MIDTERM Report
Covering the project activities from 01/01/2012 to 31/12/2014

Reporting Date
31/12/2014

LIFE+ PROJECT NAME or Acronym
Restoration and public access of urban coastal meadow complex in Pärnu town, URBANCOWS

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2. Executive Summary

Boreal coastal meadows and coastal lagoons are the habitats listed as priority habitats under Annex 1 of the Habitat Directive. Considering the distribution of these habitats in EU, Estonia has high responsibility in securing the conservation of both habitats. Though these ecosystems are spread all over the western coast of Estonia, only in a few areas the coastal meadow and lagoon complexes reach more than 100 hectares as those are usually split by human settlements, industrial and agricultural areas etc. Pärnu Coastal Meadow Nature Reserve which embraces boreal coastal meadows, coastal lagoons and sand dunes, even when located inside urban environment, is spread over more than 250 hectares (total size of the protected area is ca 371 ha).

Boreal coastal meadow habitat type often suffers from insufficient management due to the cease of grazing and haymaking during the Soviet times in coastal areas. Unmanaged coastal meadows and lagoons overgrow with reed and bushes degrading the nature values of those areas. The experiences gained during last decade in restoration of those areas prove that the most cost effective is mechanical removal of reed and bushes followed by immediate reintroduction of cattle grazing.

The coastal meadows and lagoons of Pärnu also overgrew with reed after grazing stopped here in 1970-80s. There have been occasional attempts to move the reed but it has not been efficient enough because the vigorous regeneration of reed plants. Evidently it was necessary to reintroduce grazing which is a challenge in urban environment. The coastal meadows of Pärnu are located next to the public beach and very close to the resort centre and apartments of local residents. Using cattle for managing coastal meadows in such urban environment is not impossible but needs large investments that have not been available in previous times.

The general aim of the project is to improve the conservation status of the coastal meadow and coastal lagoon (habitats 1630* and 1150* according to the Habitat Directive) habitat complex in Pärnu Coastal Meadow Nature Reserve as well as the species characteristic and protected in these habitats. It is achieved by reintroduction cattle grazing, the traditional management in Pärnu coastal meadow and lagoon habitat complex together with raising the awareness of both local community as well as the visitors of Pärnu town and the decision makers about the nature values of the protected area. During the project the infrastructure necessary for grazing (fences, shelters etc.) and dissemination/education (information boards, observation towers, nature trail) in urban environment will be established together with preparing the area for the continuous management in the future by restoring the habitat complex of coastal meadows and lagoons.

2.1 Paragraph summarising each chapter of the main report

Chapter 2 of the report briefly describes the project objectives, 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 site and indicates which habitat types 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. 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 5th chapter goes into details in terms of the progress of each action of the project, bringing out the respective accomplishments and problems encountered. It describes the activities undertaken and indicates outputs achieved in quantifiable terms clearing also the role of different beneficiaries. Each task is compare 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 3rd subchapter of the 5th chapter focusses on the evaluation of the project implementation. The success of the methodology applied is discuss, 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 6th 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

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<thead>
<tr>
<th>Name of the Deliverable</th>
<th>Code of the associated action</th>
<th>Deadline</th>
<th>Status</th>
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<tbody>
<tr>
<td>Project webpage</td>
<td>D.5</td>
<td>30/04/2012</td>
<td>Available in time</td>
</tr>
<tr>
<td>Technical documentation for grazing infrastructure</td>
<td>A.1</td>
<td>31/12/2012</td>
<td>Completed in time</td>
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<tr>
<td>Technical documentation for visitor infrastructure</td>
<td>A.1</td>
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<td>Completed in Sept. 2014</td>
</tr>
<tr>
<td>Technical documentation for restoration of hydrology</td>
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<td>Species action plan</td>
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2.3 The list of the milestones of the project

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<td>29/02/2012</td>
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<td>Grazing shelters established</td>
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<td>30/06/2012</td>
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<tr>
<td>Information panels set up to the entrances of the protected area</td>
<td>D.2</td>
<td>31/10/2012</td>
<td>Completed in May 2013</td>
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<td>Social media campaign initiated</td>
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<td>Road closed</td>
<td>C.6</td>
<td>31/07/2013</td>
<td>Started in June 2013</td>
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<td>1 Observation platform built</td>
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<td>31/07/2013</td>
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<td>1 Excursion for the decision makers of similar areas conducted</td>
<td>D.3</td>
<td>01/08/2013</td>
<td>Completed in Oct. 2013</td>
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<td>50% of the coastal meadows restored and suitable for management in next season</td>
<td>C.1</td>
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<td>Achieved in time</td>
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<td>Project Description</td>
<td>Responsible Unit</td>
<td>Start Date</td>
<td>Status</td>
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<td>-------------------------------------------------------------------------------------</td>
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<tr>
<td>50% of nature tours completed</td>
<td>D.1</td>
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<td>Cleared reed and bushes from 220 ha of coastal meadow habitat complex</td>
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<td>Finetuning of species habitats implemented</td>
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<td>Full nature trail established</td>
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<td>Public access to the nature reserve that does not harm the nature values</td>
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<td>2012-2016</td>
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3. Introduction

Boreal coastal meadows and coastal lagoons are the habitats listed as priority habitats under Annex 1 of the Habitat Directive. Those habitats often suffer from insufficient management due to the cease of traditional activities, grazing and haymaking, caused by the change of agricultural practice during 20th century. Unmanaged coastal meadows and lagoons overgrow with reed and bushes degrading the nature values of those areas by directly causing the loss of biodiversity as the reed beds are not suitable habitats for the most of meadow species. The experiences gained during last decade in restoration of those areas prove that the most cost effective is mechanical removal of an old reed and bushes followed by immediate reintroduction of cattle grazing.

Pärnu Coastal Meadow Nature Reserve which covers boreal coastal meadows, coastal lagoons and sand dunes, even when located inside urban environment, is spread over more than 370 hectares. In addition to the habitats mentioned the nature reserve is designated to protect the followed species given in the Directive 92/43/EEC: the fen orchid (Liparis loeselii), marsh angelica (Angelica palustris) and the species mentioned in Directive 79/409/EEC: the ruff (Philomacus pugnax) and dunlin (Calidris alpina schizii). There are also several plant species in the area protected by the Estonian Nature Conservation Act like lesser butterfly-orchid (Plantantera bifolia), early marsh-orchid (Dactylorhiza incarnata), western marsh-orchid (Dactylorhiza baltica), common spotted orchid (Dactylorhiza fuchsii), broad-leaved helleborine (Epipactis helleborine), marsh helleborine (Epipactis palustris), shining meadow rue (Thalictrum lucidum) European white elm (Ulmus laevis), gibbous duckweed (Lemna gibba) and wooly butterbur (Petasites spurious).

The inventories have demonstrated that during the last decades the conservation status of the area has worsened significantly due to the lack of traditional management. Also most of the lagoon were in poor conservation status due to overgrowth, eutrophication, polluting with garbage and wastewater. It is important to notice that in Estonian conditions undivided coastal meadow complexes in a size of more than 200 hectares is valuable even if in poor conservation status and needs to be restored.

