored. Then PM I or PM II visits the area

and check the quality (stump height, coverage of bushes and trees etc.). Based on this fieldwork inspection protocol is compiled and the direct feedback to the contractor given at the site. Only after that the contractor is allowed to proceed with the restoration. The importance of such procedure is that if the contractor misunderstands the terms of the contract or does not apply the proper restoration operations the quality can be improved in the very beginning of the restoration work. So far this constant verification has assured high quality of the habitat restoration. Similar process of onsite verification is repeated when the contractor/farmer declares that some stage of the restoration is finished and wishes to be paid. Then the PM I or/and PM II of EB visit the area once again and check the quality of work after what the documentation of acceptance are signed and the work done rewarded.

After the restoration work is completed the quality is checked also by the scientist of the EULS. Scientist will evaluate the restoration success of the area by checking different aspects of the restoration work and filling the respective data form for later analysis. This phase involving the staff of EULS started in May 2016 in the project area no 2 and 21. By now the initial phase of fieldwork has been carried out by EULS in project areas Aruküla (no 2), Sarve (no 1), Kõruse (no 20), Võrsna (no 14), Türju (no 16), Ilpla (no 12), Nõmmküla-Üügu (no 9), Lõetsa (no 10), Simisti-Võiküla (no 6) and Kurese (no 3). Report of the results is written by the EULS after the restoration work is finished on all the project areas.

### 5.1.8 Action D.3. Socio-economic monitoring

Deliverable	Deadline in Proposal	Status 31/01/2017
Report: Results of the socio-economic impact monitoring	01/03/2019	In progress

The questionnaire targeted to local entrepreneurs, project contractors, tourists and landowners is filled on-line and the results summarised in automatically generated table. So the approach to the interviewee is rather personal, at first he or she is contacted directly and after getting the agreement to participate the link to the questionnaire provided. The respective questionnaire is available at <http://goo.gl/forms/C7d0GR5pHo>. The survey of project contractors is also conducted online (<http://goo.gl/forms/vQPv9Smrxb>) and will be carried out when the restoration activities are finished. The socio-economic monitoring of the local entrepreneurs and project contractors started in 2015 prior to restoration activities and will continue in 2017. In case of tourist survey we use a tear off page of the project brochure that they can fill and return by prepaid postal service. This part of the monitoring started in November 2015 and continued during the year 2016. The questionnaire of landowners is also in paper format and questioning this group will be carried out in parallel to the fieldwork of monitoring of restoration success or during local dissemination events. By now we have gathered more than 100 responses from different target groups. The summarising results of the whole study will be included in the Final Report. The preliminary overview of the respondents is given below:

Indicator 1: local benefit and business capacity:

a) Added economic value to local enterprises via increased tourism - stage I (initial situation assessment) finished: 50 questionnaires filled and will be analysed together with the data of the second stage (post project situation) gathered in the end of the project.

- b) Added economic value to local farmers - in progress - data will be obtained in the end of the project from the Estonian Agricultural Register and Information Board.
- c) Incorporation of the local people to the restoration work - 5 questionnaires filled, task in progress, around 40 questionnaires expected to be filled and analysed by the end of the project.

Indicator 2: knowledge and awareness:

- a) Increased knowledge about alvar grasslands and general attitude towards restoration work among local people. Survey has been carried out among 65 landowners and project participants. Work is in progress as during landowners study trip in 2017 more people will be enquired.
- b) Number of people reached through dissemination activities during the project – work is ongoing. Media coverage, meetings, farmers training and working group participants, project participants, printed materials and web-page visits are taken into account to assess the number of people reached towards the end of the project. By now the respective number is tens of thousands all over the country (the number of homepage visits is already more than 30 000). In addition we register the number of each meeting, excursion or working group event.
- c) Tourist questionnaires are distributed together with the printed booklet of the project as the removable paid return page. By now 61 tourist questionnaires has been returned. We expect many more to be returned during 2017 as we have a prize winning opportunity for the participants (a local entrepreneur is offering free accommodation for two people in the tourist farm near Koguva project area and a hike on the restored alvar). The prize will be drawn in the summer 2017.

### 5.1.9 Action F.2. Networking with other projects

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Networking with other projects visit I completed	31/07/2016	Accomplished in April 2016
Networking with other projects visit II completed	31/07/2017	Not relevant yet
<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Report: Results of networking with other projects	04/09/2017	Not relevant yet

In the beginning of June 2015 PM I visited the seminar organised by the LIFE Viva Grass (LIFE13 ENV/LT/000189) to introduce our project. In the middle of June 2015 PM I and PM II of EB hosted the visit of the coordinator Niclas Bergius from LIFE+ projects MIA and LIFE Taiga (LIFE13 NAT/SE/000065). The project areas in Muhu and Saaremaa Islands were visited and the project aims introduced.

We have established contacts with Italian project LIFE12 NAT/IT/000818 XERO-GRAZING. The main interest for EB in case of XERO-GRAZING project is the similarity of the habitats and the restoration methods used in that project. The first networking visit to Italy was agreed took place from 26th to 29th of April 2016. The representatives of each beneficiary of our project took part in it. During the visit the local grassland restoration and

long term management methods were studied and the respective knowledge exchanged together with distributing the project brochures.

In May 2016 EB hosted the networking visit from the project called LIFE Aran (LIFE12 NAT/IE/000995) from Ireland. During that some project areas were visited and the aims and development of our project introduced. As the conservation activities, the scale and the general approach of LIFE Aran seemed even more relevant than those of XERO-GRAZING we plan to replace the second visit to Italy with the one to visit LIFE Aran in May 2017.

In August 2016 PM I of the EB introduced the project at 10th European Conference on Ecological Restoration in Germany and had an oral presentation. The presentation was given to a rather large audience (around 60 people). This event was necessary to introduce the project results and findings at international level and to create contacts with specialists tackling the same kind of restoration problems in abroad. It was also a good opportunity to distribute the English version of the project brochure. Another beneficial aspect of that event was the excursion organised to the local seed farm. The owner of the farm introduced the methods and machinery used by him for cultivating the seeds of natural plant species used for ecological restoration of disturbed sites. The excursion and the respective presentation was profound. The plantation of natural species was visited together with the plant for drying, quality control and storage rooms of the seeds. As the representatives of UT also take part at that event and got several ideas or methods that could be implemented also in the frames of our project for processing the seeds collected. So we can conclude that the seed collection, sowing and germination aspect that was too brief when visiting LIFE XERO-GRAZING was fully covered in Germany.

In September PM I of EB participated the final conference of LIFE + URBANCOWS. During that conference contacts with the NGO running three other Estonian LIFE projects (HAPPYFISH, HAPPYRIVER, SPRINGDAY) was established and the brochures of the project distributed.

In December 2016 Latvian LIFE+ project EREMITA MEADOWS was visited to learn from their experiences in restoring wooded grasslands and restoring the management of these areas. The aim of that visit was to learn in terms of restoration and traditional management reintroduction of another priority seminatural habitat Fennoscandian wooded meadows (6530\*) and to distribute brochures of the project.

In October 2016 the PM I of EB participated in Natura 2000 Biogeographical Process 2nd Boreal Region Seminar in Vilnius. This event was necessary and useful for networking and exchanging management experiences and to build know-how about the effective means to achieve more for habitats and species of Community importance. A lot of specialists on practical nature conservation and the decision makers from Baltic States were met there.

