



LIFE Project Number  
**LIFE 15 NAT/DK/000948**

**Progress Report (first)**  
**Covering the project activities from 01/09/2016 to 30/09/2017**

Reporting Date  
**30/09/2017**

**Actions for improved conservation status of the Thick Shelled River  
Mussel (*Unio crassus*) in Denmark**

**- UC Life Denmark -**

Data Project

<b>Project location</b>	Denmark (Zealand)
<b>Project start date:</b>	01.09.2016
<b>Project end date:</b>	31.12.2021
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<b>(%) of eligible costs</b>	60,0

Data Beneficiary

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## **2. List of abbreviations**

NK = Næstved Municipality / Næstved Kommune

CB = Coordinating beneficiary

GA = Grant Agreement

PM = Project Manager

### **3. Executive summary**

#### **3.1 Assessment as to whether the project objectives and work plan are still viable.**

This is the first progress report of the UC Life Denmark project concerning reintroduction and management of the Thick Shelled River Mussel (*Unio crassus*) in Denmark.

During the first 13 months of the project we have focused on gaining knowledge about the host fishes and their susceptibility to glochidia-infection. Many resources have also been used on involving landowners and interest groups in the project and its technical issues. Overall this means that the project is partly delayed in action A1 and delayed in action C5. Due to these delays we present an alternative / revised timetable, and also an alternative technical plan for the stocking / release schedule of the host fishes (Minnow and European Bullhead) – cf. action C5.

Other preparatory and monitoring actions are running almost as foreseen in the GA. We have put a lot of effort into the dissemination actions in order to obtain public ownership. The projects' website and database is up and running.

The overall project progress is illustrated in a Gantt chart (annex 2).

We conclude that the overall project objectives and targets are still valid.

#### **3.2 Problems encountered**

We have put more effort into communication with the landowners and various interest groups in the subprojects, than the GA warrants. As a result, we have increased local ownership to the project, but the start-up of some of the actions has been delayed – e.g. start-up of action A1. We will however catch up to this delay shortly.

Additionally, we have increased our knowledge about the biology of the host fishes and their susceptibility to glochidia-infection. We can conclude, that the application is too optimistic regarding the possibilities of glochidia-infection of the host fish, and we present (see action C5) a revised stocking / infection / release program. The revised program fits the biology of the host fish, and we will be able to release the same number of fish in total, as stated in the GA. In addition to this, the revised program also fits the timetable for the proposed conservation actions in subproject 2. Overall, the adjustments in the program will most likely secure a better outcome of the costly investments made in stocking, glochidia-infecting, and release of the host fish.

There are minor errors in the GA in regards to the flow of e.g. the conservation actions (C actions) and the archaeological surveys (action A1) compared to the timetable. We therefore propose adjustments of the timetable for several actions. The major adjustments are as follows:

<b>Action</b>	<b>Technical part</b>	<b>Timetable adjustment</b>
<b>A1</b>	Archaeological investigations	First part to be finished in 2018 and second part in 2019
<b>A1</b>	Water samples	Samples will also be collected in 2021
<b>C1</b>	Watercourse bottom substrate	Implementation only in 2019
<b>C4</b>	Planting of water-plants	Implementation only in 2019 and 2021
<b>C5</b>	Reintroduction of Minnow and European Bullhead	Implementation from 2018 and onwards

In the description of the action progress (section 5) we have addressed the subjects mentioned above in detail and in accordance with EASME's letter dated 16<sup>th</sup> May 2017.

*We kindly ask EASME to acknowledge the proposed adjustments to the various actions and the timetable (please see the table above).*

## **4. Administrative part**

### **4.1 Description of project management**

The project management is taken care off in action F1 as follows:

- NK is the coordinating beneficiary and has established a secretariat to support the project. The secretariat is composed of the project manager (Bent Hummelose) and an economic controller (Gert Magnus Hansen). Originally Malene Callesen Dall was the PM, but she is now part of the project group.

The PM is supported by an assistant project manager.

NK is the sole partner in this project. The Head of Center of Planning and Environment, Pernille Balslev-Erichsen, is chairman of the internal steering group. Team manager, Charlotte Thiel Weber Johansen is project owner of the project. NK is a political organisation, and the Technical Board is regularly informed about the progress of the project.

- The project group takes care of the day to day activities in the project. The project group consist of Malene Callesen Dall, Søren Madsen, Palle P. Myssen, Sofia Mulla Kølme, Elisabeth Bruun and Dorthe Brink Lillelund. Malene Callesen Dall and Søren Madsen are supported by the PM, Pernille Balslev-Erichsen and Charlotte Thiel Weber Johansen in the daily work when necessary. For example support is given in relation to handling public information and dissemination and in relation to the political level in the municipality.
- In annex 1 we have attached the account codes of the project.