The coastal meadows and lagoons of Pärnu also overgrew with reed after grazing stopped here in 1970-80s. There have been occasional attempts to control the reed by mowing in coastal meadow complex but it has not been efficient because the vigorous regrowth of reed plants and access difficulties. Evidently it was necessary to reintroduce grazing to stop the biodiversity loss in the protected area which is a challenge in urban environment. The coastal meadows of Pärnu are located next to the public beach, very close to the resort centre and apartments of local residents. Using cattle for managing coastal meadows in such urban environment needs large investments and a lots of dissemination activities for what the resources have not been available in previous times. The improved conservation status of Pärnu coastal meadow complex combined with publicity of the respective values also improves the status of other coastal meadows habitat complexes due to better understanding of traditional management. Restoration of the traditional coastal landscape also broadens the possibilities of recreation for local people and the visitors together with advanced possibilities for nature education supported by the respective infrastructure development.
The project is targeted to restore the favourable conservation status of coastal lagoons and boreal coastal meadows and the protected species still present in the area. The target area of lagoons to be restored is ca 50 hectares and the respective area of coastal meadows to be restored together with reintroduction of long-term cattle grazing is approximately 200 hectares. This would keep both the species and habitats targeted in favourable condition also in the future. Possible threats to the conservation activities are extraordinary storms that could destroy the grazing infrastructure as most of the area is not higher than 1m from the sea level. Another major issue could be unfavourable attitude of local residents towards cattle grazing in the urban environment which is tackled through active publicity.
4. Administrative part

4.1 Description of the management system

4.1.1 Description of project management

At the end of 2011 the Environmental Board (EB) organised a recruitment to find a suitable candidate for a project manager. Project manager started working at the beginning of January 2012. 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 Pärnu Town Government (PTG) the project team was appointed in April 2012. The assigned representative of PTG is responsible for the whole project management by that associated beneficiary and also for tourism issues (part time job for the project). The city gardener is responsible for project activities implementation of the PTG (part time job). For giving the input to the reports at PTG the project coordinator is responsible. Bookkeeping has been provided by bookkeeper of the project. Also city planners, building and reconstruction specialists, juridical specialist and specialist on environmental issues are involved to the project team of PTG on demand. They give their input to the project in the frames of their everyday work or are employed on part time basis.

The project team of Tartu University Pärnu College (PC) consists of three persons who are also employed on part time basis. The additional input is given by different members of the staff of the PC project in the frames of their everyday work.

The project team at coordinating beneficiary (EB) consists of the project manager and different specialists depending on the demand. The specialists (landscape management specialists, specialists of nature protection, specialist of planning etc.) give their input to the project in the frames of their everyday work. The roles and the size of the project team have not changed remarkably since the beginning of the project.

The project team functions well. Each partner implements its activities according to the description of the project. The co-operation between project partners is efficient also. The main method to update the state and the developments of the project and to concretize the plans and personal roles is to organise team meetings regularly. Usually all the beneficiaries are to be represented at those meetings but on demand coordinating beneficiary organises personal meetings with either associated beneficiaries also. In addition there is a special kick-off meeting held at the beginning of each year to revise the Annex I of the Grant Agreement and to clear all the goals by project partners that have to be achieved during that year together with giving an overview to the others on the most recent project activities of each partner. Another method to ensure the fluent development of the project is to contact the representatives of associated beneficiaries by e-mail or phone. As all the members of project consortium are located at the same town the project can be coordinated quite operatively.

4.1.2 Principle stages in project management

Basically the project period can be divided into two phases: a) general planning phase and b) implementation phase of the respective restoration/conservation actions. The implementation
of both phases has been directed by continuous management actions and disseminated through consistent publicity activities.

General planning phase started soon after the project start date with the main effort contributed during the first two years of the project. It could be concluded that by now the general planning phase of the project has either ended or transformed to the continuous management of the project. The activities of that phase were A.1.a Planning grazing infrastructure, A.1.b Planning visitor management infrastructure, A.2 Lagoon restoration planning, A.3 Species action planning and A.4 Publicity planning. All the activities ended up with the respective deliverables which are the documents directing the implementation of concrete conservation or dissemination actions. During that phase approximately 26 meetings were organised to plan the implementation the respective action in most efficient manner.

Implementation phase of the restoration/conservation activities started in parallel with the general planning phase in terms of those tasks which did not need preceding profound planning (removal of unwanted trees and bushes, controlling an old reed etc.). Though there are some activities already finalised, this phase lasts partly until the end of the project as the conservation activates are foreseen until then and to be continued after the project. The activities of that phase are C.1 Removing unwanted vegetation, C.2 Grazing infrastructure establishment, C.3 Lagoon restoration, C.4 Finetuning species habitats, C.6 Limiting access. During that phase approximately 10 meetings were organised which were more focused on specific issues like finetuning of grazing, more efficient reed or bushes removal, proper electrical fence marking etc. The result of those meetings 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 at the very beginning of the project and even before that when the launch of the URBANCOWS project was introduced in the local newspaper. Quite soon after the project started we launched the website of the project and FB page. By now we have had more than 25 newspaper articles and several TV broadcasts on the project activities. We also have carried out 12 excursion 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 to disseminate the results and learn from the experiences of the others. We have established 14 information boards introducing the values of the project area and the project itself. We also have built two observation towers for the visitors of the nature reserve. 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 management team of the project was formed during the first months after the project started. The partnership agreements were signed in March 2012 and submitted with the Inception Report. From both associated beneficiaries there are two or three persons more actively involved in the everyday activities of the project. In case of Pärnu Town Government the implementation of project tasks is the responsibility of city gardener who is also coordinating the whole process of practical project implementation from their side. For giving the input to the reports and following the budget at PTG the project coordinator is responsible who is less involved in implementation of practical actions. In addition there is a person responsible for tourism and dissemination issues and respective reporting. The main added value of PTG in terms of project team is the background of local municipality which means the authority for local residents and competence in different kind of planning and verification processes at municipality level (e.g. detail planning process, verification processes of construction documentation etc.).

In case of Tartu University Pärnu College there is a project coordinator who follows the budget and schedule and gives an input to the reports. She is also capable to give input to substantive matters both at the field of biology and publicity. In addition there are two specialist at PC responsible for implementation of the concrete project activities and less for the management. The main added value of PC is a strong biological background at the field of ornithology and hydrochemistry of those persons working at the project. College also has the means of dissemination of the project results to a large number of students.

At Environmental Board there is a part time project manager hired who keeps the whole management team of project consortium together and continuously controls if the project schedule and budget is followed as stated in the Grant Agreement. His responsibility is also to carry out the practical actions of EB in the project like organising restoration activities,
dissemination events, media communication etc. The added value of EB is a wide variety of different nature protection specialists who could be involved in the project on demand.

The main method to update the state and the developments of the project and to concretize the plans and personal roles of consortium members is to organise team meetings regularly. In addition there is a special kick-off meeting of project consortium held at the beginning of each year to revise the progress and to clear all the goals that have to be achieved during forthcoming year. E-mail and phone communication takes also place on regular basis.

The communication with the Commission has taken place on 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 role of External Monitoring Team in advancement of the project cannot be underestimated. The visits to evaluate the project have been regular. If there have been questions than need to be clarified the project manager of EB has not hesitated to ask the External Monitoring Team. This kind of communication has been more frequent before the submission of reports. 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.a: Planning grazing infrastructure

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<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
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<tbody>
<tr>
<td>Technical documentation for grazing infrastructure</td>
<td>31/12/2012</td>
<td>Completed in May 2012</td>
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The technical documentation of steady fence and cattle shelters were finalised in May 2012. The technical documentation of steady fence was slightly modified in 2013 as we decided to lengthen the steady fence in the project area next to a new pedestrian street outside the border of nature reserve in that region. It is reasonable and safe for the pedestrians if the street and the cattle on coastal meadow are isolated by the steady fence there also. The documentation of steady fence is available at http://www.keskkonnaamet.ee/public/linnalehmad/Parnu_rannaniidu_veiste_pusiaed_06.03.2013.pdf. The documentation of cattle shelters is available at http://www.keskkonnaamet.ee/public/linnalehmad/Technical_documentation_for_grazing_infrastructure.pdf. Both documents were also submitted with Progress Report I.