### 5.1.10 Action F.3. After-Life conservation plan

<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
After-Life conservation plan	01/12/2019	Not relevant yet



Action		2014		2015				2016				2017				2018		Envisaged progress until the
E.7. Web page	Proposed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Web page operational and updated.	
	Actual																	
E.8. Working group for promotion of added-value products from alvar grasslands	Proposed			X	X	X	X	X	X	X	X	X	X				Action finalised, respective deliverables completed.	
	Actual																	
E.9. Layman's report	Proposed														X	X	Layman's report compiling initiated.	
	Actual																	
F.1. Project management	Proposed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Carried out according to the proposal.	
	Actual																	
F.2. Networking with other projects	Proposed							X	X			X	X				2 <sup>nd</sup> study trip to network with other projects.	
	Actual																	
F.3. After-Life conservation plan	Proposed																The action is scheduled to 2019.	
	Actual																	

## 5.2 Dissemination actions

### 5.2.1 Objectives

Disseminating actively the results is an essential part of the project. It is crucial to inform the local residents and the visitors of the project areas about the local nature values, the history and the importance of the traditional management of the area re-established in the frames of the project. This is important for both to raise the awareness and to prevent people from breaking the protection rules, harming the wildlife and valuable habitats. In rural environment traditional management of alvar grasslands by grazing is much easier to carry out if local community accepts and supports it. If people are informed and involved they also cooperate for example in terms of alerting when the fences are broken or cattle escaped the pasture plots. If there is no strong conservation message spread most of the people would see the fences established and cattle grazing next to the sea as a barriers for free movement in the landscape. This may cause conflicts and problems like disturbing livestock, vandalism, picking protected plants etc. The largest proportion of that audience is targeted through visitor information like brochures of the project and the information boards and through (social)media. We also cooperate with different stakeholders like local entrepreneurs, tourism information centres and local hotels/hostels and B&B providers to reach the largest target group.

There are several activities concerned with raising the public awareness and the dissemination of the results like promoting the alvar meadow restoration among local community. This involves regularly writing articles to the local newspapers and organizing annual meetings to give overview of the restoration progress. During those regional annual meetings EB staff and also alvar grassland experts of EULS and UT introduce the progress of the work and results. To increase the participation of locals the separate meetings are organised on each island where the project areas locate and also in the mainland. Local newspaper of the Western-Estonia called Saarte Hääl publishes the news on the project regularly. The positive vision of the restoration work helps to ensure the continuous management after the project has ended. For that training events for local farmers and entrepreneurs were carried out during first years of the project.

We have initiated the social media campaign right after the start of the project to involve the target audience. This involves regular updates and posts in the Facebook site of the project. It is mainly targeted to the general public, both to the visitors and the local inhabitants. In addition we use actively also the national media and the project homepage to spread the news concerning the project.

In addition to (social)media visitors are targeted through information materials: region specific project brochures in Estonian and the general one in three foreign languages and the information boards established at the project areas. Foreign land owners are contacted personally to give the overview of the restoration work carried out in their land. This involves both written overviews and site visits.

To promote the sustainable use of the wooden material produced during the restoration and also the side products like meat and wool from the livestock grazing the areas afterwards, the working group of added-value products from alvar grasslands was formed. Working group can be joined by anyone interested in the subject. The purpose of the group is to identify the

obstacles and to come up with the ideas for the added-value products from the alvar grassland that could give additional income for the farmer managing the area in long term.

Expected quantifiable results of the dissemination actions are:

At least 4 articles written in the local newspapers annually (20 all together); 4 public meeting held annually (20 all together); 2 information centres established on the reference areas; 6 information boards established and an interactive study tools made available for children at both visitor centre; the restoration and management work participants (ca 50) trained; information boards (up to 59) set up at each project area under the restoration; at least 10 000 project booklets in 4 languages printed and distributed; 6 study trips organised for landowners; project homepage created and updated; 5 meetings of additional value products working group organised; management guidelines updated and Laymans report prepared by the end of the project.

### 5.2.2 Action E.1. Media work

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Public meeting I organised	31/12/2014	Completed in Dec. 2014
2 articles published in local newspapers	31/12/2014	Achieved in Oct. 2014
Visual materials for the exhibition/learning centre designed	02/02/2015	Completed in Jan. 2016
Visual materials for training are printed and exhibition/learning centre established on reference areas	01/05/2015	Indoor portable information boards established in Jan. 2016; Interactive study tool in on site installation stage.
Public meeting II organised	31/12/2015	Completed in Apr. 2016
4 articles published in local newspapers	31/12/2015	Achieved in May 2015
Public meeting III organised	31/12/2016	Will be completed in Feb. 2017
4 articles published in local newspapers	31/12/2016	Achieved in May 2016
Public meeting IV organised	31/12/2017	Not relevant yet
4 articles published in local newspapers	31/12/2017	In progress
Public meeting V organised	31/12/2018	Not relevant yet
4 articles published in local newspapers	31/12/2018	Not relevant yet
2 articles published in local newspapers	30/06/2019	Not relevant yet
<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Report: Summary of dissemination work carried out during the project	01/03/2019	Not relevant yet

Visual materials for the exhibition/learning centre were finalised in October-November 2015. Indoor portable information boards were ready and delivered to the learning centres at the reference areas in Saaremaa and Hiiumaa islands in January 2016. The respective photos of indoor portable information boards are given in Annex 6.

As the tourism season usually ends in the beginning of September the delay in delivery of indoor portable information boards did not reduce substantially the potential number of people that would have seen those during non-tourism season. As the booklets of the project were ready earlier we could start exposing the indoor portable information boards together with distributing the booklets in the learning centres. The interactive study tool is also finalised. The technical design to allow to use it in computers, smartphones etc. was more complicated than initially predicted and the development took more time. The tool was finally ready in autumn 2016 and will be usable in learning centres since spring (March-April) 2017. For that a touch-screen devices were purchased by EB together with a specific stands for the installation. The study tool is also available in the Internet at: <http://life.envir.ee/elu-alvaritel-mäng> which is an additional benefit created in the frames of the project if compared with the project proposal. The availability of it for smartphones depends on the advancement of the verification process of Appstore (Android based smartphone applications) and Apple phone applications administrators. The interactive study tool is submitted to be made available for smartphones to both application administrations and hopefully it will be available soon.

Three public meetings in total were held in Saaremaa, Hiiumaa and Muhu regions to introduce the project and opportunities to take part of the project to the local community, landowners, restoration workers and farmers in 2014. During those meetings the project team and the scientists from UT introduced the timetable, restoration plans and the importance of the project activities to the local people. Short fieldtrips to the nearby project area was also organized for the participants. Four public meetings in total were held in Saaremaa, Hiiumaa, Muhu and Läänemaa regions to introduce the project development and the opportunities to take part of the project to the local community, landowners, restoration workers and farmers between the Inception Report and Progress Report I. In 2016 two additional public meetings were organised on 2<sup>nd</sup> (see the announcement in Annex 6) and 3<sup>rd</sup> of December in Muhu and Saaremaa, respectively. The third for the year 2016 was actually organised on 17<sup>th</sup> of January 2017 for the stakeholders from the mainland (see the photo in Annex 6) and the 4<sup>th</sup> is planned for 14<sup>th</sup> of February 2017 in Hiiumaa. During meetings the project team introduced in details the project advancement, preliminary results, restoration plans and the importance of the project activities to the local stakeholders. Therefore we can conclude that the respective Milestone “package” Public meeting III organised will be achieved with a slight delay. For the years 2017...2018 one public meeting in Saaremaa, Hiiumaa, Muhumaa and Läänemaa/Pärnumaa regions for each year is planned to organize.

With this report we provide the updated list of published newspaper articles (Annex 7) since the Progress Report I. The media coverage of the project activities has been fruitful. Between two reports we have been able to publish 10 articles in local newspapers. Therefore we have actually reached the initial numerical goal of the media coverage but we will still continue with that task to reach larger audience until the end of the project. All the media reflections of the project are listed at <http://www.keskkonnaamet.ee/elualvaritel/elu-alvaritele/meist-meedias/>.

