


UC Life Denmark



Threats to the Thick Shelled River Mussel (*Unio crassus*) by the invasive Zebra Mussel (*Dreissena polymorpha*) and test of new technology - underwater drone

Nordic Platform meeting 2019
Sofia Kølmel, Næstved Municipality

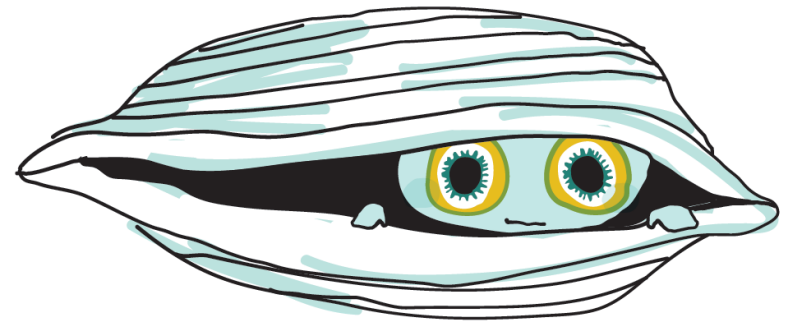
NÆSTVED



The LIFE-projekt

Project title:

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



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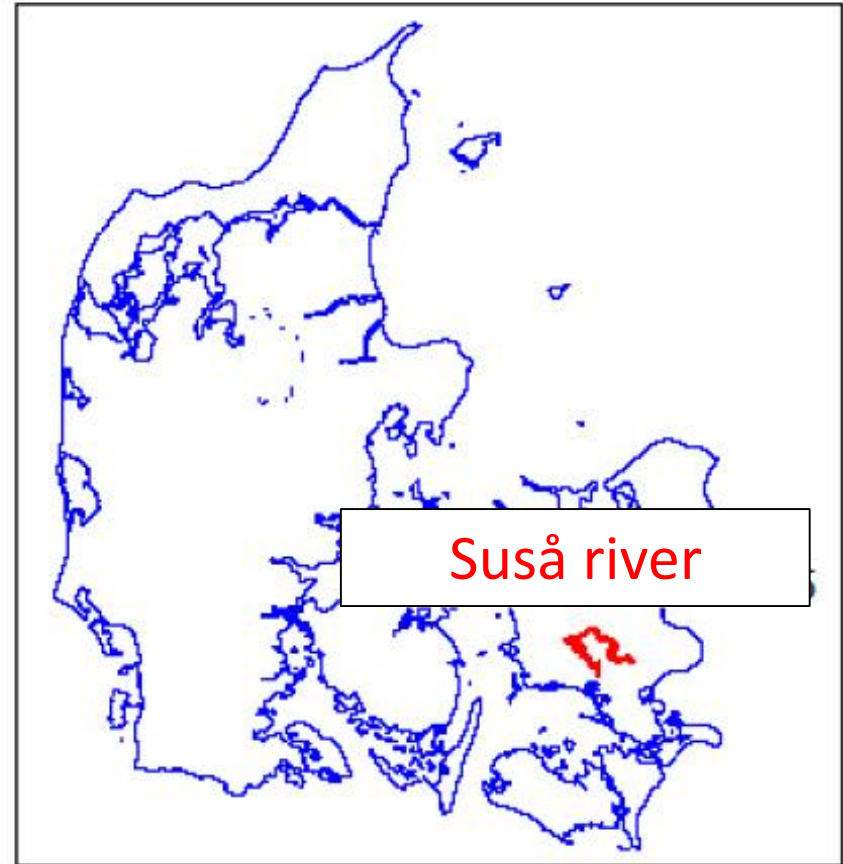


Konklusions

- Filming with an underwater drone is difficult and timeconsuming, but also good visual documentation in deep river systems
- The zebra mussel might not to be a problem for the Thick Shelled River Mussel because of difference in habitat

