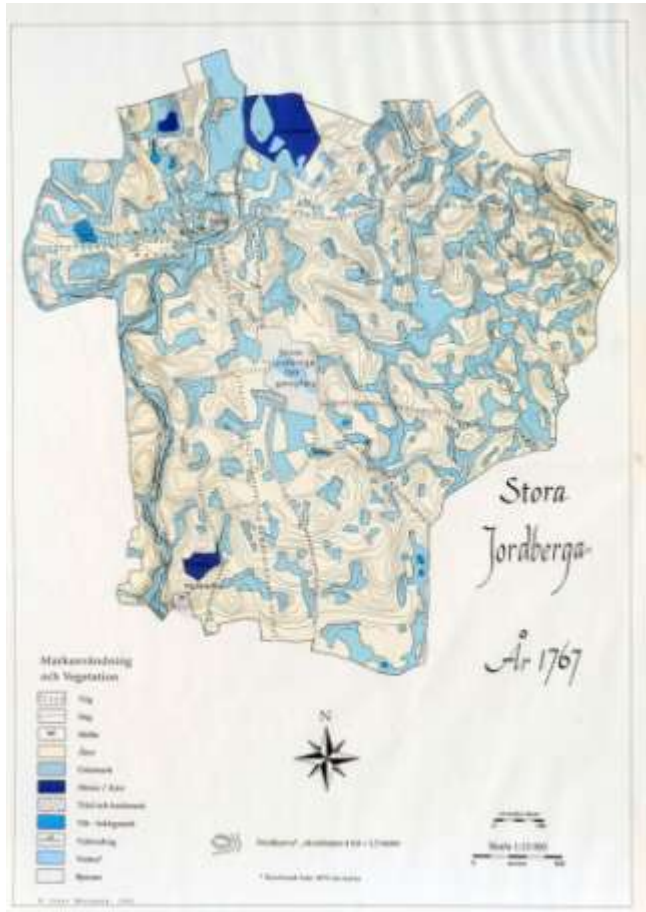


# Techniques for harvesting algae

- Matilda Gradin, Ellinor Tjernström

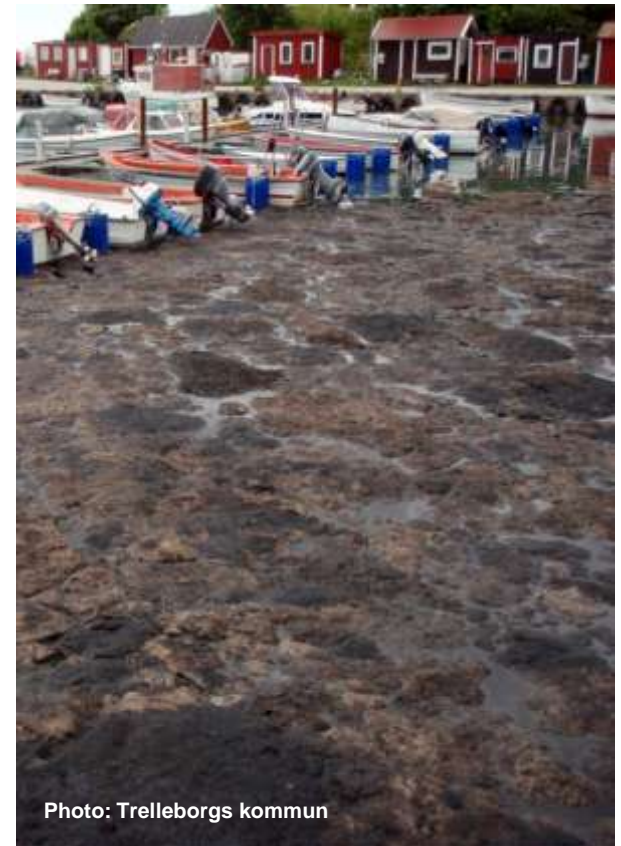
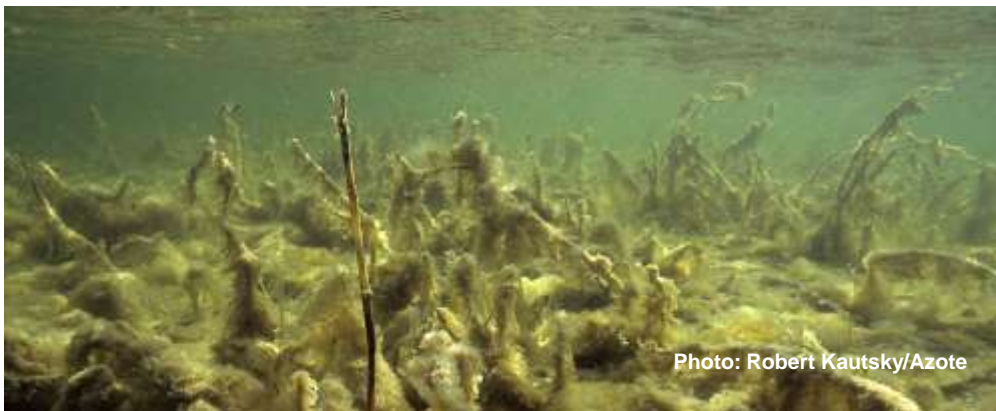


# Why is it so much algae in Trelleborg?



Part financed by the European Union  
(European Regional Development fund)

# Consequences for the costal area



# Amount of algae that can be collected within Trelleborg municipality

- Calculations from KTH estimates amount to 70 000 m<sup>3</sup> of algae/year
- BioMil calculate that the methane exchange for the algae mixture in Trelleborg is 200 Nm<sup>3</sup> CH<sup>4</sup> /ton (laboratory experiments)
- 50 GWh /year
- 500 ton N and 40 ton P removed from the Baltic Sea



# Machines tested in Trelleborg

- Grip Claw, Power-Rike, Beach-Cleaner
- Pitch fork
- “The monster”



# The Grip Claw

- + Very efficient, collected 45 m<sup>3</sup>/hour (with a dumper)
  - + Good material, not too much sand
  - + low-tech, easily available machine
- Does not clean the beach for recreational purposes



# The Pinch Fork

- DM Truxor 4700B

- + Minimum sand content in collected algae
  - + Amphibian machine, can be used also in wetlands and harbours etc
  - + Sparse fork, less impact
- 
- Fairly slow
  - Noisy, disturbing if used in summer season



Photo: Trelleborgs kommun

# ”The Monster”

- + Collects in shallow water, dewateres material
- + Specially designed to collect algae without sand
- The trailer fills up quickly and take time to empty
- Not yet in production





# Conclusions

**Gripclaw and dumper seems most efficient for collecting large amounts of algae**

**Another machine is needed to do the fine cleaning afterwards (for example a Barber)**

[www.wabproject.pl](http://www.wabproject.pl)

**W**etlands  
**A**lgae  
**B**iogas