### 5.2.3 Action E.2. Training for farmers

Milestone	Deadline in Proposal	Status 31/01/2017
All participant trained to carry out the restoration works	31/08/2016	Completed

ESCCA organised the first training for farmers in November 2014 in Saaremaa so we could start with the habitat restoration one season earlier. Sooner start of the activity was initiated by the farmers and entrepreneurs who were interested to start the restoration work already during 2014...2015 winter season. At the first training 70 farmers, landowners and entrepreneurs were trained (we expected to train only 50 people in total initially). The second training for farmers was organised by ESCCA in September 2015. PM I and PM II of EB helped to organise the event in Muhu island. The number of participants of that training was 50. In February 2016 the third farmers training was carried out in Muhu Island. This was specifically targeted to the contractors of SFMC restoring the project areas at state owned land. The number of participants was 22. Another training focussing on to the same target group was organised in of April 2016 in Muhu Island. This time the number of participants was 20. After each training the respective certificate has been issued to each of the participant. During last three trainings the Koguva-Igaküla project area (area no 7) was visited for the practical demonstration.

By now we have trained more than 160 farmers, landowners and entrepreneurs. This is due to substantially greater interest towards the project than initially predicted. As we changed the reference areas we managed to save the budget and were able to train substantially more participants with the same amount of funds. Therefore we have been within the planned budget carrying out this action with much larger impact than initially planned. On demand we will organise one additional training event also in 2017. Otherwise we can conclude this action successfully finished.

### 5.2.4 Action E.3. Establishment of notice boards

Milestone	Deadline in Proposal	Status 31/01/2017
Information boards are placed on each project area	31/12/2016	In progress

In 2015 we decided to order 18 information boards for different project areas where the habitat restoration was initiated. For that the public procurement was carried out to find the contractor. As the quality of wooden stands for the information boards did not meet the technical requirements of the public procurement we had to terminate the contract without accepting any part of it (see the chapter 4.2 for details). As we terminated the contract no financial loss was incurred to the project. In 2016 a detailed technical documentation (available at [http://www.keskkonnaamet.ee/public/LIFE\\_TO\\_ALVARS/Fotod/Pohiprojekt\\_Infostend.pdf](http://www.keskkonnaamet.ee/public/LIFE_TO_ALVARS/Fotod/Pohiprojekt_Infostend.pdf)) was ordered for manufacturing the wooden stands from engineering company describing both the design of the wooden stands and the materials to be used in installation. This will exclude any possible debates during fulfilling the contract of wooden stands delivery and ensures high quality and durable product. For manufacturing and establishment of wooden stands a separate procurement will be organised. In the beginning of 2017 EB initiated a procurement

process to order all the necessary information boards all together and to erect the stands by the start of the tourism season in early summer 2017. The final number of the information boards that will be established is 51. This is optimal as during the project planning phase some locations were planned as backups if some other locations would have turned out to be unsuitable. There will be two different procurements, one for wooden stands organised by EB and another for printing and fixing the board bearing the information organised by UT.

In addition we have ordered smaller information boards for the purpose of practical management of grazing in the restored areas which inform the visitors how to behave in the vicinity of livestock and electric fences. All the livestock shelters and portable watering facilities were also marked with the notice boards or stickers bearing the NATURA 2000 and LIFE logos. This marking will also continue this year.

### 5.2.5 Action E.4. Preparation of printed materials

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
The booklets are printed and delivered to the local businesses	01/12/2016	Booklets ready in Nov. 2015 Delivering in progress
<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Booklets are written and designed	01/06/2016	Completed in Oct. 2015

The booklets or brochures of the project were designed, printed and delivered to EB much earlier, in November 2015. This was needed due to the great public interest towards the project. Instead of 10 000 booklets initially planned we ordered 14 000 as the price turned out to be lower than predicted. We printed three different booklets one for each island (Saaremaa, Hiiumaa and Muhu) involved in the project as those islands and the respective alvars are slightly different. Those brochures are mainly meant for the clients of local entrepreneurs visiting the project areas of these particular islands. Fourth booklet describes the project and characterises the alvars of Estonia in general summarising the essence of all the island-specific booklets. The last one is mainly addressed to the stakeholders and tourists from the mainland or abroad who would probably visit the alvars of different islands and the information given is not that area-specific. Therefore this booklet was also translated into English, Russian and Finnish (4000 copies in total). All booklets are available also at the homepage of the project (at both language versions of the homepage) under the Results section.

Delivering booklets to the local businesses of all the islands involved in the project also started in November 2015 and it continued more actively in summer 2016 as this period is the main tourism season. At the moment most of the booklets initially ordered are practically distributed and we plan to order additional ones to be able to spread those also during the second half of the project. As the majority of the respective budget is still available this does not affect the budget of the project negatively.

### 5.2.6 Action E.5. Update of management guidelines

<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Best practice guidelines are updated	31/12/2018	Not relevant yet

The information for updating the best practice guidelines is gathered constantly during the project. As the conception of the methodology of alvar grassland restoration has changed during the project and reached beyond the frames of the project also, the first step would be to update the legislative act according to which the restoration is usually carried out and also subsidised in Estonia. In the current act the methodology described is not appropriate any more as the restoration can be much more effective than the manual restoration used so far. The respective amendment should be put into practice next year and by the end of 2017 the project team will give the respective input to update this legislative act.

### 5.2.7 Action E.6. Work with landowners

<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Educational trip for land-owners	31/08/2016	In progress

There have been few personal meetings and e-mail communications with foreign landowners on demand to introduce the project activities and plans and to get the landowner to communicate with the farmer interested in the restoration and re-introduction of grazing. Foreign land owners are also contacted personally to give the overview of the restoration work carried out in their land. This involves both written overviews and site visits. In January 2017 first letters and photos about the restoration work carried out were sent out to 11 foreign landowners participating in the project (see Annex 6 for a sample).

The first educational trip for land-owners was organised on 23rd of May 2015 in Muhu island (Koguva-Igaküla, Nõmmküla-Üügu and Lõetsa project areas, no 7, 9 and 10, respectively) and second one on 18th of June 2015 in Hiiumaa Island (Käina lahe-Kassari project area, no 18). In Muhu there were 45 participants and in Hiiumaa 13 participants. The third educational trip for land-owners was organised on 19<sup>th</sup> of September 2016 in Hiiumaa, where the Käina lahe - Kassari and Sarve project areas (no 18 and 1, respectively) were visited. The number of participants of that event was 14.

On 24<sup>th</sup> of September 2016 fourth educational trip for land-owners was organised in Muhu starting with the visit to Nõmmküla-Üügu project area (no 9) followed by the boat trip to introduce the scale of the restoration work done at Muhu observed from the sea. During that boat trip a lecture was given to the participants and the different sites of Lõetsa project area introduced. There were 13 participants at that event of which 2 were foreign landowners. For the photos see Annex 6.

The main target group for these study trips have been local landowners who are contacted personally as during the agreement procedure for restoration EB has gained their contact details. As we would like to see other local inhabitants also at those events, the trips are

announced at the FB site of the project also. During those trips the restored areas of the project are visited and the idea, methods and results of the project introduced.

The project areas visited were selected as the habitat restoration has been carried out there in quite impressive scale already with good results to demonstrate the project success. Those areas are also easy to access for the stakeholders interested. As the initial target was to take 80 people to the study trips all together we have achieved this target by now but we plan to proceed with these trips also in the future. As the cost of the transportation is lower due to the change of the initial reference areas, we can take more landowners to the study trips than planned initially.

### 5.2.8 Action E.7. Web page

Deliverable	Deadline in Proposal	Status 31/01/2017
Project home page published	01/06/2016	In progress

The Estonian version of the project home page (<http://www.keskkonnaamet.ee/elualvaritel/>) is operational since the end of September 2014 and the English version of it is available since March 2015. Both the web page and the interactive map were updated periodically during the first half of the project. Approximately 33 000 people have visited the web page since the beginning of the project. The majority of visitors seems to be from abroad and approximately 1/3 from Estonia. As the average duration of each visit is more than 2 minutes we can conclude that those visits are targeted and not random.