5.1.2 Action A.1.b: Planning visitor management infrastructure

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<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
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<tr>
<td>Technical documentation for visitor infrastructure</td>
<td>31/12/2013</td>
<td>Finalised in Sept. 2014</td>
</tr>
</tbody>
</table>

The prerequisite for both technical documentation and establishment of visitor infrastructure was the detail planning process and a public display of it which is required by the Estonian nature conservation and building legislation. This length of this process was not clear during grant application. The detail planning process took more than 1.5 years which was partly the reason why planning visitor management infrastructure took more time than expected. The technical documentation for observation platforms was finalised in February 2014. It is available as Annex I of the report and at http://www.keskkonnaamet.ee/public/linnalehmad/arhitektuuriline_osas_joonistega_loplik.pdf. The technical documentation for the nature trail was completed in September 2014 and it is available at http://www.keskkonnaamet.ee/public/linnalehmad/matkarada_koond_v.pdf (see also Annex 2).

5.1.3 Action A.2: Lagoon restoration plan

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical documentation for restoration of hydrology</td>
<td>31/12/2013</td>
<td>Completed in Feb. 2014</td>
</tr>
</tbody>
</table>
The abundance and distribution of protected plant species in the lagoons were summarised in the Inventory Report of the Lagoon Plants available at http://www.keskkonnaamet.ee/linnalehmad/linnalehmad-2/aruanded-4/inventuurid/. After that inventory PC started with composing the lagoon restoration plan. It was completed in February 2014. The lagoon restoration plan categorizes the lagoons into I-III priority classes according their conservation status and potential biodiversity effect of the restoration. The main restoration method for lagoons shall be the removal of the rhizome layer of reed in order to enable the restoration of initial water table, enable livestock to graze the lagoons coastline and encourage the relevant biodiversity recovery. The lagoon restoration plan is available at: http://www.keskkonnaamet.ee/public/linnalehmad/Lougaste_Taastamiskava_17.02.14_loplik.pdf (see also Annex 3). The lagoon restoration plan is a base document for the technical design of lagoon restoration according to which the real restoration activities will be carried out.

EB organised the public procurement to find the water engineering company for the technical design of lagoon restoration in spring 2014. At the moment the company blueprinting the lagoon restoration is behind the schedule for three months already but promises to deliver the final documentation in the beginning of January 2015. However, such a delay will result in reduction of the contractual fee up to 20% of the initial sum. Probably the delay of water engineering company will result in most of the lagoon restoration works to be postponed until the autumn 2015. However, EB will initiate the public procurement to find the contractor of lagoon restoration in the beginning of 2015 and there are some works that can be done already during the grazing season in terms of water regime restoration.

### 5.1.4 Action A.3: Species action plan

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species action plan</td>
<td>31/12/2013</td>
<td>Completed in May 2013</td>
</tr>
</tbody>
</table>

Species action plan gives specific suggestions how it would be better to carry out reed removal and grazing activities, fine-tuning of protected species habitats etc., so that it would be the most effective and less harmful to the species. Species action plan was generally ready in May 2013. It was slightly improved in summer 2013. It is available at www.keskkonnaamet.ee/public/linnalehmad/hoolduskava_19.12.13_loplik_vaike.pdf (see also Annex 4)

### 5.1.5 Action A.4: Publicity plan

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publicity plan to raise awareness about the Pärnu coastal meadow</td>
<td>31/12/2013</td>
<td>Completed in Feb. 2014</td>
</tr>
</tbody>
</table>

The background information to compile the publicity plan was gathered by the students and the staff of PC. This material was an essential input information to compile the final publicity plan. It was forwarded to the professional PR-company who succeeded in the respective procurement. Finally, after overcoming some difficulties with the professionals the publicity plan was completed in February 2014. It is available at
So far the publicity plan has been used for organising the public events like excursions to the project area, in co-ordinating communication with the media and for the development of FB site and the homepage of the project. It also gives some short suggestions how to proceed with the publicity of the project and the respective nature reserve after the end of current project.

5.1.6 Action C.1: Removing unwanted vegetation

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% of the coastal meadows restored and suitable for management in next season</td>
<td>31/10/2013</td>
<td>90% (201 ha of 220ha)</td>
</tr>
<tr>
<td>100% of coastal meadows restored and under management</td>
<td>31/10/2014</td>
<td>Achieved in Oct. 2014</td>
</tr>
</tbody>
</table>

The result of the third year of the project was 227 ha of the coastal meadow grazed or cleared from reed and bushes mechanically by the end of October 2014 (see Annex 6 for photos). Approximately 200 hectares of coastal meadow was restored by grazing in 2014 but in the rest of the area we still had to use the traditional agricultural machinery to fight the reed. This was partly caused by the shortage of the cattle of one cattle keeper grazing the area. Some areas will probably need additional mechanical intervention again also as in humid areas left unmanaged for some decades the regrowth of reed plants form the rhizomes will be too vigorous for cattle to handle right after the restoration.

5.1.7 Action C.2: Grazing infrastructure

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazing shelters established</td>
<td>30/06/2012</td>
<td>Finalised in June 2013</td>
</tr>
<tr>
<td>Grazing infrastructure established</td>
<td>30/06/2013</td>
<td>Completed in Nov. 2013</td>
</tr>
</tbody>
</table>

Two cattle shelters envisaged in the project proposal were ready by July 2012 (see Annex 6 for photos). The price of those was lower than expected and we were able to order two extra shelter as the need for shelters remained. The last one was built and delivered in June 2013. Two additional shelters compared with the initial plans give an extra value as after removing the unwanted bushes cattle need artificial shelters in more than two pasture plots.

Permanent wooden fence (2.1 km) was established at the border of project area and the town by EB in November 2013. This extent of fence covers the most critical section of the project area where contacts between people and cattle are the most common.
Unfortunately an exceptionally strong autumn storm together with flooding hit the west coast of Estonia at the end of October 2013 and the majority of electric fences established in May 2013 were damaged. We lost basically 90% of the electric fence lines and also some wooden poles (see also Progress Report II). To replace the loss EB initiated an additional public procurement of electric fence materials in February 2014 so that the cattle owners had those before the grazing season started in 2014. The cattle owners have built and dismantled the electric fences in the frames of their everyday work without additional compensation. As we did not spend the whole budget of the fence materials in 2013 an additional purchase did not influence the overall budget of the project.

5.1.8 Action C.3: Lagoon restoration

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restoration of natural hydrology completed</td>
<td>31/10/2015</td>
<td>Not relevant yet</td>
</tr>
<tr>
<td>Improved conservation status on 50 ha of coastal lagoon ecosystem</td>
<td>31/10/2015</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>

We proceeded with the preparatory actions for the lagoon restoration (see Annex 6 for photos). EB organised the public procurement to find the water engineering company for the technical design of lagoon restoration in March 2014. The contract was signed in the beginning of May 2014 with the deadline at the end of September 2014. Unfortunately the contractor was not able to meet the initial deadline which resulted in reducing their fee but also caused a delay. The initial idea was to organise the procurement to find the contactor for lagoon and natural hydrology restoration already at the end of 2014 to use the winter month suitable for this activity. However, we hope to find the contractor for restoration in early spring of 2015 (March-April). As the most suitable months for lagoon restoration are late autumn and early winter months (no cattle and less visitors in the area, smaller biological activity in sediments and less smell) it is possible that we have to carry some restoration activities out also during the first months of 2016. We probably have to postpone the initial deadline of the restoration of natural hydrology completed by ca 6 months.