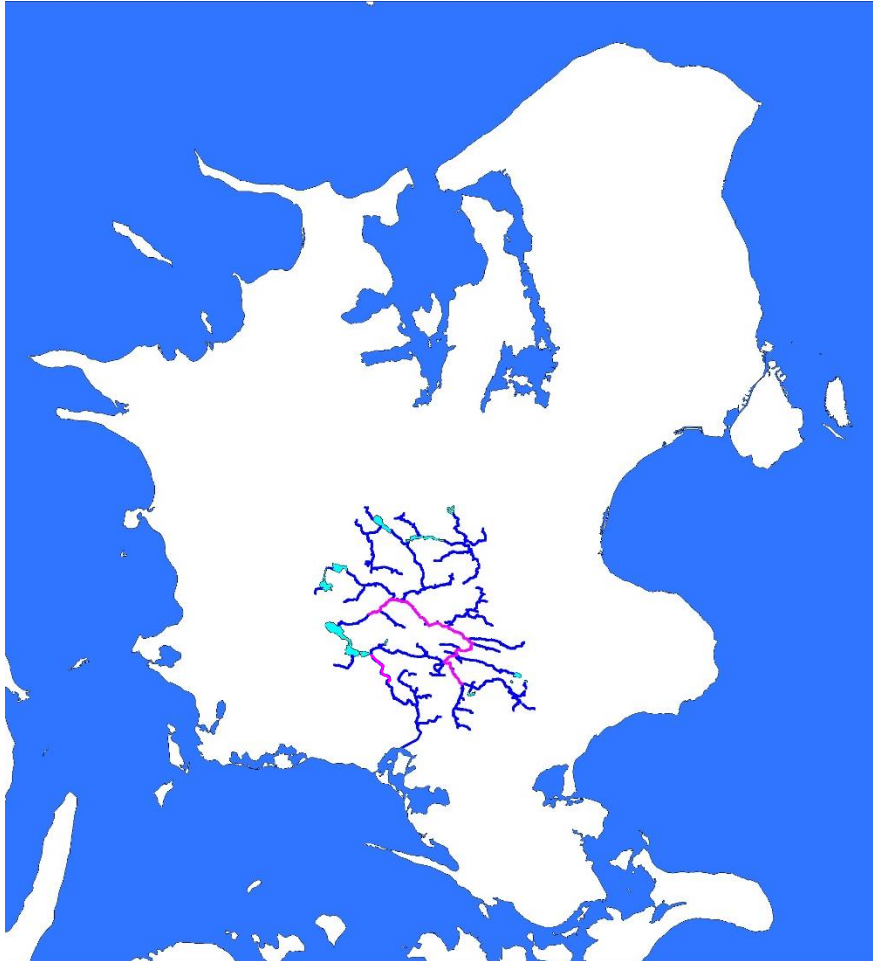
Our project site is the river Suså

Suså is the largest river in Eastern Denmark

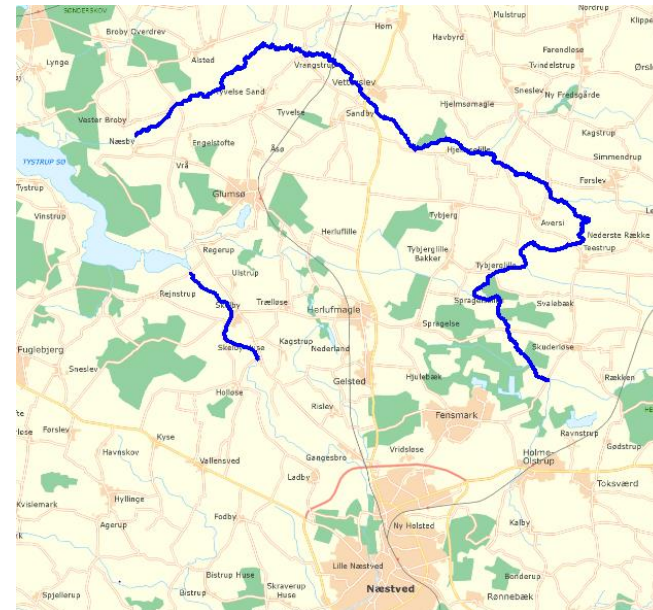


Location of the river Suså


Our project site is the river Suså




- The river catchment area is app. 12 % of Zealand



The Thick Shelled River Mussel (*Unio Crassus*)