Due to the centralisation of the web design and structure of all governmental institutions of Estonia during which a new general homepage technical solution will be adopted with substantially less options and choices both in terms of design and upload capacity the old homepage of EB will be closed in 2017. As the project homepage is a subsection of the homepage of EB, this will be closed along with the one of EB too. To prevent losing any of the information uploaded so far we have designed a new homepage of the project where all the materials and the interactive map are doubled by now but not yet launched. The address of a new homepage of the project will be <http://life.envir.ee/eesti-loopealsete-karjamaade-taastamine>. This environment is basically created for all the LIFE projects of Estonia by the Ministry of Environment and does not have to adopt the new technical solution described above which meets our needs and secures the availability of the project materials. Since the end of 2016 we do not update the old homepage any more, all the new materials will be uploaded to the new homepage. Also the informative link directing visitors to the new homepage will be given at the old one. The new homepage will be also announced at the FB page of the project when the old one will be closed and updated by the project staff of EB in the future. The new homepage will be fully operative when the old one of EB is closed. This will probably happen sometime between March and May 2017. Until then the current homepage of the project will be operational.

The Facebook page of the project (<https://www.facebook.com/lifetoalvars>) is modified and renewed continuously by adding relevant information, announcements of the project events and photos of the conservation activities. By now we have gained 248 “likes” which is the number of direct followers reaching each inscription as soon as they log in their FB account.

However, the number of people reached by a single inscription could be up to several hundred depending on the amount of people sharing the news in this social media network.

### **5.2.9 Action E.8. Working group for promotion of added-value products from alvar grasslands**

<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Report: added-value products working group work results	01/06/2017	In progress

The action was started in 2015 with gathering the information on the interest groups possible involved in any kind of products originating from alvar grasslands. At first the wood based producers were focussed. Soon it become clear that the alvar related handicraft products are well established, the respective market functions well and there is no urgent need to promote this sector. However, the usage of the wood material in fence building of the same areas where it was gathered during the restoration has been promoted among the farmers since the start of the project by EB. Also the usage of wooden biomass collected during the restoration for the heat and electricity production rather than on site burning has been promoted during the project among the contractors in the frames of that action. This practice has established well, the majority of the biomass is used as a renewable energy source locally, regionally and even internationally by shipping it from Saaremaa to Sweden for example.

During 2016 the wool and meat related producers among the farmers of the project areas were focussed. The first official assembly of the working group for promotion of added-value products from alvar grasslands was organised in Kuressaare town in the beginning of January 2016. This event was mainly attended by the livestock keepers grazing the project areas of Saaremaa and Muhu islands. The idea was to synchronize the level of knowledge among more and less experienced meat producers on valorising the meat products of the livestock used for the seminatural communities management. The possible solutions for processing and marketing the meat products as “meadow meat” close to the initial production areas were discussed. The lecture was given by the sheep farmer experienced in short chain marketing of his own farm products. The number of participants was 13. During that event the main barrier hindering local meat production was identified to be the absence of slaughter service that would also process sheep and untraditional beef cattle like Scottish highland cattle.

On 24<sup>th</sup> of October 2016 another meeting of the working group was organised. This event was mainly attended by the sheep breeders grazing the project areas of Saaremaa and Muhu islands. The main problem of that stakeholder group is the wool usage as the market for wool is low and local wool does not compete with the quality and price of that from New Zealand for example. During the meeting alternative possibilities of wool usage were introduced by the respective experts: natural insulation material importer selling wool based products and composite materials expert. The number of participants of that event was 16.

During the last meeting organised on 13<sup>th</sup> of December 2016 the problems of meat producers were further discussed. The idea for the future is to establish a local slaughter house somewhere in Saaremaa or Muhu that would be operated by the organisation of sheep and cattle breeders of the project areas not to transport the animals to the mainland or Latvia and

the meat back again. The number of the participants of the last event was 35. For photos see Annex 6.

The same topic was further discussed during the meeting organised at the mayor's office of Muhu municipality on 2<sup>nd</sup> of January 2017 where some local entrepreneurs and sheep breeders agreed the concrete actions in terms of slaughter house establishment survey. The first step agreed was to visit the existing slaughter house in Hiiumaa in January 2017 and a portable one that is not operational at the moment and locates in South Estonia. The purpose of these visits will be to evaluate the pros and contras of both technical solutions for further analyse which kind of solution would be the most suitable in local conditions. At that event 6 people outside EB participated.

The main role of EB during the last meetings of the working group for promotion of added-value products has been mainly to identify the stakeholders, to organise the meetings and being generally supportive. Another role has been to activate the discussion and fostering analysing the current situation, the clear identification of the existing problems and the possible solutions of those by involving the respective experts. Any kind of practical or financial involvement of EB in the establishment of some kind of wool processing facility or butchery is beyond the scope of this project. However, the topic of added-value products is still under active discussion in terms of meat products. Therefore we would not like to start pulling it together without any tangible result or at least the recognition that witch kind of technical solutions is most suitable for the valorisation of the locally produced meat and what kind of local cooperation would be the most effective in promoting the respective products. So at the moment we foresee that the beginning of June 2017 would be too soon for the respective Deliverable and we would like postpone this deadline until the end of the year 2017 to gather more comprehensive results and to be able to make more relevant conclusions.

### 5.2.10 Action E.9. Layman's report

<b>Deliverable</b>	<b>Deadline in Proposal</b>	<b>Status 31/01/2017</b>
Layman's report completed	03/06/2019	Not relevant yet

## 5.3 Evaluation of Project Implementation

In this section mainly the planning phase and conservation actions will be focussed as the second half of the project is still ahead and it is too early to draw major conclusions e.g. on the effectiveness of dissemination actions or generalize the lessons learned.

<b>Action</b>	<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Evaluation</b>
A.1: Preparation of agreements with farmers	All restoration contracts signed	01/12/2016	Successful; 57 signed, ca 1000 ha private land covered in time

Basically the only preparatory action in the frames of the project has been A.1 which started right after the first training for farmers was organised by ESCCA in November 2014. However, a lot of preparatory work in terms of the successful development of this action in

the project was already done during the preparatory phase of the project proposal. The PM I of EB managed to collect ca 260 agreements from private land owners to join the project before the submission of the grant application to EC. This assumed basically a huge amount of voluntary work, personal communication, e-mails, phone calls and personal meetings to convince those who were hesitating because of the character and the scale of the restoration work planned to be carried out. This preparatory communication was probably one reason resulting in the successful progress of that action during the project lifetime. It can be assumed that if we would have started with collecting the agreements from private land owners only at the beginning of the project we would have not been able to sign the necessary restoration contracts with farmers to cover ca 1000 ha of private land by the end of 2016.

Due to active media coverage and public meetings organised before the start of the project the private land owners and livestock breeders already got some kind of expression from the project and saw the additional possibilities in terms of land use and production diversification. Therefore, already since the beginning of the project the livestock owners interested in restoration and re-introduction of grazing in some particular areas also took the initiative in getting the landowners' clearances and gained several also by themselves. This is actually a positive development not foreseen as it fosters the local cooperation between different stakeholders.

The general lesson learned in terms of project implementation useful for planning similar project in the future is that there could have been more actions in the project proposal defined as preparatory actions. During this project a lot of planning has been done in the frames of conservation actions like the preparation of all technical documentation needed for grazing infrastructure (watering facilities, removable shelters, cattle grids, re-construction of access roads) and for establishment of notice boards (technical documentation of wooden stand). Preparation of those technical documents is a prerequisite for successful procurement, efficient implementation of the respective tasks without delays and sometimes also for the verification of the placement of that kind of utilities in the nature reserve. The necessity of this kind of technical documentation for successful implementation of respective action was not clear during the project preparation phase and the time needed for preparation of those has been the main reason for the delays in the implementation of some tasks. However, as the cost of those documents has been diminutive compared with the purchase cost of the respective materials or implementation of concrete actions this additional expenditure does not affect the final cost of the respective actions. Irrespective of short delays all the respective action will be implemented also in the frames of the project.