5.1.9 Action C.4: Finetuning species habitats

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finetuning of species habitats implemented</td>
<td>31/10/2014</td>
<td>In progress</td>
</tr>
</tbody>
</table>

The main finetuning activity of protected orchid habitats has taken place in Naisteranna special protection zone. There is quite large colony of Dactylorhiza baltica and Dactylorhiza incarnate between shifting dunes and permanent red bed, which was suppressed by Hippophae rhamnoides, birch, willows and other indigenous bushes. In the end of 2012 we cut down ca 1.5 hectares of bushes that started to overgrow the orchid habitat (see Annex 6 for photos). After the vegetation period for orchids has ended we have mowed this area in August of 2013 and 2014 to keep it open. In 2014 we also focussed on some other orchid areas by fencing those out from pasture plots at the beginning of grazing season and grazed later in the end of summer to allow the regeneration of orchids. As the main activities of
restoration have been focussed on the large-scale habitat restoration so far we plan to proceed with protected species habitat spots finetuning also during the second half of the project. This does not affect the budget of the project as we still have the funds left for that activity.

5.1.10 Action C.6: Limiting access

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road closed</td>
<td>31/07/2013</td>
<td>Completed</td>
</tr>
<tr>
<td>Illegal accesses closed for motorized vehicles</td>
<td>31/01/2015</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>

By now we have decided to close the illegal accesses to the project area for cars permanently in four places instead of two initially planned. We used ca 1.8 m long concrete columns of which ca 1m was buried into the ground and 80 cm left above the soil surface (see Annex 6 for photos). The distance between the columns enables the passage for walkers and cyclists but excludes ATVs and cars. The mounting of these pillars was carried out in June 2013 and September 2014 by the contractor of PTG.

In case of paths (8 locations) that have to be passable from time to time (e.g. emergency vehicles, beach cleaning vehicles, winter fishermen etc.) we decided to use the prohibition signs for motorized traffic. If some of those signs will not function well enough or there will be another illegal access established before the end of the project we will come back to this activity as we still have some funds left for that.

5.1.11 Action C.7: Grazing coastal meadow complex

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazing initiated</td>
<td>30/06/2013</td>
<td>Initiated in May 2012</td>
</tr>
<tr>
<td>Cleared reed and bushes from 220 ha of coastal meadow habitat complex</td>
<td>31/10/2014</td>
<td>Completed in Oct. 2014</td>
</tr>
</tbody>
</table>

Grazing of coastal meadow complex was initiated with ca 100 beef cattle in the end of May 2012. The result was approximately 70 hectares of coastal meadow grazed by the end of October 2012. In 2013 the grazing season of coastal meadow complex was initiated in the second half of May. There were ca 210 cattle and 11 horses in total grazing the area in 2013. The result was ca 201 ha of coastal meadow cleared from the reed by the middle of October 2013. However, without mechanical removal of old hardened reed by the agricultural machinery (Action C.1) due to exceptionally dry summer we probably would not have been that successful. In 2013 there were two cattle owners in the project area meaning two different herds of cattle as the land use rights contracts of the project area were renewed in the beginning of the year.

In 2014 we started with grazing already at the first half of May (see Annex 6 for photos). Approximately 200 hectares of coastal meadow was restored by grazing in 2014 but in more than 20 hectares we still had to use the traditional agricultural machinery to fight the reed. This was partly caused by the shortage of the cattle and financial resources of one cattle
owner (MTÜ Eesti Pärandmaastikud) grazing the area which started to influence the whole quality of cattle keeping in the area and the restoration success also. As the financial situation of that cattle owner got worse during the summer he decided not to prolong the land use rights contract with PTG and to stop cattle keeping in the end of 2014. As he informed the project team quite early we had enough time to organise a competition to find another cattle keeper to take over the grazing of approximately 150 hectares of coastal meadow complex in 2015. There was quite a lot of extra effort contributed by EB to find new owners to the herd and to take the cattle away from the project area before snow and to clarify the situation to the general public why some cattle staid in the meadow until the middle of November 2014. By now the land use rights contract has been signed by the next cattle keeper (Mr Silver Visnapuu) and PTG and we do not see any problems with continuing grazing in spring 2015.

5.1.12 Action E.2: Project effectiveness monitoring

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring report of breeding birds</td>
<td>31/12/2014</td>
<td>Completed in time</td>
</tr>
<tr>
<td>Monitoring report of vegetation and vascular plants</td>
<td>31/12/2015</td>
<td>Not relevant yet</td>
</tr>
<tr>
<td>Monitoring report of lagoon sediments</td>
<td>31/12/2015</td>
<td>In progress</td>
</tr>
<tr>
<td>Monitoring report of predation</td>
<td>31/12/2015</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>

During the project lifespan monitoring is mostly planned for the years 2014-2015, when the management effectiveness can be assessed compared to the data gathered in 2009. In 2013 we carried out the inventory of seminatural meadows of the project area as detailed inventory was not carried out before. The data of the seminatural meadows are however needed to assure the grazing of the project area also after the restoration phase of coastal meadow complex: only the areas included to the official national meadows inventory database are eligible to apply for the management subsidy paid from the sources of the next Estonian Rural Development Plan (RDP, 2014-2020). So this inventory was essential to assure the sustainability of the project restoration activities. The data of the meadow inventory are delivered as a GIS data so these are not uploaded to the project web page.

In 2013 PC started to collect and analyse the samples of the lagoon sediments indicating the situation prior to the lagoon restoration. On the basis of collected data they composed a preliminary report on Lagoon sediments monitoring prior to restoration (Annex 7). It summarises the hydro chemical profile and also some critical physical aspects of the lagoons studied. It is available at http://www.keskkonnaamet.ee/public/linnalehmad/RANNIKULOUGASTE_SETETE_UURING_enne_taastamist.pdf. The results of the first period of lagoon sediments sampling were taken into account in the lagoon restoration plan. Comparative sampling will be carried out after the lagoon restoration has been completed. Both the pre-restoration and the later data collected will be used in the final Monitoring Report of lagoon sediments.

In spring 2014 we carried out the monitoring of breeding birds of the project area. The monitoring generally indicated the increase of meadow bird species and the decreased of reed
bed species if compared with the data collected before the restoration of coastal meadow complex started. This clearly indicates the natural conditions becoming more favourable for those species which are characteristic to managed coastal meadows. The monitoring report of breeding birds (Annex 8) is available at: http://www.keskkonnaamet.ee/public/linnalehmad/Linnustiku_vahearuanne_2014_mati.pdf.

5.1.13 E.3: After Life management plan

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>After LIFE+ management plan</td>
<td>31/12/2016</td>
<td>Not relevant yet</td>
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</table>

5.1.14 Action E.4: Project networking

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference on urban coastal seminatural communities management</td>
<td>31/10/2016</td>
<td>Networking in progress</td>
</tr>
</tbody>
</table>

EB has established good relationship with the project manager of DRAGONLIFE (LIFE08NAT/EE/000257) who participates the Steering Committee meetings of URBANOWOS. The project manager of EB has established contacts also with LIFE-BaltCoast project (LIFE05NAT/D/152) by participating and presenting the poster of URBANOWOS at the final seminar of that project in Germany in 2012.