## **4.2 Previous reports and amendments**

This is the first progress report according to the reporting scheme in the GA.

## **4.3 Organigram**

The organigram (in Danish) from the GA is still valid.

## **4.4 Comments to EASME's letter dated 16<sup>th</sup> May 2017**

The external Neemo monitor Camilla Strandberg-Panelius visited the project on the 7<sup>th</sup> of March 2017. This was the first monitor visit to our project. It was followed by a number of comments and requests, which we address below.

Ad 1) EASME notes, that action A1 has been partly delayed and that action C5 has not yet started. EASME asks for a description of the consequences of these delays, a new timetable and technical changes.

In section 5.1.1 and 5.1.9 we address these issues.

In short, action A1 is partly delayed due to the timing of the archaeological surveys. Furthermore, the water quality measurements will be partly delayed. We present a revised timetable for these tasks. Other minor delays – e.g. in relation to the project plan – will be caught up on during 2017. In these cases we will be able to respect the deadlines of the GA.

In short, action C5 is delayed. The overall reason is that we have gained new knowledge about the lifecycle of the host fishes and their susceptibility to glochidia-infection. This will influence the stocking program and the timing of host fish release. Another reason for delay is, that NK must have a certain level of support from interest groups and landowners in the subprojects, before we initiate a costly stocking program. We present a revised plan for the stocking / release plan along with a revised timetable.

Ad 2) EASME notes, that there is probably a misunderstanding in relation to the deadline for landowner dialogue (action A3) in subproject 1. We confirm that the correct deadline is December 2018. This is shown in the Gantt Chart (annex 2).

Ad 3) EASME notes, that there is a mistake in the timetable for action C4. We confirm that the correct deadline is September 2021. This is shown in the Gantt Chart (annex 2).

Ad 4) EASME notes, that there are delays in both action D2 and D3. Below - in section 5.1.11 and 5.1.12 – we clearly explain how we have started these actions and their implementation to catch up the delay.

Ad 5) EASME notes, that the communication strategy in action D2 is delayed. The project has caught up the delay and has produced a communication strategy for the project. Below - in section 5.1.12 – we clearly explain in more detail how we have handled the communication strategy and how the delay was caught up.

Ad 6) EASME notes, that the projects workshop in action E2 is delayed. The workshop has taken place in the form of a one-day workshop on Funen, where we have discussed the project with national experts within the field of fish stocking and infection of host fish with glochidia. Below - in section 5.1.14 – this is explained in more detail.

Ad 7) EASME notes, that the personnel costs will be divided among more persons than foreseen in the GA. We appreciate that this is acceptable, as long as the work is as foreseen in the GA.

Ad 8) EASME draws our attention to the public procurement rules. We are aware of these rules and we will keep the necessary documentation in our files. During the first months of the project we have already performed several tendering procedures – e.g. in relation to the assistant project manager.

Ad 9) EASME also draws our attention to the threshold value of 130.000 € for open tendering procedures. We are fully aware of this threshold concerning tendering in the future.

Ad 10) EASME notes, that our time registration in principle is correct. We appreciate this, and we note further, that the total working time in a LIFE project cannot include e.g. illness, vacation and lunchtime.

## 5. Technical part

The primary objective of this project is to contribute to obtain a favourable conservation status of Thick Shelled River Mussel (*Unio crassus*) in Denmark. The present conservation status of the mussel in the Danish continental biogeographic region is very poor, and is in danger of further deterioration in the coming years.

To increase the mussel population in the Suså river, the main initiative in the project is to stock the mussels' host fish (Minnow (*Phoxinus phoxinus*)) and infect it with mussel glochidia. Thereafter the infected host fish will be released in the Suså, and eventually the glochidia will be released and establish themselves in the river substrate. We will also re-introduce the European Bullhead (*Cottus gobio*) as a host fish for the mussel on a somewhat smaller scale.

We will also improve the physical conditions in the Suså river by e.g. removing obstacles and improving the bottom substrate to support the host fish population in the future.

The project operates on two individual stretches of Suså river. Subproject 1 concerns app. 13 km of the upper Suså river while subproject 2 concerns app. 5 km of the lower Suså river. Infected host fish will be released in both subprojects, while the physical improvements of Suså river will take place in subproject 2 (lower Suså) only.



## 5.1 Activities

Below we address the project progress, action by action. The progress is also illustrated in the Gantt chart in annex 2.

### 5.1.1 Action A.1 – Biological and technical documentation

Biological and technical surveys are performed to support management and restoration works.

NK has performed a technical investigation of the possibilities for watercourse improvements in subproject 2 prior to the LIFE application. Thus, at this point we are ahead of the timetable.