Another technical observation in terms of initial planning is that the work load of the project managers of EB is underestimated during the project proposal preparation. The realistic work load is around two full time managers which would also benefit the implementation quality of the project actions. Therefore we plan to switch some budget (less than 30 000 €) of Consumables to the Personnel cost category and increase the work load of PM II of EB to be able to follow the project schedule more precisely and to be more effective during the second half of the project. This is essential for assuring the high quality of the implementation of several actions like C.3, D.2, E.3 and F.1.

In addition to signing the restoration contracts we prepared several technical documentation in the frames of preparatory actions as well which are not listed in the project proposal. In order to being able to carry out the public procurement of grazing materials we ordered the technical documentation of portable livestock shelters, cattle grids and portable water tanks

which could be considered as additional deliverables of the project. Preparing that documentation was essential to purchase the most suitable, functional and high quality materials or appliances for reintroduction of grazing in restored alvar grassland areas. Additional costs incurred (2460 euros of external assistance funds Act. C 1) are not expected to restrict the implementation of activities or exceed the total budget planned for action C 1 in any way.

<b>Action</b>	<b>Milestone</b>	<b>Deadline in Proposal</b>	<b>Evaluation</b>
C.1: Restoration of the habitat	Restoration work finished	21/12/2018	Successful, ca 930 ha restored in total

The restoration of alvar grassland habitat is carried out in two phases: the first phase involves cutting down and removing the woody biomass in the areas. The second phase will usually be carried out after one year has passed since the end of the first phase when the stumps height of bushes is corrected. The second phase is necessary as in the project areas where pine trees and junipers have grown for decades thick undisturbed layer of needles has deposited on the ground. If the trees of bushes are cut town and the needles layer will be disturbed and trampled during grazing the stumps become higher as the needles layer will collapse and start to decay.

Until the project start, only a small area of alvar grasslands were restored in Estonia. The work was done mainly manually, using brush-cutters and chain saws. This method is time consuming and expensive, thus not suitable for large-scale restoration. In terms of novelty we started to use the chain swipe mower fitted to an excavator and the common forestry machinery like harvester, forwarder and guillotine in alvar grasslands restoration. This kind of equipment has been usually used for clearing the ground under power lines, cutting the grass and bushes at roadsides and in forestry. It turned out that chain swipe mower and guillotine fitted to an excavator is an effective combination for clearing the overgrown alvar grassland areas. The forwarder and harvester are also effective in collecting the harvested biomass and cutting larger trees. The largest fear before the start of restoration activities was that large machines like harvester, forwarder and excavator will make deep ruts during operation and damage the restoration sites. Also the first reaction of public was sometimes that how it is possible that heavy equipment is allowed to use in the nature reserves. By now we can assure that if the weather conditions are taken into account there is no risk of habitat damage during the restoration operation with heavy machinery. If the ground is wet during heavy rains or after the snow melting the operations have to be stopped for some time and crossing swampy places should be avoided. If those simple rules are obeyed the existing machinery can be used efficiently in alvar grassland restoration as those enable fast restoration in a large scale. The average time spent for the mechanised restoration of one hectare is approximately one week (ca 40 hours) but in case of manual restoration the same amount of time needed is approximately two months (ca 320 hours). Moreover, if compared with manual restoration, the cost effectiveness of mechanised restoration is also much better. The mean restoration cost per hectare in case of manual labour is 2400 € but in case of mechanical restoration ca 1700 € in average is needed. When the goal is to restore several hundred or thousand hectares the time and budget needed clearly favours the mechanical restoration. Therefore we can conclude that experimenting with the restoration methodology not applied in a large scale before in Estonia has been justified both by the area of habitat restored so far and the budget spent for that.

In terms of immediate visibility of the project results the restoration of habitat creates clear difference in landscape appearance in rather short time: the areas covered with bushes and young trees undergo a remarkable change becoming rather open traditional landscape shortly. The effect of the restoration to the species richness of the habitat needs more time for drawing solid conclusions but the first results are promising. The recovery of the meadow vegetation is much faster than expected. In the areas covered with the juniper bushes the recovery of the meadow vegetation is observed already during the first vegetative period after the initial restoration. This is probably the result of the seed bank preserved in the soil and grazing that fosters the dispersal of seeds and other propagules of plants. This also stresses the need for immediate re-establishment of grazing in those areas for both reasons: to avoid the regrowth of deciduous bushes and to speed up the dispersal of herbaceous species. We have also seen fast recovery of protected plants like different orchids right after reducing the bushes and trees coverage. The massive flowerings of orchids in the next spring after the restoration have been observed in several project areas. This indicates that those species are also able to tolerate unfavourable growing conditions for a while without local extinction.

The effectiveness of dissemination due to active media coverage of the project activities has been rather high. Between two reports we have been able to publish 10 articles in local newspapers. In general there have been 11-25 different media coverages in each year of the project. We have been able to reach local, national and international media, both written and broadcasting, to publish the results of the project. Therefore we have actually reached the initial numerical goal of the media coverage but we will still continue with that task to reach larger audience until the end of the project. Therefore we can conclude that some technical drawbacks (e.g. the failure of the information boards' procurement) are compensated by other advancements like much more active media coverage and project booklets delivered much earlier than initially predicted. The noticeable effect of this work is that there are much less or practically no negative feedback in terms of mechanised alvar restoration and the general perspective of the whole project any more. Moreover, some fundamental sceptics who did not hesitate to step forward at several public meetings and to criticise the whole idea of the project and foretell the potential failure of it are now interested to join.

## 5.4 Analysis of long-term benefits

### 5.4.1 Direct environmental benefits

European Union's Habitats Directive priority habitat types are with great importance to be maintained in favourable condition. LIFE to alvars project is with direct environmental impact in improving the situation of the priority habitat and protected species involved. The project is benefiting a priority habitat - Nordic alvar and precambrian calcareous flatrocks with the European Union's Habitats Directive code 6280\* (alvar grasslands). During the project the conditions of this priority habitat are directly improved by more than doubling the habitat area of alvar grasslands in favourable condition in Estonia. Only 2000 hectares (25% of the 2020 year goal) of alvars grasslands was under management prior to the project in Estonia (Figure 1). By 2019 this area is expected to be at least 4500 hectares (60% of the 2020 year goal). As 1/3 of all the alvar grasslands situate in Estonia, this is a European scale Natura 2000 habitat improvement.