Advanced



Thick Shelled River Mussel


Unio crassus

CITATION
Lopes-Lima, M., Kebapçı, U. & Van Damme, D. 2014. *Unio crassus*. *The IUCN Red List of Threatened Species* 2014: e.T22736A42465628.
<http://dx.doi.org/10.2305/IUCN.UK.2014-1.RLTS.T22736A42465628.en>. Downloaded on 23 August 2019.

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	< ENDANGERED >	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX

POPULATION TREND
Decreasing

GEOGRAPHIC RANGE



The Thick Shelled River Mussel (*Unio Crassus*)



Believed to be extinct from DK

Found in the river-system of Odense River in 2003

Found in the river-system of the Suså in 2008

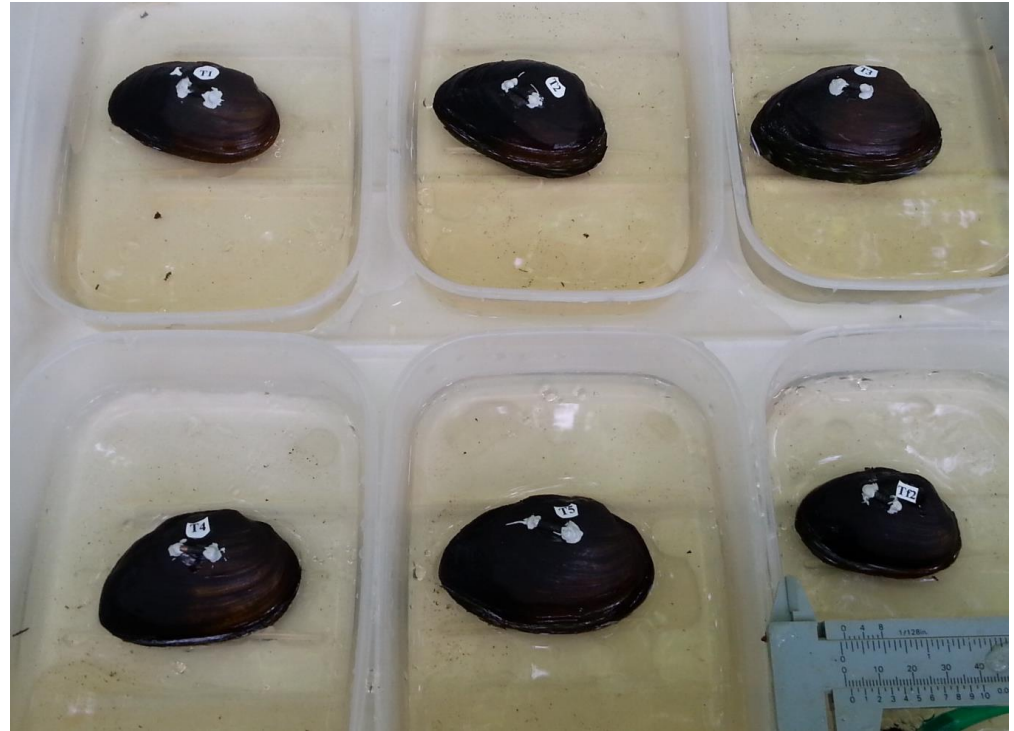
Unio Crassus:

- Filters the water to feed
- Shells are habitat for other organisms
- Lives in the river bed
- Lives 40-50 years (some live up to 90 years)
- Lives in rivers with good water quality and moderate velocity and good physical variation
- Needs host fish to develop

Is a keystone-species to the river



UC monitoring



2017:

Torpe Kanal: 6 living individuals

Upper Suså: 6 living individuals

2018 Three of these died in the hot summer

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The marvelous world of the Thick Shelled River Mussel and its host fish