Since November 2016 the technical reports about the watercourse restoration in subproject 2 have been presented to, and discussed with, the landowners bordering the Suså river, and with various local organisations (e.g. the local canoeing organisation). The outcome is that NK during the autumn of 2017 will ask consultants to conduct further biological and technical investigations in order to present a revised and improved project. This will form the basis for agreements reached with the landowners (cf. action A3). NK expects these additional technical investigations to be performed within the original timetable, and without any delays.

NK foresees a delay concerning the archaeological investigation. Thus the most logical way to perform this investigation is to await the final technical investigations and the agreements with the landowners. The archaeological investigations will be divided into two separate activities. The first will be a survey, while the second will be in relation to the construction works. The first activity will then be performed prior to the detailed planning of the physical changes, while the second activity will be performed in connection to the actual construction works. The archaeological investigation will be delayed with more than 12 months and we expect the first part to be carried out in late 2018 and the second part during 2019. We do not expect the delay to have any influence on the concrete construction works in the C-actions and the timetable for these actions.

This action also includes a project plan for the release of glochidia infected host fish. The project plan shall answer a number of questions related to the stocking and infecting of the host fish. It will also answer questions relating to mapping of relevant river stretches for release of infected host fish. The plan shall also describe an exit strategy, and present a cost/benefit analysis. Finally, the plan shall map the water quality on river stretches in both subprojects.

During the first month of the project, and during the workshop in action E2, we have obtained new knowledge about the biology of the host fish, and their symbiosis with the river mussel's glochidia. Thus, we have become aware, that the host fish Minnow (*Phoxinus phoxinus*) must have a certain size (4 cm, equivalent to the age of 1 year) before the infection with glochidia can take place. We have also learned, that the European Bullhead (*Cottus gobio*) will be very difficult to stock, due to the fish's natural breeding behaviour. These findings will have an influence on the recommendations in the project plan, and certainly on how we will be able to implement action C5 (stocking and infection of host fish).

The project plan should have been started in late 2016. Instead we have presented a tendering procedure in September 2017 for the project plan, based on the above findings. In October 2017, a selection procedure will take place, and the project plan will be prepared during the remaining of 2017. This way, we will still be able to present the project plan as required by the GA's timetable. This will also include water quality measurements. To be able to present a one year variation, however, these measurements will continue until the autumn 2018. The water quality measurements will be reported in a separate report. Furthermore, the water quality elements will also be measured at the end of the project period, so that project effects can be documented.

Overall, action A1 is in progress, and we expect to present most of the deliverables according to the original timetable in accordance with the GA. The archaeological investigation being the exception. These will be delayed until December 2019. Another exception are the water quality measurements, which will be due in 2018 (pre conditions) and 2021 (post conditions).

*We kindly ask EASME to acknowledge the proposed postponement of the archaeological investigation, and that the investigation will be divided into two activities. In addition, we ask EASME to acknowledge the proposed postponement of the water quality measurements.*

### **5.1.2 Action A.2 – Authorization procedures**

In relation to the construction works and the stocking and releasing of host fish, the necessary authorization procedures must be in place. In practice the authorization procedure will be initiated as soon as possible in relation to the host fish schedule. Later on, the authorization procedure will include applications connected to the actual construction works which in turn are dependent on successful agreements with the landowners.

In subproject 2 the area for the new 880 m riffle is located in a conserved area. We are well aware that the authorization procedure related to the conservation can be slow. We will therefore contact the conservation board as soon as possible, to make sure that it is prepared to handle our authorization request in due time.

Action A2 is highly dependent on the progress in action A1, A3 and B1.

The action is due from July 2017 until December 2018, and will be initiated shortly in relation to the stocking programme for host fish (Cf. action C5). We still expect the original objectives and timetable of the GA to be valid.

### **5.1.3 Action A.3 – Landowner negotiations**

The aim of this action is to perform negotiations and obtain agreements with the private landowners in connection to subproject 2. The agreements will pose as the framework for the compensation for land rights, reduced fishing income and reduced power production.

Involvement and dialogue with the primary landowners and various interest groups is a key element in this project, and it was started in 2015 with two meetings (2<sup>nd</sup> October 2015 and 26<sup>th</sup> November 2015) as preparation to this LIFE project.

NK finds involvement and dialogue very important as a means of obtaining the most viable project. We have therefore spent some time in the beginning of the project securing local ownership, and this is the main reason for the delays in the technical investigations recognised in action A1. Thus during this reporting period, we have had several meetings with the landowners and various interest groups as follows:

4<sup>th</sup> of February 2016  
9<sup>th</sup> of August 2016  
7<sup>th</sup> of November 2016  
9<sup>th</sup> of December 2016  
1<sup>st</sup> of March 2017  
12<sup>th</sup> of June 2017  
12<sup>th</sup> of September 2017

We intend to continue this dialog and involvement strategy in the coming months, in an effort to make sure, that all interests are considered in the coming technical investigations (cf. action A1). At the meeting in September 2017, all landowners still accept to proceed with the technical and biological investigations (cf. action A1).