In May 2013 contacts were established with the team of LIFE MIA (LIFE07/NAT/S/000902) who visited the project area of URBANOWOS in Pärnu. In September 2013 project manager of EB visited the areas of the Central Baltic Interreg IV programme project NATURESHIP and a previous project called Grassland Restoration and Management in Finland, Sweden and Estonia (original title in Finnish “Niittyjen kunnostus ja hoito Suomessa, Ruotsissa ja Virossa”) in Finland and met some members of the team of that project. In June 2014 the team of URBANOWOS visited Denmark for networking and knowledge exchange with the staff of NATURESHIP project and to see the similarly managed coastal areas next to Copenhagen (Saltholm and Vestamager, see Annex 6 for photos). In October 2014 the final seminar of LIFE MIA (LIFE07/NAT/S/000902) was visited by EB in Sweden. This was definitely the most useful networking event so far as there were established contacts with several nature conservation projects currently running in Sweden and Finland e.g. LIFE Reclaim LIFE11 NAT/SE/000848, LIFE+ Vänern, LIFE Coastal Benefit, LifeTaiga and BushLIFE.
### 5.1.15 Envisaged progress until the next report

<table>
<thead>
<tr>
<th>Action</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>Envisaged progress until the next report</th>
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<tbody>
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<td>Overall project schedule</td>
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<td>Carry on according to the proposal.</td>
</tr>
<tr>
<td>O - Start date</td>
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<td></td>
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<tr>
<td>IR - Inception Report</td>
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<tr>
<td>PR1 - Progress Report no 1</td>
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<tr>
<td>PR2 - Progress Report no 2</td>
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<td>MTR – Mid-term Report</td>
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<tr>
<td>A.1.a: Planning grazing infrastructure</td>
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<td>A.2: Lagoon restoration plan</td>
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<td>A.4: Publicity plan</td>
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<td>Actual</td>
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<tr>
<td>C.1: Removing unwanted vegetation</td>
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<td></td>
<td></td>
<td></td>
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<tr>
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</tr>
<tr>
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<td></td>
<td>Some mechanical intervention still needed in small areas</td>
</tr>
<tr>
<td>C.2: Establishing grazing infrastructure</td>
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<td></td>
<td></td>
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<tr>
<td>Actual</td>
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<td></td>
<td></td>
<td></td>
<td>Completed already.</td>
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<tr>
<td>C.3: Lagoon restoration</td>
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<td></td>
</tr>
<tr>
<td>Proposed</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Public procurement to find the contractor of lagoon restoration.</td>
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<tr>
<td>C.4: Finetuning species habitats</td>
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<td>Proposed</td>
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<td></td>
</tr>
<tr>
<td>Actual</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>To be continued according to the species action plan.</td>
</tr>
<tr>
<td>C.6: Limiting access</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 illegal accesses closed permanently. Grazing cattle limits temporarily access to the meadows.</td>
</tr>
<tr>
<td>C.7: Grazing</td>
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<td></td>
<td></td>
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<tr>
<td>Proposed</td>
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<td></td>
</tr>
<tr>
<td>Actual</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>4th grazing period will start in May and last until October 2015.</td>
</tr>
<tr>
<td>Action</td>
<td>2012</td>
<td>2013</td>
<td>2014</td>
<td>2015</td>
<td>Envisaged progress until the next report</td>
</tr>
<tr>
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<td>------</td>
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<td>------</td>
<td>------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>D.1: Publicity of Pärnu Coastal Meadow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To be continued according to the publicity plan.</td>
</tr>
<tr>
<td>Proposed</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.2: Visitor infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Building the nature trail by the summer 2015.</td>
</tr>
<tr>
<td>Proposed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.3: Sharing experience on management of seminatural urban Natu 2000 in Europe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To be continued.</td>
</tr>
<tr>
<td>Proposed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.4: Best practice guidelines for management of urban coastal protected areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gathering the input information for the best practice guidelines.</td>
</tr>
<tr>
<td>Proposed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.5: Project web page</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Complementing the project web page with new information.</td>
</tr>
<tr>
<td>Proposed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.6: Laymans report</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gathering the input information for the Laymans report.</td>
</tr>
<tr>
<td>Proposed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.7: Project notification boards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Project notification board will be installed to the nature trail.</td>
</tr>
<tr>
<td>Proposed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.1: Project management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Common project management. Preparing the next Progress Report.</td>
</tr>
<tr>
<td>Proposed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.2: Project effectiveness monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Monitoring vascular plants, lagoon sediments and predation.</td>
</tr>
<tr>
<td>Proposed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.3: After LIFE+ management plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The action is scheduled to 2016.</td>
</tr>
<tr>
<td>Proposed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.4: Project networking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To be continued, establishing contact with CityWaters project.</td>
</tr>
<tr>
<td>Proposed</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
5.2 Dissemination actions

5.2.1 Objectives

It is crucial to inform the local residents and the visitors of Pärnu coastal meadow about the local nature values 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 urban environment grazing is only possible 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 visit the protected area just as an extension of public beach and behave accordingly. This may cause conflicts and problems like disturbing cattle, vandalism, picking protected plants etc. The largest proportion of that audience is targeted through visitor information and (social)media. We also cooperate or plan to do it with different stakeholders like local surfing clubs, tourism information centre and local hotels to reach that largest target group.

There are several activities concerned with raising the public awareness and the dissemination of the results. The strategy for implementing those activities is the publicity plan prepared in the frames of Action A.4, which summarises the means and methods how to develop positive attitude towards nature protection in city environment, how to raise the awareness of locals and tourists, how to involve different target groups, which campaigns are needed during the project and after the project is closed. This strategy is involved and referred to in case of each task of dissemination activities.

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 of Pärnu town and the local inhabitants. In addition we actively use local newspaper, local radio and also the national media to spread the news concerning the project.

We also have organised regular guided tours to various target groups (both locals and tourists) to introduce the project ideas and the value of the area. Those nature tours were initially planned to be targeted to the local people living close to the project area but due to great interest EB has organised those also for tourists both from other places in Estonia and abroad. Initially it was planned to organise at least 1 tour per year and 10 altogether but by now we have exceeded the total number already. We also plan to bring some excursions of schoolchildren to visit the area when the tourism infrastructure is ready. To ascertain those groups we can use the social media campaign e.g. to organise a drawing contest of URBANCOWS rewarded with an excursion.

We have planned to put together an exhibition based on roll-ups easy to move between different facilities targeted to local inhabitants and visitors of the town. This task is in progress as we are waiting for tourism infrastructure (nature trail) to be ready beforehand. We will use the exhibition longer than initially planned as the last year of the project has is the most suitable time for such kind of dissemination.

Expected quantifiable results of the dissemination actions are: one social media campaign carried out during the whole duration of the project; 10 nature tours; leaflet in 3 languages
(ENG, EST, FIN) on the project and the site; one portable exhibition put together and exhibited in different places.

5.2.2 Action D.1: Publicity of Pärnu coastal meadow

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social media campaign initiated</td>
<td>31/01/2013</td>
<td>Achieved in time</td>
</tr>
<tr>
<td>50% of nature tours completed</td>
<td>31/12/2013</td>
<td>Achieved in time</td>
</tr>
<tr>
<td>Exhibition completed</td>
<td>31/08/2015</td>
<td>Not relevant yet</td>
</tr>
<tr>
<td>100% of tours completed</td>
<td>31/01/2016</td>
<td>Achieved but will continue</td>
</tr>
<tr>
<td>Social media campaign completed</td>
<td>31/12/2016</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>

We started with raising the public awareness and introducing the aims and activities of the project to the public both at local and national level right after the start of the project. The first public events were oral presentations and nature tours organised during the first six months of the project. By now we have had more than 25 newspaper articles and several TV broadcasts on the project activities. All those are linked to the project webpage available at [http://www.keskkonnaamet.ee/linnalehmad/linnalehmad-2/meist-meedias/](http://www.keskkonnaamet.ee/linnalehmad/linnalehmad-2/meist-meedias/). One proof of the effectiveness of the publicity is that the establishment of the observation towers was nominated to the award of The Accomplishment of the Year 2014 of Pärnu granted by the local newspaper Pärnu Postimees.