Host fish (primarily)

Minnow (*Phoxinus phoxinus*)



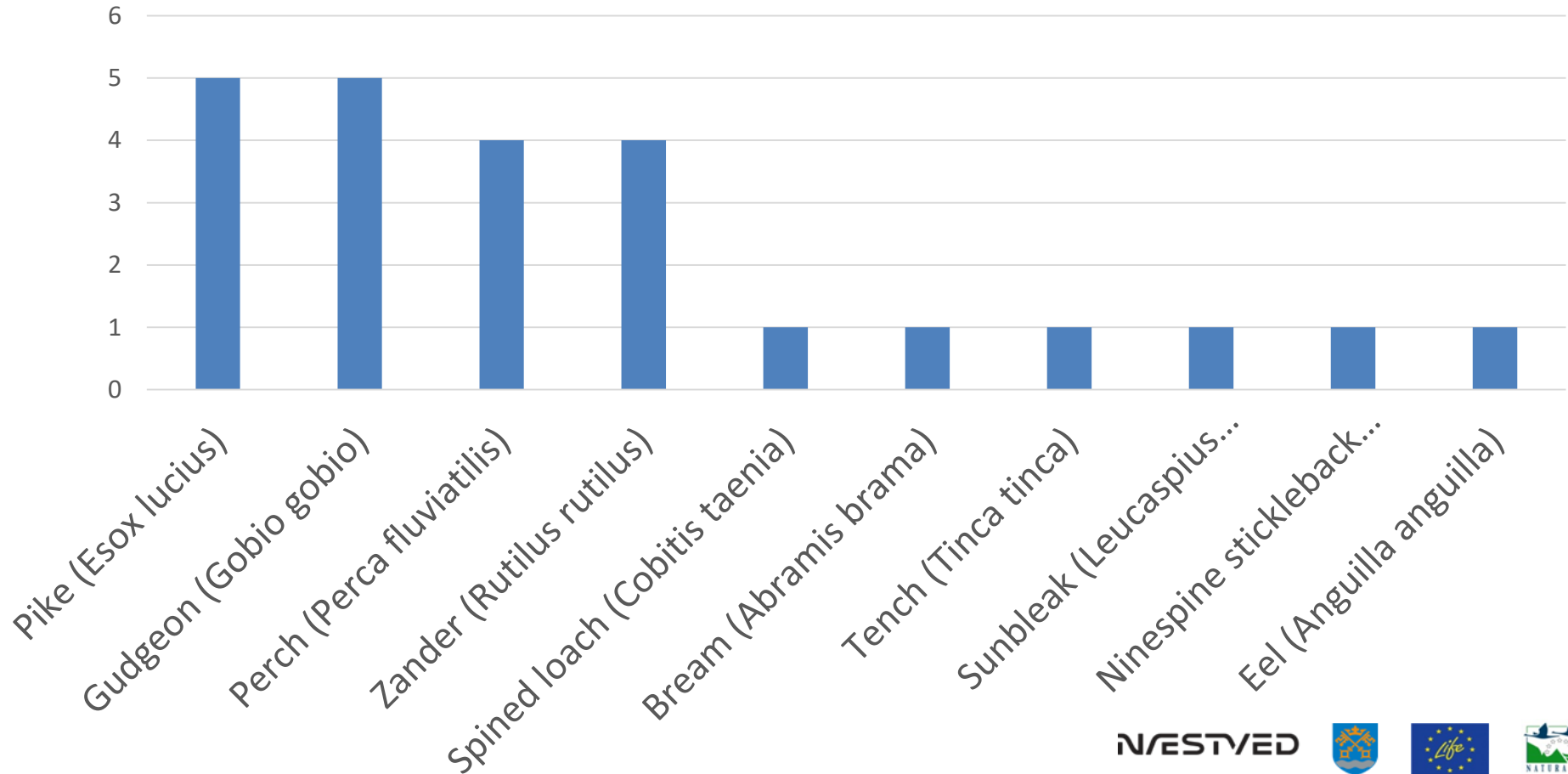
European Bullhead (*Cottus gobio*)