The action is due from October 2016 until December 2018. Through dialogue we present some progress in the action, and we expect to present a solution in accordance with the objectives of the GA and the original timetable. This also applies to the landowner dialogue in subproject 2.

#### **5.1.4 Action B.1 – Economic compensation to landowners**

The aim of this action is to pay compensation to the 3 private landowners in subproject 2, and to compensate for lost fishing rights and power production rights. Payment of the compensation depends on succeeding in Action A3.

The action is due from January 2018 until December 2018, and has not yet been initiated, as it will be highly dependent on the outcome of action A3. At this moment, we consider the objectives and the timetable of this action unaltered compared to the GA.

#### **5.1.5 Action C.1 – watercourse bottom substrate**

This action is an actual conservation action, and it will be implemented on 3.500 m of Suså river in subproject 2. The purpose is to improve the bottom substrate in the favour of the mussel. Planning and technical descriptions of this action will occur in action A1.

The action is due from July 2017 until December 2019, and has not yet been initiated. The action cannot be initiated before we have obtained agreements with the private landowners (action A2). The action is also connected to completion of action C3. We therefore expect that the full implementation will take place only in 2019. However, we still expect the deadline and the foreseen results in the GA to be valid.

*We kindly ask EASME to acknowledge the proposed change of the timetable. The change means that there will be no activity in 2017- 2018 but only in 2019.*

### **5.1.6 Action C.2 – planting of vegetation along the watercourse**

This action is an actual conservation action and will be implemented on 500 m of Suså river in subproject 2. We will plant trees to create more shadow for the watercourse, and in turn stabilize the water temperature. Planning and technical descriptions of this action will occur in action A1.

The action is in 2019, and has not yet been initiated. The action cannot be initiated before we have obtained agreements with the private landowners (action A2). We still expect the deadline and the foreseen results in the GA to be valid.

### **5.1.7 Action C.3 – Re-meandering of watercourse and establishment of continuity**

This action is an actual conservation action and it will be implemented on 880 m of Suså river in subproject 2. In this action we will also remove the obstacle at Holløse Mølle. Planning and technical descriptions of this action will occur in action A1.

The action is in 2019, and has not yet been initiated. The action cannot be initiated before we have obtained agreements with the private landowners (action A2). We still expect the deadline and the foreseen results in the GA to be valid.

### **5.1.8 Action C.4 – Planting of water-plants**

This action is an actual conservation action and it will be implemented on 880 m of Suså river in subproject 2. The planting will take place when the re-meandering in action C3 is completed. Planning and technical descriptions of this action will occur in action A1.

According to the GA, the action is due from July 2018 until September 2020, and it has not yet been initiated. The action cannot be initiated before we have obtained agreements with the private landowners (action A2) and action C3 is completed. We therefore propose that the timetable is changed and running from July 2019 until September 2020.

*We kindly ask EASME to acknowledge the proposed change of the timetable. The change means that there will be no activity in 2018 but only in 2019 and 2020.*

### **5.1.9 Action C.5 – Reintroduction of Minnow (*Phoxinus phoxinus*) and European Bullhead (*Cottus gobio*) infected with mussel glochidia**

This action concerns collection, stocking and glochidia-infection of the mussels host fish; Minnow (*Phoxinus phoxinus*) and European Bullhead (*Cottus gobio*). According to the GA, this work was scheduled to start at the beginning of the project period in late 2016.

For various reasons we have been delayed. Below we present an alternative plan and timetable for implementation of the action in accordance with the comments from EASME in the letter dated 17<sup>th</sup> May 2017.

Overall we expect the alternative plan to be able to fulfil the action's objectives as stated in the GA.

#### Reasons for the delay

The description of the stocking and releasing procedure in the GA is apparently too optimistic for a number of reasons:

- As explained in section 5.1.1 the biology of the Minnow means that the young fish must have a certain age (4 cm long and at least 1 year of age) before infection can take place. Therefore artificially infected Minnows cannot be expected to be released until 2019. It is further noted, that collection of aged Minnow may be very unsuccessful as far as glochidia-infection is concerned, because older fish may be immune to the infection if previously infected under natural conditions. Therefore, glochidia-infection certainly is expected to be most effective, when used on young artificially grown and glochidia-susceptible fish.
- Regarding the European Bullhead, we have learned that its reproduction is very complex, and that it also becomes immune to glochidia-infection in the same way as the Minnow. Collecting of various aged European Bullhead followed by infection under controlled conditions, will therefore most probably be very unsuccessful. The most effective way to introduce European Bullhead into the project's watercourses will be by making a yearly collect and release event during the spring. This is expected to result in a population of European Bullhead in the watercourses, which will support the lifecycle of the mussel.
- In subproject 2, the 5 km long stretch of the Suså river will be reconstructed due to the activities in action C1 and C4. We assess, that the release of stocked glochidia-infected host fish prior to these construction works is at high risk of being unsuccessful due to the disturbances caused by the construction works. The best strategy for the release of stocked glochidia-infected fish in subproject 2 will therefore be to release them after the construction works/re-meandering.
- In both subprojects, the release of the host fish must be coordinated with the river stretches that have the appropriate water quality (cf. action A1 and D1). This has to be done to ensure the best survival rate.
- Handling of the landowners interests, as well as other interests (cf. Action A2 and E1), has been more complicated than foreseen in relation to the presented project. NK prefers to have a certain level of support and ownership from these interest groups prior to initiating the costly stocking and infection program.