6280

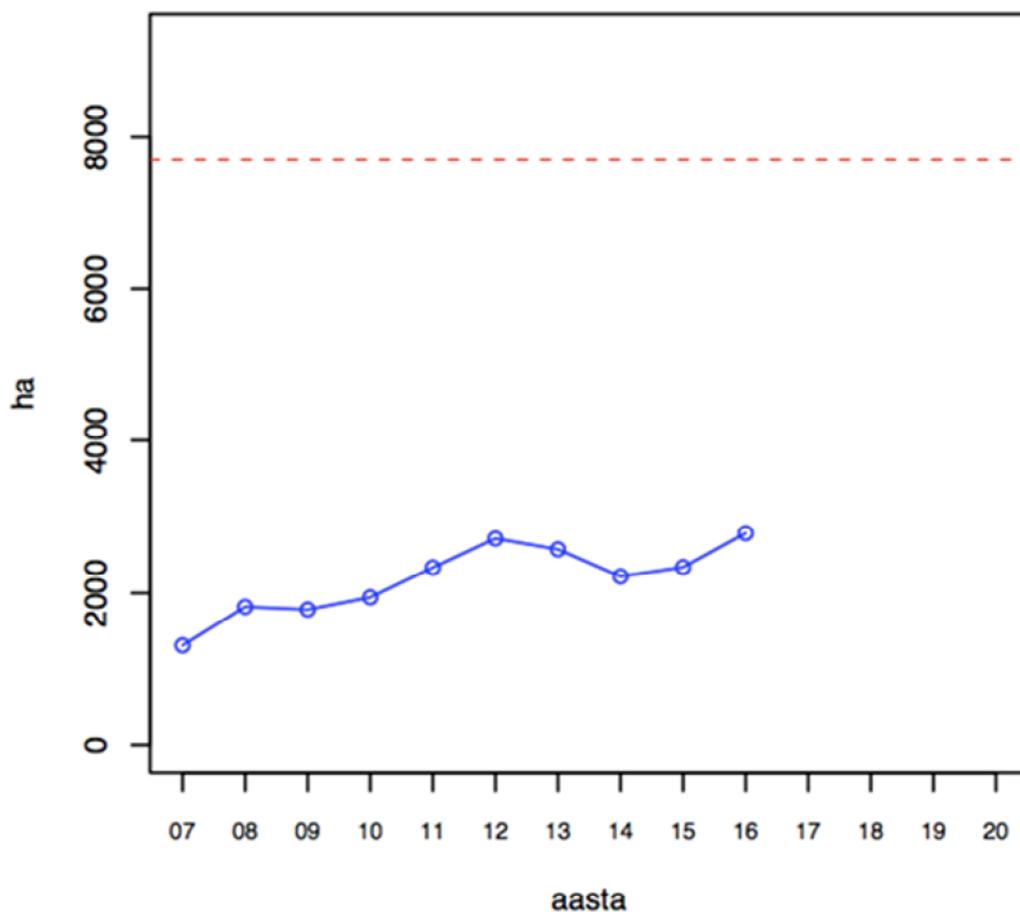


Figure 1. The dynamics of the area of managed alvar grassland habitat type in Estonia since 2007. The red dotted line is the 2020 goal of this habitat type under management.

At that stage we can only speculate on the long-term benefits of the project as the second half of the project is still ahead. By now we can report that the restoration is finished and grazing reintroduced on more than 900 hectares of alvar grassland and the restoration initiated or at least the respective contracts signed for another 900 hectares. If we manage to maintain the sufficient grazing of restored areas at the second half of the project and years after that then there will be clear environmental benefits in terms of preserving valuable priority habitat in significant quantity. We have also targeted a number of protected species (plants, birds and insects) of this habitat type which all will benefit if the project succeeds in re-establishment of sustainable management of the restored areas and better quality of the habitat. The species targeted concern a number of protected species at the national level and several species listed in the Annex II of the Habitat Directive (Directive 92/43/EEC): *Sisymbrium supinum*, *Cypripedium calceolus*, *Liparis loeselii*, *Thesium ebracteatum*, *Pulsatilla patens*, *Tortella rigens*, *Encalypta mutica*, *Maculinea arion*; and three bird species listed in Annex I of the Birds Directive (Directive 2009/147/EC): *Crex crex*, *Lanius collurio* and *Sylvia nisoria*. Already now there are clear evidence from the biodiversity monitoring carried out during the project that the restoration activities are beneficial to many protected plant species as the vegetation recovery including protected species is much faster than predicted.

## 5.4.2 Long-term benefits and sustainability

### **The outlook for the targeted habitat type and/or species:**

The outlook of the targeted habitat is continuous and efficient grazing also after the project has ended in which case the favourable condition of the alvar grasslands restored and the protected species characteristic to well-managed areas would be preserved. The long term management of the restored project areas will be assured through the measures of the Common Agricultural Policy of the EU. The areas included to the official national seminatural meadows inventory database are eligible to apply for the management subsidy paid from the sources of the Estonian Rural Development Plan (RDP, 2014-2020). The subsidy for grazing alvar grasslands in protected areas is also included there. There is no reason to believe that this scheme will not continue also after the year 2020.

Cost effective and fast restoration methodology was developed in preparation of this project. Private land owners of 1000 hectares of alvars are involved in the project and positive image of the project got many more interested in restoration activities. As the new cost-effective and efficient restoration of alvar grasslands is now widely used in Estonia, this has encouraged the Ministry of Environment to find additional funding for the alvar restoration also from the Cohesion Fund sources for the private landowners who could not fit in the project frames. All the restored areas are ready to join the agri-environmental subsidy scheme that allows long term management of the restored areas to continue. In several cases we have witnessed that if large enough alvar grassland is restored, the farmer can completely rely on the income received from the management of that land and by-products like good quality meat. Therefore a lot of effort is invested to come up with the efficient use of by-products from the alvar restoration and management during the project. For example the wood cut from the restored sites is used for fence poles, handicraft and heat production. Added value products from the alvars are discussed and farmers involved in the added value products working group to assure the sustainability and long term benefits initiated during the project.

Positive image of the project in media and among private landowners and farmers has resulted in large interest in alvar habitat restoration in Estonia. Large restored alvar pastures are attractive for the farmers as it is economically more viable to manage larger area by grazing. During the project farmers are equipped with necessary grazing supplies like cattle fences, watering facilities, collection pens, animal shelters and access roads to the restored pastures. This gives them opportunity to carry on the annual management of the restored habitat by grazing and turns the management economically more viable in the long term also.

### **The remaining threats:**

The most realistic remaining threat is that some livestock owners would give up grazing the restored project areas as mainly the middle aged people are dealing with livestock breeding. Fortunately the new generation of farmers also exists and general interest towards managing such a large areas is not poor if the restoration actions are finished. The sustainability of the management activities initiated during the project will be the responsibility of EB and SFMC also after the project: EB is responsible for organising the management activities of such protected meadows and SFMC is a land owner responsible for renting out the state owned protected alvar grassland areas for livestock keepers. EB is also responsible for administrating agri-environmental subsidy scheme for protected semi-natural grasslands in Estonia. All of the restored areas will be incorporated into this scheme (900 hectares already in the scheme) and checked regularly for management quality after the project is finished. EB in cooperation with SFMC has to ensure the continuous management and favourable condition of the

restored areas after the LIFE project and CAP agri-environmental scheme finances is used for that purpose.

**Long-term economic benefits:**

Long-term economic benefits realize through new business opportunities for local farmers and tourism entrepreneurs. As the areas restored are large, the grazing gives direct income to a number of entrepreneurs dealing with the later management of the project areas and creates employment opportunities at rural areas. There have been some cases where young farmers have started with cattle/sheep grazing in the restored alvar areas and given up their city job. When the restoration is finished, the area kept in favourable conditions and the information boards established the local nature tourism entrepreneurs could add project areas to their programs. Another economic benefit opportunity would be available for the livestock breeders if they start to co-operate with local restaurants. It would need common marketing from both sides but a local “meadow meat” could be a potential sales article especially for the visitors from abroad or more aware of that concept quite common there. For the local landowners an additional income source is generated by enabling renting out their land to the livestock owners managing the restored areas: now there is a realistic demand for this land that was not there before the restoration started. As a new effective approach in terms of restoration technique was developed, this can also be applied in the restoration of other seminatural grasslands in Estonia generating additional indirect benefit for the stakeholders involved.

**Long-term social benefits:**

Long-term social benefits will realize through several aspects. For example, the environment becomes more diverse due to the project activities. This will directly result in better recreational and outdoor education possibilities of the locals and the visitors of the project areas. Better recreational options and more time spent in fresh air will result in better health of people. The sea view available after the restoration of several project areas and the traditional herds of domestic livestock create positive emotions. During that time of the year when the animals are not present all visitors of the area can walk around also in the pasture plots which was not possible before the project as the areas were covered with dense vegetation with no visibility. We do not have the respective methodology available to assess this project but there will be definitely ecosystem services created during the project that could be expressed also in financial terms.

Other important social benefits of the project is raising the awareness of the environment protection officials, locals, participants, landowners and visitors about the values of alvar grasslands. Different activities are carried out during the project to ensure as many people as possible would be included. In addition to different printed materials and public meetings training provided to the project participants (farmers, agricultural companies, restoration workers etc.) contributing to this. Already 160 participants are trained how to carry out alvar restoration work in practice. In addition informational field-trips are targeted to the land owners. At least 80 land owners are expected to take part of the field-trips to the reference areas.