Fish monitoring 2015



Fish per 100 m river



European Bullhead from Sweden

**Skånsk fisk ska hjälpa
hotad mussla rena
danska vatten**



Aftonbladet 2018

Minnow from Funen

Hågerup Å, Funen



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The invasive Zebra Mussel (*Dreissena polymorpha*)

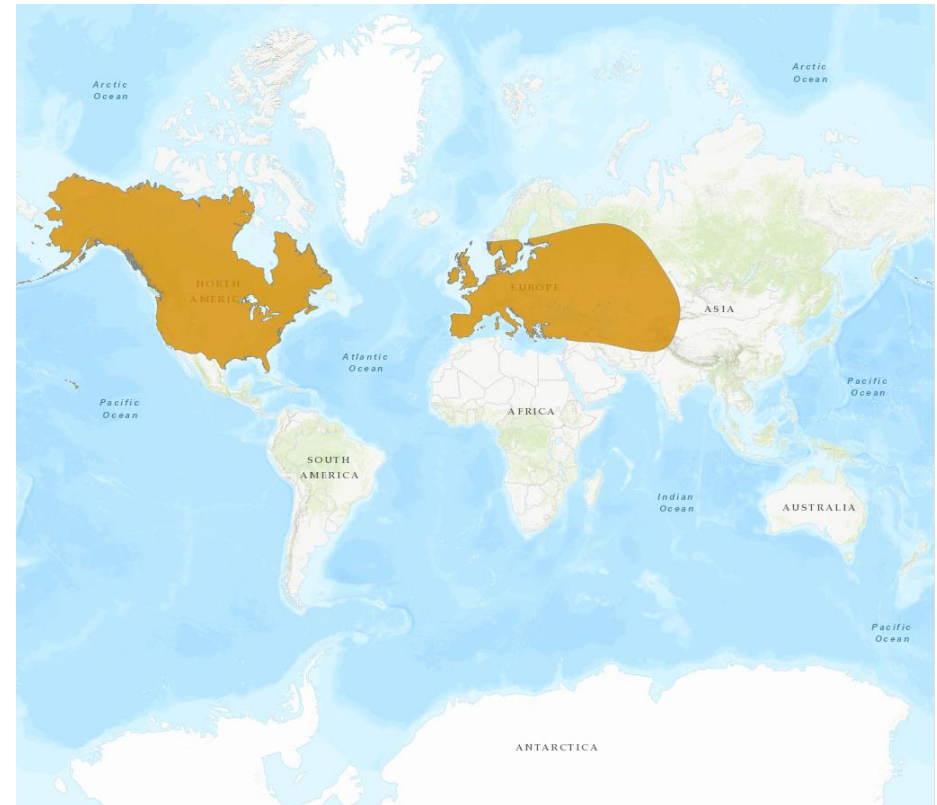
- The Zebra mussel is not dependent of a host fish to develop
- needs a hard surface
- attaches itself with byssus threads



Dreissena polymorpha

The invasive Zebra Mussel (*Dreissena polymorpha*)

- Originally from the Caspian Sea
- Reported in Zealand in 1840
- In the lakes in the Suså river-system the last 40-50 years



Dreissena polymorpha
The IUCN Red List of Threatened Species

The invasive Zebra Mussel (*Dreissena polymorpha*)

- Native mussels are overgrown
- Outperform the native mussels for food
- Native mussels starves
- Movement inhibited