#### Proposal for a revised stocking / release plan and a revised timetable

Based on above the findings, we propose a revised plan for the stocking, glochidia-infection and release of host fish. The main points of the revised plan are as follows:

- In September 2017 we presented a tender for the stocking – infection – release program. The tender is on the website [www.udbud.dk](http://www.udbud.dk) from 22<sup>th</sup> September 2017 until 20. October 2017. We expect to sign the contract in October 2017.
- In the tender document we have presented a timetable for the stocking, glochidia-infection and release. As a start, we propose to release adult species of Minnow and European Bullhead in subproject 1, to build the basis for further reproduction, and later on young fish, capable of infection. For the Minnow, the release will occur in rather low numbers in 2018, and for European Bullhead from 2018-2021.
- Parallel to the release of adult fish, we will start the stocking of young Minnow. As soon as possible – and probably in the spring 2019 – the young Minnow will be ready

for glochidia-infection, followed by release in subproject 1. Release in subproject 2 will occur as soon as the construction works are in place (planned in 2019), with release starting in the spring of 2020 and onwards. Overall, this release will occur in rather high numbers, and we will release a total of 40.000 infected Minnows (please see table below).

- We depart from the strategy of controlled glochidia-infection of the European Bullhead based on the arguments above.

The revised stocking, glochidia-infection and release schedule for the Minnow and the European Bullhead can be summarized as follows:

Minnow (*Phoxinus phoxinus*)

Year	2017	2018	2019	2020	2021	In total
Release numbers	0	200*	10000	15000	15000	40.000

European Bullhead (*Cottus gobio*)

Year	2017	2018	2019	2020	2021	In total
Release numbers	0	375*	375*	375*	375*	1.500

\*Not glochidia infected

Overall, the revised stocking schedule will allow the release of 40.000 Minnows and 1.500 European Bullhead in the Suså river, in accordance with the GA. Although we plan to change the release rate of host fish and to make a slight reduction in the number of glochidia-infected fish we still believe that the objectives of the GA are valid with respect to the expected density of the mussel in the river bed at project closure. The proposed changes can therefore be considered to be insignificant compared to the project's objectives and goals.

*We kindly ask EASME to acknowledge the proposed changes of action C5. The revised timetable means that we will start this action in the autumn 2017 with the first host fish release in 2018.*

### 5.1.10 Action D.1 – Baseline and impact monitoring

This action monitors the effect of the project actions by use of a number of indicators in the two subprojects as follows:

- A) Physical index
- B) Occurrence of Thick Shelled River Mussel (*Unio crassus*)
- C) Occurrence of Minnow (*Phoxinus phoxinus*) and eventually European Bullhead (*Cottus gobio*)
- D) Photos
- E) Arial photos (only subproject 2)
- F) LIFE performance indicators

The monitoring will be performed as a baseline study early in the project and as an effect study at the end of the project. Results will be reported in the final report.

During this reporting period we have performed the baseline monitoring as shown below. The data will be used in the coming planning of the concrete management actions.

A) Mapping of physical index. The results are reported by SBH Consult (July 2017). The survey also mapped the occurrence of watercourse fauna (e.g. insects).

B) Mapping of Thick Shelled River Mussel (*Unio crassus*). The results are reported by Karlstad University. The mussel was found in river stretches in subproject 1 and in the nearby Torpe Kanal. Overall 21 mussels were recorded. Most of the mussels were quite old and we did only record one juvenile individual indicating lack of reproduction.

C) Mapping of Minnow (*Phoxinus phoxinus*) and eventually European Bullhead (*Cottus gobio*). The survey shows that neither (as expected) of the two host fish species occurs in the Suså river. This could be one reason for the missing juveniles of the mussel.

D) Photos of the stretches of the Suså river in the two subprojects.

E) Arial photos from 2016 and 2017

F) The LIFE performance indicators are unchanged compared to the indicators table in the GA. The indicators table is attached in annex 3.

In conclusion, the baseline monitoring was performed as foreseen in the GA, and almost within the proposed timetable. We will continue working with the indicators, following the timetable.