We have carried out 12 excursion with ca 240 participants from various target audiences and more than 10 oral presentations with the total audience of ca 450 people. Although we have carried out the initially planned number of nature tours we will proceed with this activity also during the second half of the project as the natural conditions of the area are getting better due to the restoration activities and the area itself is more attractive due to the visitor infrastructure established.

Social media campaign was initiated in January 2013 by creating the Facebook site of the project. It 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 243 “likes” but the number of people reached by a single inscription could be up several thousand depending on people sharing the news in the social media network.

The task of portable exhibition is in progress as we are waiting for tourism infrastructure (nature trail) to be ready before physically printing out the exhibition materials. We will use the exhibition longer than initially planned as the last year of the project has is the most suitable time for such kind of dissemination as the nature conditions of the coastal meadow has recovered and attractive visitor infrastructure established.

Since the beginning of the project there have been several international dissemination events also. In September 2013 project manager of EB participated at the International Wader Study Group Conference in Wilhelmshaven, Germany. In August 2014 project manager of EB participated at the 9th European Conference on Ecological Restoration in Finland with 397 participants. There a contact was established with LIFE Xero-Grazing and 36 poster
outsprints (Annex 9) of the project handed out. In September 2014 project was introduced at the International Wader Study Group Conference with 125 participants held in Estonia.

### 5.2.3 Action D.2: Visitor infrastructure

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information panels set up to the entrances of the protected area</td>
<td>31/10/2012</td>
<td>Completed in May 2013</td>
</tr>
<tr>
<td>1 observation platform built</td>
<td>31/12/2013</td>
<td>Achieved in June 2014</td>
</tr>
<tr>
<td>Full nature trail established</td>
<td>31/10/2014</td>
<td>In progress</td>
</tr>
<tr>
<td>Public access to the nature reserve that does not harm the nature values</td>
<td>31/01/2015</td>
<td>In progress</td>
</tr>
</tbody>
</table>

The 14 information panels introducing the nature values, protection regulations, of Pärnu Coastal Meadow Nature Reserve, the traditional management methods of the coastal meadow complex and the project were set up in May 2013 by the contractor of PTG. We decided to postpone this action from late autumn to early spring because during winter the number of visitors of the nature reserve is minimal and the attention to the information boards negligible. The initially planned number was 10 but we decided to set up one panel per each public access to the project area. This did not influence the budget of the project as the price per panel was lower than expected.

The deadline of the 1st observation platform built was also postponed. Building visitor infrastructure assumed that the detail planning is finished and valid for the project area. Building observation platform or the nature trail in the project area before the detail planning process end would have been illegal in terms of national nature conservation and building law. This was not clear during the preparation of project proposal. Finally we built two observation platforms (see Annex 6 for photos) at the time and the official opening of those was in September 2014.

The blueprinting and establishment of nature trail also assumed the detail planning process carried out. The contractor of PTG could start blueprinting the nature trail in December 2013 with the initial deadline of the middle of March 2014. There were quite serious problems with the contractor who literally disappeared for several months not responding to the phone or e-mails. Finally the co-operation was re-established and the technical documentation of nature trail was ready in September 2014. Immediately after that the procurement to find the contractor to build the nature trail was initiated by PTG. The deadline of the full nature trail established is the 1

The 14 information panels introducing the nature values and protection regulations together with the physical barriers or signs established in the frames of Action C.6 and the nature torus organised for the locals all contribute to achieving the Milestone of public access to the nature reserve that does not harm the nature values. It has actually resulted in local visitors of the project area acting as a voluntary guards calling to the order of those behaving improperly, harming the nature or damaging the grazing infrastructure. EB also has a fruitful cooperation.
with Environmental Inspectorate which responds quickly if there are some serious violators e.g. dumping garbage of driving cars in the coastal meadow.

5.2.4 Action D.3: Sharing experience on management of urban NATURA 2000 in Baltic Sea region

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 excursion for the decision makers of similar areas conducted</td>
<td>01/08/2013</td>
<td>Completed in Oct. 2013</td>
</tr>
<tr>
<td>1 excursion for the decision makers of similar areas conducted</td>
<td>31/08/2014</td>
<td>Postponed until 2015</td>
</tr>
<tr>
<td>Conference on urban coastal seminatural communities management</td>
<td>31/10/2016</td>
<td>Not relevant yet</td>
</tr>
<tr>
<td>2 Study tour for the decision makers of areas similar to Pärnu</td>
<td>31/10/2016</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>

The 1st seminar and an excursion for the decision makers of the local municipalities of Estonia to introduce the URBANCOWS was held at the beginning of October 2013 (see Annex 6 for photos). Seven different municipalities were represented; the total number of participants was 27. During the excursion the project area and its development was introduced. The deadline was slightly postponed as August is the last month of vacations and it would have been difficult to find the participants and speakers. The potential number of participants was probably reduced by the elections of municipality councils for which the decision makers prepared during that time.

In the end of the September 2013 the project manager of EB gave on oral presentation introducing URBANCOWS to the decision makers and the residents of Kuressaare town with 24 people in the audience.

We assume that it would have larger impact if we postpone the next event of decision makers until 2015. In summer 2014 the visitor infrastructure was not ready yet nor were the lagoons restored. Therefore we decided not to repeat basically the 1st event without being able to show too much recent developments or share new experiences to inspire the participants. We plan to carry out the second seminar and excursion for the decision makers of similar areas in autumn 2015.

5.2.5 Action D.4: Best practice guidelines for management of urban coastal protected areas

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best practice guidelines</td>
<td>31/12/2016</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>
The input information for the best practice guidelines is gathered during the whole duration of the project.

**5.2.6 Action D.5: Project web page**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project webpage</td>
<td>30/04/2012</td>
<td>Accomplished in January 2012</td>
</tr>
<tr>
<td>Project webpage is available and visited</td>
<td>2012-2016</td>
<td>Available since January 2012</td>
</tr>
</tbody>
</table>

News section and the references to media articles on the project have been renewed continuously. We also create additional sections on demand if some deliverables not having the respective paragraph get ready. The webpage is available at http://www.keskkonnaamet.ee/linnalehmad.

We have not published the gallery of photos of the project activities at the webpage as this task is covered by the FB site where it is technically easier and probably gains more operative attention and feedback. The direct link to the FB site of the project is given at the project webpage.

The map elements of the project area will be published at the project webpage when the map of the area illustrated with the natural values of the area will be ready (in spring 2015).

In February 2013 the Google Analytics software was integrated to the project web page. Since then the number of visits has been 1148 of which 54% have been new visits and 46% returning visits. Most often Estonian people are visiting project web page (92% of visits) followed by Finland and Sweden. The average visit session duration is approximately 4 minutes and average number of subsections visited during one session is over 4 indicating that the visitors actually read the web page materials.

**5.2.7 Action D.6: Laymans report**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Deadline in Proposal</th>
<th>Status 31/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laymans report</td>
<td>31/12/2016</td>
<td>Not relevant yet</td>
</tr>
</tbody>
</table>

The input information for the Laymans report is gathered during the whole duration of the project.