Vejle Amt 2006

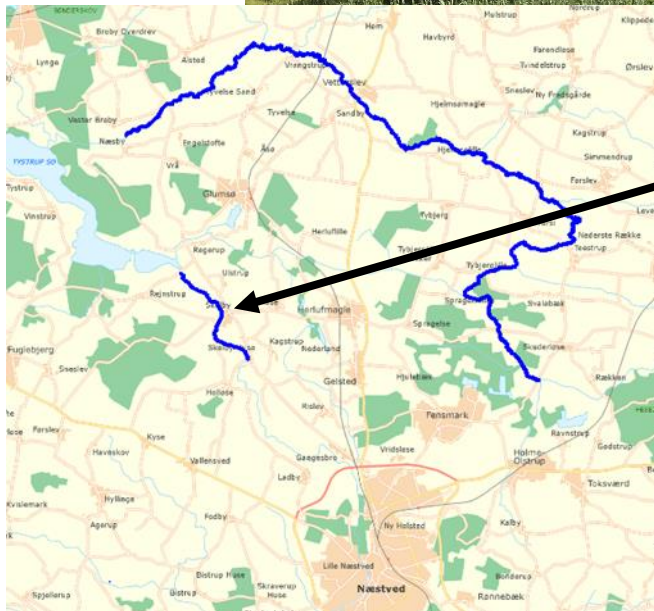
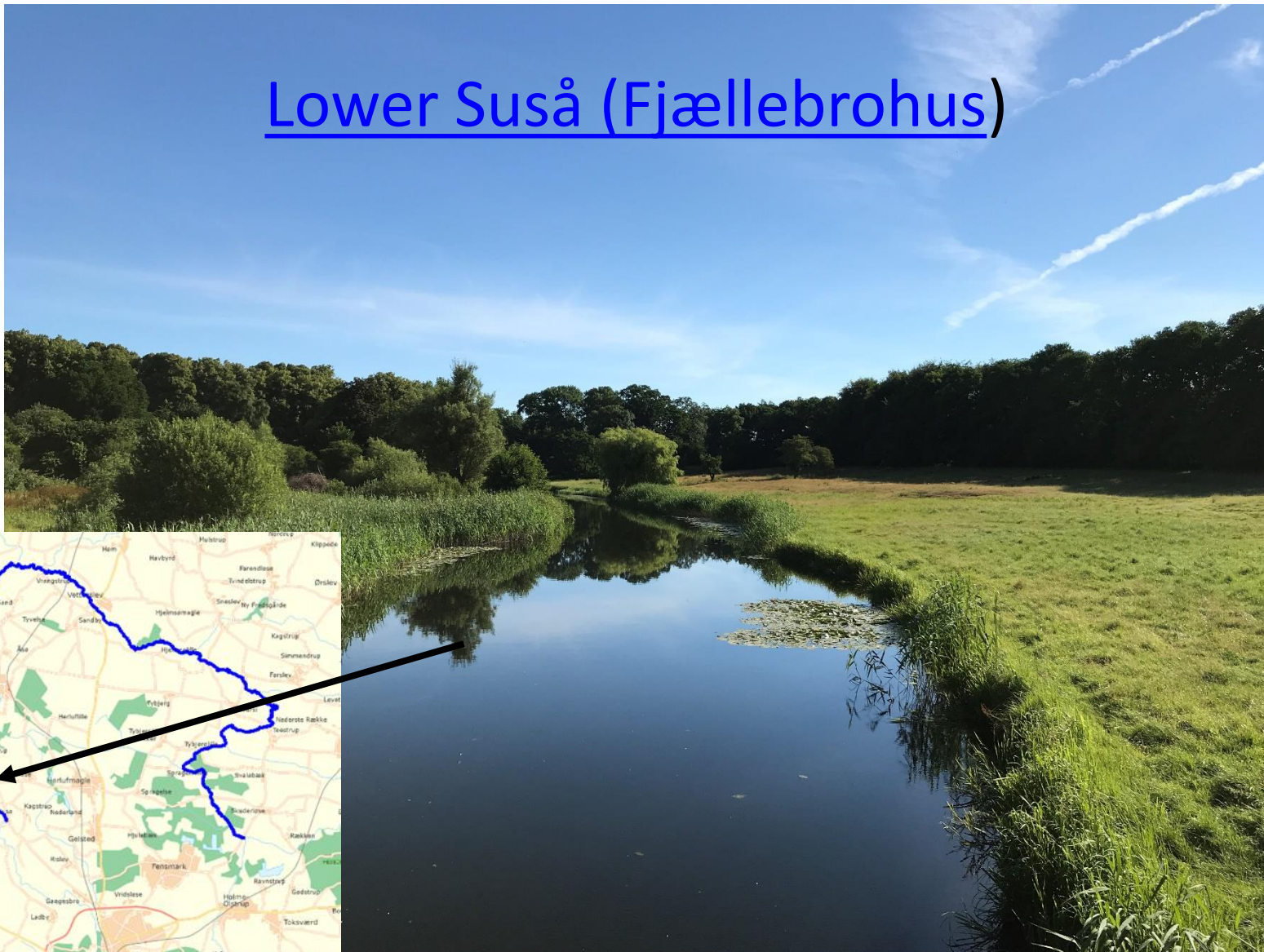
Monitoring for the Zebra Mussel?