### **5.1.11 Action D.2 – Socio-economic monitoring**

This action monitors the socio economic impact of the project based on five indicators:

- A) Activity at local companies
- B) Recreational fishery
- C) Increased settlement
- D) Employment due to project implementation
- E) Press coverage and a communication strategy

The monitoring will be performed throughout the entire project period, and results will be reported in the final report. During this reporting period, we have performed the baseline monitoring as follows:

A) According to the account, we have placed orders at private companies so far for 19.578 €

B) We asked two local fishery boards (Fladså Sportsfiskeforening and Suså Sportsfiskeforening) in subproject 1 and 2, for the activity of recreational fishing. Although the boards sell fishing licenses, no data is available on the actual recreational fishing. The chairmen of the boards believe that no recreational fishing occurs at present.

C) Settlement data will be extracted from a Næstved Municipality database.

D) In this reporting period, the project has resulted in the employment of 196 person days.

E) So far, the project has been reported on at 11 occasions, both in the local printed press and in the national radio. The most important articles and features are available on the project's website ([www.merelivisusaaen.dk](http://www.merelivisusaaen.dk)). During 2017 we have also produced a communication strategy (annex 4).

In conclusion the baseline monitoring was performed as foreseen in the GA, and almost within the proposed timetable. We will continue working with the indicators according to the timetable.

### **5.1.12 Action D.3 – Monitoring of ecosystem services**

This action monitors the ecosystem services of the project based on three indicators:

- A) Natural dynamics in watercourses
- B) Recreational possibilities and tourism
- C) Protection of certain gene pools

The monitoring will be performed throughout the project, and results will be reported in the final report. During this reporting period, we have performed the baseline monitoring as follows:

A) The natural dynamics of watercourses in the project was measured in the summer 2017 as physical index (cf. indicator A in action D1).

B) This indicator is measured as the activity of recreational fishing (cf. indicator B in action D2) and as the use of the project site for recreational purposes. At present, the recreational fishing is absent, while the recreational use has been illuminated by the use of a questionnaire. We are still analysing the collected answers.

C) The conservation status of the Thick Shelled River Mussel (*Unio crassus*) will be evaluated by use of European data on EIONET. The present article 17 reporting states, that the conservation status in the continental biogeographic region is either poor or very poor in most of the countries (including Denmark) in the region.

In conclusion, the baseline monitoring was performed as foreseen in the GA, and almost within the proposed timetable. We will continue working with the indicators according to the timetable.

### **5.1.13 Action E.1 – Public information**

Public information is implemented by use of the following activities:

- A) Website
- B) Information signs
- C) Layman report
- D) Public meetings, advisory boards, green boards, guided tours

Action E1 will be performed throughout the entire project period. During this reporting period, we have performed the following activities:



A) A website ([www.naestved.dk/susaa](http://www.naestved.dk/susaa)) was launched in September of 2016. About one year later, in August 2017, we transferred the website to [www.merelivisusaaen.dk](http://www.merelivisusaaen.dk) and the English version [www.uclife.dk](http://www.uclife.dk). The website is available in English and Danish. The website is maintained by NK and updated regularly.

B) Temporary and permanent information signs will be raised as soon as we operate on the ground at the project sites.

C) The Layman report is due at the end of the project period.

D) We have put in a great effort into informing the general public and the landowners about the project. On 8<sup>th</sup> of November 2016, we arranged a public meeting with approximately 200 participants. The public meeting was also available for live viewing on Facebook, which gave the public the opportunity for asking questions. With this feature, we reached 7.364 people, and we received 159 questions about the project. Based on the findings from the public meeting, we have arranged a number of new meetings as follows:

12<sup>th</sup> June 2017. Meeting with the main landowners.

15<sup>th</sup> June 2017. Meeting with the local boards of Suså and Skelby

21<sup>st</sup> June 2017. Meeting with various interest groups (e.g. canoeing and lake and river board)

22<sup>nd</sup> June 2017. Meeting with the green organisations.

On the meetings we discussed the technical surveys and expectations to the content of future technical surveys.

An advisory board is composed of persons representing the interest groups mentioned above. In addition the Næstved Municipality “Green board” receives information about the project at their regular meetings.

In conclusion, informing the public is going according to schedule of the GA, and almost within the proposed timetable. We will continue working with informing the public – including guided tours - according to the timetable.

#### **5.1.14 Action E.2 – Capacity building**

In this action we will strengthen our knowledge about Thick Shelled River Mussel (*Unio crassus*) management by

A) Arranging a workshop

B) Visiting other projects working with the same topic.

As mentioned in the EASME response letter following the monitor meeting in March 2017, the workshop was arranged a meeting with national experts within the field of Thick Shelled River Mussel (*Unio crassus*) management. At this occasion we also discussed host fish stocking. The workshop took place on the 20<sup>th</sup> of March 2017, and we prepared a small report (annex 5) about the workshop. The delay regarding the workshop has been caught up.