**5.2.8 Action D.7: Project notification boards**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Deadline in Proposal</th>
<th>Status 28/02/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project notification boards set up</td>
<td>2012-2016</td>
<td>In progress</td>
</tr>
</tbody>
</table>
We have set up 3 large project notification boards on cattle shelters (see Annex 6 for a photo). There is also 4th large project notification board ready for setting up to the 4th cattle shelter which will be assembled in spring 2015. We have used smaller project notification boards in case of on the visitor infrastructure and electric fences.

5.3 Evaluation of Project Implementation

In this section mainly the planning 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.

<table>
<thead>
<tr>
<th>Task</th>
<th>Deadline in Proposal</th>
<th>Achieved</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action D.2: Visitor infrastructure</td>
<td>1 observation platform built 31/12/2013</td>
<td>June 2014</td>
<td>Achieved with a delay</td>
</tr>
<tr>
<td></td>
<td>Full nature trail established 31/10/2014</td>
<td>In progress</td>
<td>Will be achieved with a delay</td>
</tr>
</tbody>
</table>

The prerequisite for both technical documentation and establishment of visitor infrastructure was the detail planning process, the public display of detail planning documentation and the official confirmation by the local municipality followed by the reduction of building restriction zone. The process is required by the Estonian nature conservation and building legislation. The length of this process was not clear during grant application. Probably it was assumed that as the project deals with the visitor infrastructure listed in the management plan of Pärnu Coastal Meadow Nature Reserve the detail planning is not obligatory. In case of some building activities (e.g. information boards and steady fence establishment) such kind of exception is possible due to the peculiarities of Nature Conservation Law. However, quite soon after the start of the project it became clear that in case of such large and fixed buildings like observation platforms or nature trails the detail planning process is an obligation. The whole detail planning process took more than 1.5 years which was the main reason why planning visitor management infrastructure and establishing it took more time than expected. This in turn affected the reporting and payment schedule of the project as we were not able to reach the Midterm Report level of costs according to the initial plans. Therefore the lesson learned is that it would have been useful to clear this issue and the length of the detail planning process during the project application preparation phase and to draft the respective realistic schedule of the project. However, as we had to start with the building activities later than planned we had a chance to focus on the restoration activities resulting in the coastal meadow complex in better condition by the time of visitor infrastructure establishment.
<table>
<thead>
<tr>
<th>Task</th>
<th>Deadline in Proposal</th>
<th>Achieved</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action A.3: Species action plan</td>
<td>Species action plan ready 31/12/2013</td>
<td>Finalised in May. 2013</td>
<td>Delivered earlier</td>
</tr>
</tbody>
</table>

As we started with grazing the coastal meadow area (Action C.7) one year earlier than planned in the Proposal and by the initial deadline of the species action plan we would have grazed already for two years it was critical to review the respective deadline also. The main reason for this conclusion is that grazing (either too intensive or insufficient) and other conservation actions like old reed harvesting are the main factor that could directly affect protected terrestrial species still present in the area. So it was essential to pinpoint the respective areas and to clear if there are spots where the beginning of grazing should be postponed until the second half of the summer, which is the optimal grazing pressure, if we have to collect all the old reed in the area etc. The respective information was necessary to disseminate also to the cattle owners and subcontractors directly responsible for grazing or restoration activities. By delivering species action plan earlier we ensured that the restoration actions are carried out in the most cost-effective and beneficial way.

<table>
<thead>
<tr>
<th>Task</th>
<th>Deadline in Proposal</th>
<th>Achieved</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action C.1: Removing unwanted vegetation</td>
<td>100% of coastal meadows restored and under management 31/10/2014</td>
<td>Oct. 2014</td>
<td>Achieved in time</td>
</tr>
</tbody>
</table>

Removing unwanted vegetation was the task initiated right after the beginning of the project with the clear-cut of trees and bushes in the coastal meadow complex in Papiniidu district. Since then we have proceeded with this task cyclically by removing old reed and unwanted bushes only when it was sure that we would able to extend the grazing to that area right after the unwanted vegetation removal. As both the reed plants and bushes invading the coastal meadow regenerate vigorously from the roots taking all those down at once without being able to start grazing right after that would result in wasting the budget. This approach has justified itself as in those areas when grazing has followed the unwanted vegetation removal with a proper number of cattle per area unit minor assistance of agricultural machinery has been necessary even at the end of the first grazing season. The cattle have been able to suppress both the regrowth of reed and bush sprouts. Without initiating the grazing one year earlier than planned we probably would have not being able to cover the whole area by the end of this year as the volume of the conservation effort necessary has been larger than expected. Another lesson learned is that in the lagoon areas which are severely overgrown with reed the restoration of lagoons targeted to removal of reed rhizomes is necessary to support grazing. We had some heavily overgrown lagoons cleared from an old reed in 2013 with a special machinery but overgrown once again because cattle were not able to move on the unstable and swampy surface of reed rhizomes. Therefore the rhizomes have to be removed in advance.

The general lesson learned from removing unwanted vegetation is that on old reed has to be taken down before start grazing. General observation is that cattle do not enter old reed stands voluntarily probably because of reduced visibility and tend to stay in the higher areas with lower vegetation. Even if the cattle enter the reed overgrown areas most of the old stalks will
not be trampled and the recovery of the outlook of the habitat will take several years. Therefore they tend to graze some higher areas too heavily and those overgrown with reed will say infested by reed for longer. If the old reed is previously removed the cattle will graze the newly sprouted reed plants and enter those areas if the surface is not too swampy and the recovery process of the meadow habitat is much faster. Removing unwanted vegetation is definitely one of the activities that has been immediately visible as it results in fast change in the appearance of the area. However the effect of those activities to the species targeted will only become apparent after a certain time period when those have had enough time to recover.

5.4 Analysis of long-term benefits

5.4.1 Direct environmental benefits

Boreal coastal meadows and coastal lagoons are the habitats listed as priority habitats under Annex 1 of the Habitat Directive. We have targeted to restore and re-establish the sustainable management of ca 220 hectares of coastal meadows and at least 50 hectares of coastal lagoons in a particular Natura 2000 network area, Pärnu Coastal Meadow Nature Reserve. 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. If we manage to maintain the sufficient grazing of coastal meadow complex at the second half of the project and years after that then there will be clear environmental benefits in terms of preserving valuable priority habitats in substantial quantity. Coastal meadow complexes larger than 100 hectares are rare even in Estonia and coastal lagoons of Pärnu rather distinguishable. We have also targeted at least 12 protected plant species of those habitat types which all will benefit if the project succeeds in reestablishment of sustainable management of the area and better quality of the habitats.

5.4.2 Long-term benefits and sustainability

The outlook of the targeted habitats is continuous and efficient grazing also after the project has ended in which case the favourable condition of those and the protected species characteristic to well-managed seminatural coastal areas would be preserved. The long term management of the project area 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 coastal meadow complexes in protected areas is also included there. There is no reason to believe that this scheme will not continue also after the year 2020.

The most realistic remaining threat is that due to high vandalism level or some violent act like it was the killing of one bull in 2013 the cattle owner would give up grazing the project areas. Fortunately the replacing process of one cattle owner we had to undergo this year indicated that the interest towards managing such a large areas even in urban environment is not poor if the restoration actions are practically finished. The sustainability of the management activities initiated during the project will be the responsibility of EB and PTG also after the project: EB is responsible for organising the management activities of such protected meadows and PTG is a land owner of the majority of the project area. In cooperation of those two the presence and high quality of meadow grazing has to be assured.
The visitor infrastructure of the area established during the project will be kept in the budget of PTG which will be responsible for the maintenance of it. They will use town budget or apply for additional sources (e.g. Estonian Environmental Investments Centre) if a major repair is needed.