- Aquascope
- Camera
 - not suitable for deep rivers

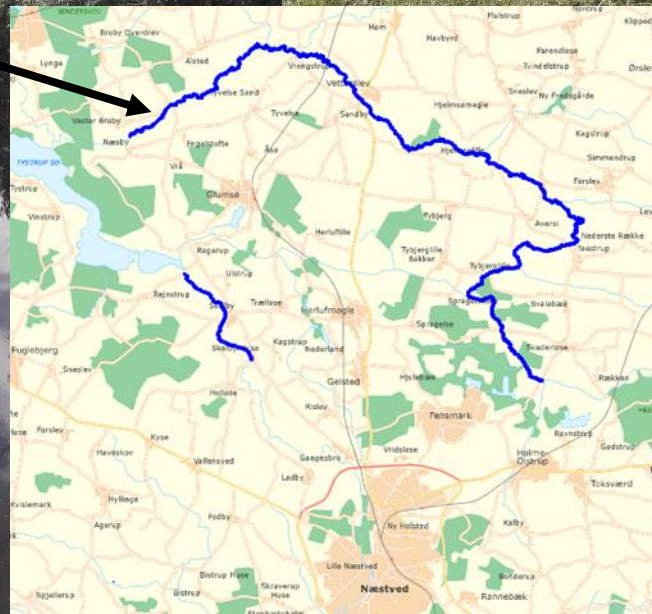
- New technology -
Powerray underwater drone



Lower Suså (Fjællebrohus)



Upper Suså (Næsbybro)



Konklusions

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http://www.merelivsusaaen.dk/ Næstved Kommunes intranet Forside - Mere liv i Susåen

SUSÅEN UNDER VÅDET OVER VÅDET AKTUELT EU-PROJEKTET

Mere liv i Susåen!

Vores malermusling holder flyttedag!

Projektet Mere Liv i Susåen er flyttet længere op af åen. Fokusområdet er nu nord for Tystrup Sø.

Hjemmesiden er derfor under redigering.

De væsentligste ændringer til projektet er:

- Torpe Kanal og Nedre Suså er ikke længere en del af projektet.
- Holløse Mølle og kulturlandskabet omkring bliver ikke berørt.
- Spildevand og kloakering er ikke længere en del af projektet.

Vi vil fortsat skabe mere liv i Susåen og bevare malermuslingen. Dette vil ske ved:

- at udsætte værtsfisk som elritse og hvidfinnet ferskvands ulk,
- at skabe flere og bedre levevilkår for dyre- og plantelivet i Susåen, ved at lave skygge vha. træer, og udlægge sten og grus i åen,
- at projektstrækningen i Øvre Suså udvides. Alle berørte bredejere vil blive kontaktest og informeret om planerne i starten af 2019.

Mere liv i Susåen

På bunden af Susåen lever den tykskallede malermusling. Men der er kun ganske få eksemplarer tilbage. Derfor har EU bevillet 9,3 mio. kr. til at forbedre dens leveforhold og

11:53
16-01-2019

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Thank you for your attention

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