The 17<sup>th</sup> of May 2017 we visited the Swedish UC4LIFE project (LIFE10 NAT/SE/000046). This was a very informative meeting, and we made valuable contacts for future collaboration on the management of Thick Shelled River Mussel (*Unio crassus*). A small report from the meeting is attached in annex 6.

According to the timetable, another networking meeting was planned with the Rest-unio project in Luxemburg (LIFE11 NAT/LU/000857). We have been in contact with the project and have received articles and reports, which have helped us, especially regarding the monitoring of water quality (BOD and nitrate). We are planning to visit the project before the end of 2017. This minor delay will then be caught up on shortly.

In addition, we participated in the LIFE Kick-off meeting in Brussels on the 6<sup>th</sup> of October 2016, and the LIFE platform meeting in Örebro, Sweden in April 2017.

Overall, most of the activities in this action have been initiated, and most of the delays have been caught up on. The remaining initial activities will be carried out during the autumn of 2017. Overall the timetable in the GA is still valid.

### **5.1.15 Action E.3 – Replication**

In this action, we will publish knowledge gained in the project, so it is accessible to professionals and the broader public. We will publish the knowledge in a database, which is accessible here: <http://www.merelivisusaaen.dk/database/>

The database was established in the spring 2017. Currently the database holds app 50 documents primarily from our own project. Later on we will expand the use of the database, and eventually include reports and documents from other LIFE projects.

### **5.1.16 Action F.1 – Project Management**

The project organization is described above (section 4). The day to day administration is very simple because the Municipality of Næstved is the sole participant in the project. We have organised the project with an internal steering group, where the Head of the Center for Planning and Environment, Pernille Balslev-Erichsen, is the chairman. The other members of the steering group is Steen Andersen and Birgitte Gussenhoven Eriksen. The Technical Board is responsible for the projects' economy, and must approve the budget and costs of the project.

NK is a political organisation, and the Technical Board is informed on a regular basis about project progress.

The first NEEMO extern monitoring inspection took place the 7<sup>th</sup> of March 2017. As stated in section 4.4, we have noted EASME's comments to the inspection dated the 16<sup>th</sup> of May 2017.

A permanent bookkeeper, Sabine Meyer, keeps the accounts for the project. She is responsible for collecting all financial supporting documents relevant to the project, and to update the account regularly. Economic controller, Gert Magnus Hansen, is ensuring that the bookkeeping is correct.

In the GA, Malene Callesen Dall is mentioned as the project's contact person at Næstved Municipality. This has been changed, so that Mr. Bent Hummelose is now the project's contact person and PM. Bent Hummelose is available on [bnhum@naestved.dk](mailto:bnhum@naestved.dk) and phone +45 40155162.

The PM is supported by an assistant project manager. After a tendering procedure in early 2017, this task is taken care of by Claus Paludan from Bangsgaard og Paludan ApS. The PM and the assistant project manager are in frequent contact on relevant issues related to the project's administration.

To ensure that the tendering procedures follow internal and external rules, and to ensure all relevant documentation, we have organized a logbook. The logbook will keep track of tendering letters, tendering offers, award decisions, award letters and contracts. Relevant documents will be journalized. We also keep a document describing the internal work flow in tendering procedures.

#### **5.1.17 Action F.2 – Supervision of the construction works**

This action is connected to the actual conservation actions in action C1, C2, C3, C4, and C5. The action is due from mid-2017 until 2021, and has not yet been initiated due to the current status of the actual conservation actions. The action will be initiated as soon as the stocking program in action C5 is started.

## **5.2 Envisaged progress until next report**

The overall project progress is illustrated in the Gantt chart (annex 2) and the next activity report (midterm report) is due on the 28<sup>st</sup> of February 2019.

At this stage, we have some minor delays in action A1, and a major delay in action C5. In the above, we have presented a solution on how to handle the delays. Implementations of the solutions will ensure that the project's objectives of the GA can still be reached.

During the remaining part of 2017, and the first half of 2018, the major tasks will be to continue with landowner negotiations, based on the results of the technical investigations. Further we will initiate the host fish stoking (Action C5), and initiate the release of the host fish into the Suså river. The release will be based on the project plan (Action A1), which will be elaborated during 2017.

NK will ensure continued and correct administration of the project. This work will continuously be supported by the assistant project manager.

## **5.3 Impact**

At this early stage, the project has no direct impact on the project's target species. We are working on preparatory activities (e.g. action A1, A3 and C5), which will give valuable advice to the coming work with the technical documentation and the actual restoration works.

### **Indirect impact**

The success of obtaining the EU grant has inspired other municipalities in Denmark to prepare LIFE Nature applications in order to support their implementation of the national Natura-2000 plans.

### **Table of indicators**

Please see section 5.1.10.