Long-term economic benefits probably realize through some new business opportunities for local tourism entrepreneurs. When the visitor infrastructure will be ready and the area kept in favourable conditions the local nature tourism entrepreneurs could add this destination to their programs. There have been some indications that the local birdwatchers organised some tours to the project area already in spring 2014. Another economic benefit opportunity would be available for the cattle owners 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 of town from abroad or more aware of that concept quite common there.

Long-term social benefits will realize through urban environment getting 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 area. Better recreational options and more time spent in fresh air will result in better health of people. The sea view itself available after the restoration of the project area and the cattle in urban environment creates positive emotions or at least a surprise. The local schoolchildren and kindergartens started to visit the project area as soon as the first cattle arrived to get familiar with the area and see the cattle. During that time of the year when the cattle is not present all visitors of the area can walk around also in the pasture plots which was not possible before the project as all the area was 2-3 meters high reed bed 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.

5.4.3 Replicability, demonstration, transferability, cooperation:

The project itself is definitely a good example to demonstrate that grazing of protected urban coastal areas is feasible. There has been several examples in Estonia where the local municipality has been too cautious and not favoured grazing in similar conditions to Pärnu. Therefore the disseminatation that is targeted to the decision makers of other Estonian municipalities is important. The respective dissemination is supported by the fact that one beneficiary of the project is local municipality which would create more trust among the similar stakeholders. Another demonstrational value of the project area is that in our case we have been able to get quite outstanding effect of restoration in some pasture plots already during the first year. The key to that is early start of grazing in spring and adequate amount of cattle per area unit. Quite common practice in Estonian coastal meadows is that cattle keepers are not able to meet the respective demands of grazing quality even years after initial restoration of the area. So the project area is an example to demonstrate that when managing the area properly the high quality results are feasible.

In terms of economic feasibility grazing coastal meadow complex is definitely more cost effective and less fossil fuels consuming than hay making that is another possibility of the management. In case of hay making the costs of operating machinery and transportation of the product would accrue. There is a clear threshold of transportation distance above what it is economically disadvantageous to transport the biomass from the source to the consumer. This
distance is usually less than 50 kilometres. The hay made in the coastal meadow not in good condition has a low quality which influences the economy also. The weather conditions should be favourable during haymaking to get better quality and reed grows back quite quickly after haymaking anyway so the natural conditions of the coastal meadow complex would not be the same as in case of grazing.

The project activities and the results in terms of visitors infrastructure and traditional appearance of the coastal meadow been restored will be beneficial to all members of the project team. In case of EB the benefit is that the image of nature use limiter turns more “human friendly” as we can demonstrate that moderate human activity in protected coastal areas is not forbidden like people tend to think but it is even favoured to preserve valuable habitats and species. PTG benefits in terms of more “greener” image resulting in promoting such kind of activities like restoration of nature reserve and establishment of respective visitor infrastructure. The town and the habitants will benefit from the environment getting more diverse and recreational possibilities wider. PC will benefit from the creation of an outdoor education destination for the students of nature subjects.

The main obstacle for the transfer of the experiences and wider restoration of protected coastal meadows is that we have practically reached the threshold of coastal meadows under management stated in the Estonian Seminatural Grassland Management Action Plan for 2014-2020. So expanding the respective area is not the first priority of the respective nature protection policy at the moment as there are several other habitat types lacking in management quality and quantity. Another obstacle is that larger complexes are already under management and there is not that large area left to restore like it was in case of Pärnu. However, there is a potential in case of poorly managed coastal meadow complexes which owners or manager definitely could benefit from the experiences gained during this project.

**5.4.4 Best Practice lessons:**

We have got the confirmation to our hypothesis that initiating grazing right after the removal of an old reed from the coastal meadow will result in fast recovery of the traditional appearance of coastal meadow complex and an efficient suppression of reed regrowth. However, the critical clause is that grazing has to be started as early in spring as possible before the reed plants have rolled out their leaves and the grazing pressure has to be adequate to depress the regeneration of reed plants. The pervious removal of an old reed is necessary as it favours more homogenous usage of the pasture plots by cattle.

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

The quantifiable indicators to be used in future assessments of the project success are given below. Those are two priority habitats of the Annex I of the Habitat Directive (Directive 92/43/EEC) and two species listed in the Annex II of that directive: the fen orchid (*Liparis loeselii*), marsh angelica (*Angelica palustris*). The criteria to monitor should be the favourable condition of both habitat types and the stable or growing population of the species considered.
<table>
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<tr>
<th>Deliverable</th>
<th>No. of concrete actions</th>
<th>Species involved (Latin name)</th>
<th>Type of habitats involved (*)</th>
<th>No. of species involved</th>
<th>No. of habitats involved</th>
<th>No. of N2000 sites involved</th>
<th>Surface involved (ha)</th>
<th>Budgeted cost (€)</th>
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<tr>
<td>Natura 2000 site creation</td>
<td>2</td>
<td>Liparis losselli; Angelica palustris</td>
<td>Boreal coastal meadow (1630°); coastal lagoons (1150°)</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>270</td>
<td>320854</td>
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<td>Natura 2000 site restoration/Improvement</td>
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<td>Liparis losselli; Angelica palustris</td>
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<td>3</td>
<td>1</td>
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<tr>
<td>Total (Every item counted only once)</td>
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<td>N/A</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>270</td>
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(*) Identification number and name as in the Directives
6. Comments on the financial report

The VAT declaration of Tartu University Pärnu College (PC) not submitted yet is given in Annex 10.

6.1. Summary of Costs Incurred

<table>
<thead>
<tr>
<th>Cost category</th>
<th>Budget according to the grant agreement* (€)</th>
<th>Costs incurred within the project duration (01.01.12-31.12.14) (€)</th>
<th>%**</th>
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<td><strong>45,21</strong></td>
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*) If the Commission has officially approved a budget modification indicate the breakdown of the revised budget. Otherwise this should be the budget in the original grant agreement.

**) Calculate the percentages by budget lines: e.g. the % of the budgeted personnel costs that were actually incurred.

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. We have not yet carried out the most expensive tasks like lagoon restoration and building of the nature trail which is the reason for the budget of External assistance being underspent. In case of Consumables half of the budget is meant for the monitoring consumables of lagoon environment which will be carried out in the second half of the project.

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 both 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 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 project manager together with 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 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 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 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 URBANCOWS.

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 contracts, 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 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 manager 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 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 in March
2012. 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 manager 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 in the financial tables in accordance with the instructions of the project manager of EB. However, all the inscriptions of the financial tables of associated beneficiaries are double checked by the project manager 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:

6.4 Summary of costs per action

The costs of action A.1 have been somewhat larger than expected (ca 5500 Eur) as it was necessary to order an independent technical expertise for assessing the quality of both the technical documentation of observation platforms and the nature trail. This assured the high quality of the respective documentation and minimised the respective problems during the building activities. 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 A.2 due to the expensive fieldworks to study the lagoons in the frames of planning the lagoon and water regime restoration. The respective over expenditure has been ca 1000 Eur which will not affect the overall budget of Travel and subsistence.

The third derivation from the initial budget are the costs of Project networking (E.4) which has been more active and fruitful then initially predicted. The amount overspent is ca 3800 Eur from the budget of Travel and subsistence. However, this will not affect the overall budget of Travel and subsistence or the general implementation of the project either as the travel costs of local meetings have been smaller than predicted.

In case of the rest of Actions still running we foresee that those can be implemented with the proposed budget.
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7. Annexes
8. Financial report

The Mid-Term financial report of URBAN COWS is delivered as a separate volume together with given Technical Report.