### **5.4.3 Demonstration, cooperation, replicability and transferability**

#### **Demonstration:**

Already during the preparation of this large-scale restoration project it was clear that traditional habitat restoration methods applied until then do not allow to restore targeted area of alvar grasslands in rather short lifetime of the project. Thus, new, more effective restoration methods had to be found. EB staff undertook several trips to Sweden to visit the restored alvar areas there and meet the staff of the former LIFE project (1996-1999). Kalmar County Council used machinery to carry out the restoration of alvar grasslands in Öland. EB transferred this knowledge to Estonia and adjusted it to local conditions. EB decided not to purchase the restoration machinery but to outsource the work from the local companies who own the suitable communal and forestry machinery to carry out the work. This has led to the development of completely new grassland restoration mentality in local conditions. The results from the operation with machinery are often with better quality than in case of traditional manual restoration. In addition, the average time spent for the mechanised restoration of one hectare is approximately one week (ca 40 hours) but in case of manual restoration the same amount of time needed is approximately two months (ca 320 hours). Moreover, if compared with manual restoration, the cost effectiveness of mechanised restoration is also much higher. The mean restoration cost per hectare in case of manual labour is 2400 € but in case of mechanical restoration ca 1700 € in average is needed. When the goal is to restore several hundred or thousand hectares the time and budget needed clearly favours the mechanical restoration.

The project itself is definitely a good example to demonstrate that the large scale restoration of overgrown grasslands is possible and feasible if proper methods are applied. This probably applies also for other priority habitats like wooded meadows which are also under high pressure of management abandonment and show no increase in the area during the last decade. Another demonstrational value of the project area is that in our case we have been able to get quite outstanding effect of restoration in several areas already during the first year. The initial doubt was that the meadow vegetation of the restored areas does not recover very quickly after the excessive trees and bushes are taken away and the appearance of newly restored areas may seem lifeless for a while providing not enough fodder for the domestic livestock. This was not true, most of the areas recover quickly and the meadow vegetation emerges right after the restoration enabling immediate re-establishment of grazing. Moreover, changed light conditions have triggered mass flowerings of protected orchid species in several project areas which makes the project activities more acceptable also for the visitors of the areas. So the project is an example to demonstrate that when restoring and managing the alvar area properly the high quality results are feasible.

The project activities and the results in terms of traditional appearance of the landscape been restored and the benefits generated for the local people will be beneficial to several stakeholders. In case of EB, the benefit is that the image of nature use limiter of the EB turns into more supportive as we can demonstrate that moderate human activities in protected areas are not forbidden like people tend to think but it is supported to preserve valuable habitats and species. Local municipalities benefit in terms of better employment of rural people and additional business opportunities created. Local entrepreneurs can diversify their activities, e.g. extending the areas managed or adding some new destinations into visitor portfolios etc. The inhabitants and tourists will benefit from the environment getting more diverse and recreational possibilities wider.

**Cooperation:**

In terms of cooperation the experience gained is also outstanding. There were several hundreds of private landowners contacted already before the start of the project by EB to get the agreement to carry out the restoration activities. More than 250 agreed to join already before any of the realistic results were to be presented at landscape level. Much more joined when the restoration activities started with promising results. The next target group to convince was livestock breeders and local entrepreneurs having the machinery suitable for the restoration. During planning phase of the project EB acted as an intermediary coordinating the communication between all those different stakeholder groups. At some point the livestock breeders started to contact the landowners directly and vice versa, the entrepreneurs started to communicate more actively with the livestock breeders and vice versa, local residents started to communicate with the local entrepreneurs and livestock breeders to get information or job, livestock breeders started to be more active in communication with SFMC to get the information on the lease conditions and the availability of state owned alvar grasslands etc. So basically the project has fostered the communication of the citizens with the state and the local people with each other. This dynamics encourages to implement similar kind of large scale restoration projects that involve a lot of private land owners and local stakeholders also in the future, e.g. after the end of the current project.

**Replicability and transferability:**

In terms of replicability the restoration methods used during this project are easily applicable also in case of the restoration of other kind of overgrown protected meadow habitats like wooded meadows, coastal meadows, alluvial meadows etc. So far the main problem in meadow habitat restoration overgrown with bushes or trees is that those areas are tried to restore gradually, reducing the overgrowth coverage step by step without immediate grazing reintroduction and applying slow manual restoration techniques. This usually results in the situation where the newly restored area covers with regrowth of trees and bushes as the restoration process is too slow. The light conditions created this way are not suitable for meadow vegetation, grazing cannot be reintroduced and at some point the restoration is just stopped because no satisfying results emerged. So there are finances spent for the restoration but no results gained in terms of habitat quality improvement nor the re-establishment of long term management. Based on the initial results of this project we plan to give input into changing the respective legislative act issued by the Minister of Environment which describes the methodology of seminatural communities' restoration and the subsidy given for that to update the outdated methodology of gradual and inefficient reduction of overgrowth.

**5.4.4 Best Practice lessons:**

The main innovation aspect of the project is the mechanical restoration technique implementation. This has also high knowledge sharing and demonstrational value. Similar methodology can be used for the restoration of several other semi-natural habitats that need shrubs, trees or reed removal. State Forest Management Centre subcontractors and private landowners applying for national funding of protected grassland restoration started to use mechanical restoration also. This gives the opportunity to restore more areas faster and with smaller costs and reaching the favourable restoration targets with reasonable time spent.

#### **5.4.5 Long term indicators of the project success:**

The quantifiable indicators to be used in future assessments of the project concern a number of protected species at the national level, one priority habitat of the Annex 1 of the Habitat Directive (Directive 92/43/EEC) and several species listed in the Annex II of that directive: *Sisymbrium supinum*, *Cypripedium calceolus*, *Liparis loeselii*, *Thesium ebracteatum*, *Pulsatilla patens*, *Tortella rigens*, *Encalypta mutica*, *Maculinea arion*. Among the quantifiable indicators of the project three bird species listed in Annex I of the Birds Directive (Directive 2009/147/EC) can also be found: *Crex crex*, *Lanius collurio* and *Sylvia nisoria*. The criteria to monitor should be the favourable condition of the habitat and the stable or growing population of the species considered.

There are quantifiable indicators also set for training activities and awareness rising and communication activities of the project. The advancement in terms of those indicators is assessable by evaluating the respective countable numbers.

## 6. Comments on the financial report

CB is aware of the need for the VAT declarations from each beneficiary. By the submission date of Midterm Report the respective declarations of UT, ESCCA and EULS were in processing at the Tax and Customs board of Estonia. CB can submit those with the next report or earlier, if needed.

### 6.1. Summary of Costs Incurred

<b>Budget breakdown category</b>	<b>Total costs (€)</b>	<b>Costs incurred 01.09.14-31.01.17 (€)</b>	<b>% of total costs</b>
1. Personnel	213022,00	101104,52	47,46
2. Travel and subsistence	39900,00	19295,26	48,36
3. External assistance	2354900,00	1619487,84	68,77
4. Durable goods			
Infrastructure	341000,00	101520,00	29,77
Equipment	0,00	0,00	0,00
Prototype	0,00	0,00	0,00
5. Land purchase / long-term lease	0,00	0,00	0,00
6. Consumables	704575,00	421161,07	59,78
7. Other Costs	12100,00	0,00	0,00
8. Overheads	60368,00	33297,66	55,16
<b>TOTAL</b>	<b>3725865,00</b>	<b>2295866,35</b>	<b>61,62</b>

In case of most cost categories approximately half of the budget has been spent during the first half of the project. The exceptions from that are External assistance and Consumables. The main reason for higher proportion of budget spent under those two cost categories is more active implementation of the habitat restoration and grazing reintroduction than initially proposed. We have not yet carried out some expensive tasks like re-construction of access roads (C.3) which is the reason for the budget of Infrastructure being underspent. In case of Consumables we predict that some budget will be saved from the costs of livestock fence materials that could be used under Direct Personnel Costs for project management (F.1), restoration effectiveness monitoring (D.2) and dissemination actions (see also chapters 5.3 and 6.4).