### **Policy implications**

So far, we have not recognised any policy barriers to the full implementation of our project. The knowledge gained in this project so far, has not had any influence on regional, national or EU legislation.

## **5.4 Outside LIFE**

So far there are no planned complementary activities which can add to the LIFE project's actions.

## 6. Financial part

The account information presented in this report is updated up until the 30<sup>th</sup> of September 2017, and parallel to the technical report.

To compute the action by action costs, we have modified the EU Excel financial statement spreadsheet.

The principles for financial reporting are discussed routinely by the PM and the assistant project manager.

### 6.1 Costs incurred

With the use of the present accounting system, expenses can be tracked on the main cost categories and on actions.

We save all supporting documents related to the account (tender documents, invoices, payment documentation, timesheets etc.) in or files. Overall the project economy is considered to be sound and favourable and the national financing is still available.

#### Costs per cost categories

Budget breakdown categories	Total cost in €	Costs incurred from the start date to 30.09.2017 in €	% of total costs
1. Personnel	331.860	66.389	20,0
2. Travel and subsistence	12.082	1.265	10,5
3. External assistance	1.431.539	19.578	1,4
Infrastructure	na	na	na
Equipment	na	na	Na
Prototype	na	na	na
5. Land purchase / long-term lease	139.580	0	0
6. Consumables	3.280	43	1,3
7. Other Costs	32.160	252	0,8
8. Overheads	126.760	To be computed later	To be computed later
<b>TOTAL</b>	<b>2.077.261</b>	<b>87.528*</b>	<b>4,2*</b>

\* excluding overhead

Overall, we have spent 4,2 % of the budget. This is a relatively low consumption compared to the length (13 month) of the reporting project. However, we are currently running the preparatory actions, while the more expensive compensation action (B1) and the concrete conservation actions (C actions) are implemented at a later stage.

In regards to the cost categories, we have spent app. 21 % of the personal costs during 13 months. During this period, a great deal of work has been put into the preparatory actions and in managing the project. The personal costs correspond very well to the planned time consumption during the 13 month period (out of the 77 month project period).

The travel costs are quite low, despite the fact that a greater part of the knowledge exchange activities have been undertaken during this reporting period. This leaves some resources free for future knowledge exchange activities or other additional travel costs.

We have had only low relative costs in the other cost categories reflecting the initial stage of the project.

### **Personnel costs**

Below we have made a chart of the use of man-power in the various action categories. Our most important comments at this stage are as follows:

- The estimated person-days spent in relation to A actions is quite low although this is preparatory actions. However we are still working with the project plan for the release of glochidia-infected host fish. In addition, the work with authorization procedures is still to come as well as concrete negotiation with the landowners.
- We do not have any budget for personnel in relation to B and C actions as these tasks are taken care off in A and F actions.
- The estimated person-days spent in relation to D actions reflect our effort with the ex ante monitoring in regard to biology, socio-economy and ecosystem services.
- The estimated person-days spent in relation to E actions reflect our effort with obligatory activities (e.g. website and replication) as well as with public involvement in the project. As explained above this has been an important activity in order to obtain local ownership to the project.
- Concerning the F actions the person-days spent corresponds very well with 13 month project period. Action F1 is an on-going action while action F2 will come into force when we initiate the concrete conservation actions.

Action type	Budgeted person-days	Estimated % of person-days spent
All projects when applicable Action A: Preparatory actions	196	27,6
NAT and CLIMA projects Action B: Purchase/lease of land and/or compensation payment for payment rights	0 (part of action A)	
ENV projects Action B: Implementation actions	XXXXX	
GIE projects Action B: Core actions	XXXXX	
NAT projects Action C – Concrete conservation actions	0 (part of action A and F)	0
CLIMA projects Action C: Implementation actions	XXXXX	
ENV and GIE projects Action C: Monitoring of the impact of the project action	XXXXX	
NAT and CLIMA projects Action D: Monitoring and impact assessment	92	27,8
ENV and GIE projects Action D: Public awareness/communication and dissemination of results	XXXXX	
NAT and CLIMA projects Action E: Communication and Dissemination of results	132	27,9
ENV and GIE projects Action E: Project management	XXXXX	
NAT and CLIMA projects Action F: Project management (and progress)	582	16,3
<b>TOTAL</b>	<b>1002</b>	<b>21,1</b>

## 7. Deliverables

Please see table in section 8.

## 8. Annexes

Progress report number 1 contains the following annexes (on USB memory stick).

<b>Annex number</b>	<b>Description</b>	<b>Deliverable (yes / no)</b>
1	Account codes for the project in NK	No
2	Gantt chart	No
3 – Action D1	Performance indicators	No
4 – Action D2	Communication strategy	Yes
5 – Action E2	Report from Workshop meeting	Yes
6 – Action E2	Networking report – UC4LIFE	Yes