### 6.2. Accounting system

Accountancy procedures of the project have been established in accordance with the normal accounting conventions imposed on them by law, existing regulations and Common Provisions. The project budget forms part of the budgets of beneficiaries. An analytical accounting system (cost centre accounting) is applied for coordinating and associated beneficiaries. The project has its own budget line number in accountancy system. All expenditure receipts feature a clear reference to the project. Invoices are registered and paid

by the relevant departments of beneficiaries according to the inside rules of the organisations. This ensures complete control over the project's expenses.

The project manager II of EB is responsible for the project's general accountancy and compiling financial reports. At least once a year, the associated beneficiaries submit financial overviews to the PMII together with all the copies of contracts, receipts, salary slips etc., which are archived. Those financial reports are compiled in accordance with the LIFE reporting forms.

Each beneficiary has stressed the need for including the project acronym and reference number on the invoices at the suppliers. Usually this is possible when the project partner and the supplier have a contractual relationship. However, sometimes the book-keeping programs used by the suppliers allow only inserting limited info, e.g. the contract number or the number of the delivery-reception act to the invoice. In case of less expensive purchases that do not need the public procurement and a contract it is impossible to add the project reference by the supplier as the cash register system usually does not allow that. Therefore we use the stamp of the project to assure that each invoice of the project has the respective reference. The code used for the identification the project costs in the analytical accounting system of the beneficiaries is LIFE to alvars or just LIFE in case of the beneficiaries with only one LIFE project running (e.g. ESCCA).

At the associated beneficiaries the procedure of approving costs involves several people: at first the cost is verified by the responsible project coordinator who follows the relevance of the costs in terms of the respective contract, the budget and also the resources available for each cost category. Then the cost document goes to the book-keeping office which double checks the cost according to the book-keeping rules of the organisation. After that the payment is made by the book-keeping office.

In EB each cost document is verified also by several people before the payment is made. First one is the project manager (I or II) who follows the Grant Agreement and its budget, the respective contracts and the rules of the organisation. Then the cost has to be accepted by the director of the regional office of EB who is responsible for the use of the whole budget of that region including the project. After that the book-keeper of EB has to verify the cost followed by the book-keeper of The Ministry of Environment who organises the transaction.

All the costs of associated beneficiaries are double checked by the project manager II of EB at least once a year and compared with the aims of the project and the budget of it. For that associated beneficiaries deliver the copies of all cost documents (contracts, invoices, payment orders etc.) to EB. In reality this verification takes place practically twice a year as the same procedure applies additionally in case of report submission and the schedule of the reports usually does not follow the annual cycle.

We use the electronic time recording system and the form meeting the requirements of the European Commission's Note ENV/TS/AS/HM/ml ARES(2010) 917793 from the 08. December 2010. The time worked for the project is registered on daily bases. Signed timesheets of associated beneficiaries are sent to project manager of EB monthly by the 15th day of the following month the latest.

Until now we have had one financial transaction between the coordinating beneficiary and the associated beneficiaries which was made after signing the partnership agreements. The first

transaction was made to ESCCA as their project activities started already in 2014. The rest of the ABs received their first pre-financing amount according to the schedule of their activities (UT in 2015 and EULS in 2016). With that transaction the first pre-financing payment equivalent to 40% of the maximum EU financial contribution of the share of associated beneficiaries was delivered to them. The fulfilment of the project budget by associated beneficiaries is followed by both the book-keeper of EB and the project managers of EB. The next transaction will take place after the 150% of the first pre-financing payment is spent, the Mid-Term Reported submitted to the Commission and the next pre-financing payment received by EB.

In terms of financial reporting, associated beneficiaries themselves enter the information into the financial tables in accordance with the instructions of the project manager II of EB. However, all the inscriptions of the financial tables of associated beneficiaries are double checked by the PMII of EB before the submission of the reports.

### 6.3. Auditor's contacts

The name and the address of the external auditor which will verify the compliance of the final financial report of the project with the LIFE+ Programme Common Provisions, the national legislation and accounting rules is:

Audiitorbüro ELSS AS, Vanemuise 21A, Tartu 51014, [www.elss.ee](http://www.elss.ee).

### 6.4 Summary of costs per action

The costs of action A.1 have been somewhat larger than expected (ca 7300 €) as this task has been more time consuming than initially proposed and needed more input from the side of EB. The sum overspent is concerned with the personnel costs of EB. This task was practically finished by the Midterm report and therefore we can predict that this cost will not increase substantially anymore and the over expenditure could be compensated from the leftover of some other actions during the second half of the project.

The respective unpredicted cost will not affect the whole budget of infrastructure costs.

We have had larger costs than predicted also in case of action D.2 and F.1 due to the intensive fieldworks and site visits to ensure the quality of the restoration at each site of different project areas and the fruitful cooperation between different stakeholders: the restoration entrepreneurs, livestock owners, local inhabitants etc. This cost mainly comprises of the personnel costs of EB. The costs of action D.2 and F.1 will probably be overspent also as a lot of respective work are still to be carried out. The fieldwork and site visits are essential in terms of both, the recovery of the restored habitat quality and the whole image of the project. From long distance we cannot be sure that the restoration or fencing contracts are implemented in high quality and the respective funds spent efficiently and if so it would result in bad impression created from the project in general. Therefore the onsite quality control and meetings are essential in terms of high quality implementation of the project activities.

The third derivation from the initial budget are the costs of networking (F.2) which has been more active and fruitful than initially predicted. The amount left to be spent is ca 3600 € from the budget of Travel and subsistence and this will probably be overspent. However, this will

not affect the overall budget of Travel and subsistence or the general implementation of the project either as the travel costs to visit local reference areas due to the reallocation of those areas have been smaller than initially predicted.

In case of the rest of Actions still running we foresee that those can be implemented with the proposed budget.

Action no	Action name	Foreseen costs	Spent so far	Remaining	Project final cost
A.1.	Preparation of agreements with farmers	12152,00	19494,63	-7342,63	19494,63
C.1	Restoration of habitat	2306620,00	1622638,93	683981,07	2306620,00
C.2	Re-introduction of grazing	864340,00	518005,17	346334,83	864340,00
C.3	Re-construction of access roads	215800,00	667,87	215132,13	215800,00
C.4	Restoration of habitat through seed sowing	14330,00	175,6	14154,40	14330,00
D.1	Biodiversity monitoring	14960,00	3701,87	11258,13	14960,00
D.2	Restoration success monitoring	6300,00	4509,6	1790,40	6300,00
D.3	Socio-economic monitoring	7630,00	207,53	7422,47	7630,00
E.1	Media work	35730,00	15722,07	20007,93	35730,00
E.2	Training for farmers	16755,00	14861,02	1893,98	16755,00
E.3	Establishment of notice boards	50050,00	6540,79	43509,21	50050,00
E.4	Preparation of printed materials	24950,00	7629,2	17320,80	24950,00
E.5	Update of management guidelines	3850,00	47,89	3802,11	3850,00
E.6	Work with landowners	14562,00	4944,06	9617,94	14562,00
E.7	Web page	14426,00	2922,96	11503,04	14426,00
E.8	Working group for promotion of added-value products from alvar	4130,00	2321,35	1808,65	4130,00
E.9	Layman's report	5402,00	0	5402,00	5402,00
F.1	Project management	37692,00	26032,51	11659,49	37692,00
F.2	Networking with other projects	15818,00	12145,64	3672,36	15818,00
F.3	After-Life conservation plan	0,00	0	0,00	0,00
	OVERHEADS	60368,00	33297,66	27070,34	60368,00

## 7. Annexes

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## 8. Financial report

The Mid-Term financial report of LIFE to alvars is delivered as a separate volume together with given Technical Report.