



# TransAlgae seminar / Welcome words 12.09.2018

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Steering group of TransAlgae -project



# TransAlgae



Biomass: health food, nutrition and fodder for animals  
cleaning of the wastewater; using fertilizers

Most rapidly growing organism (short growt time)

Big questions are still: growing (open bond or reactor),  
harvesting, different ways to use

# Project leaders & Partners



## Project leader

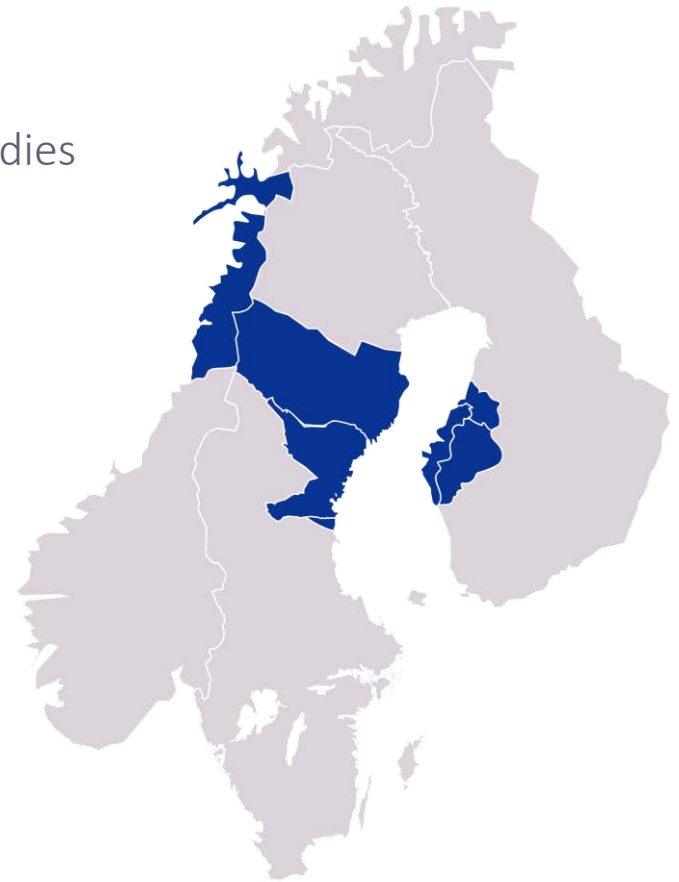
Swedish University of Agricultural Sciences (SLU)  
Department of Wildlife, Fish and Environmental Studies

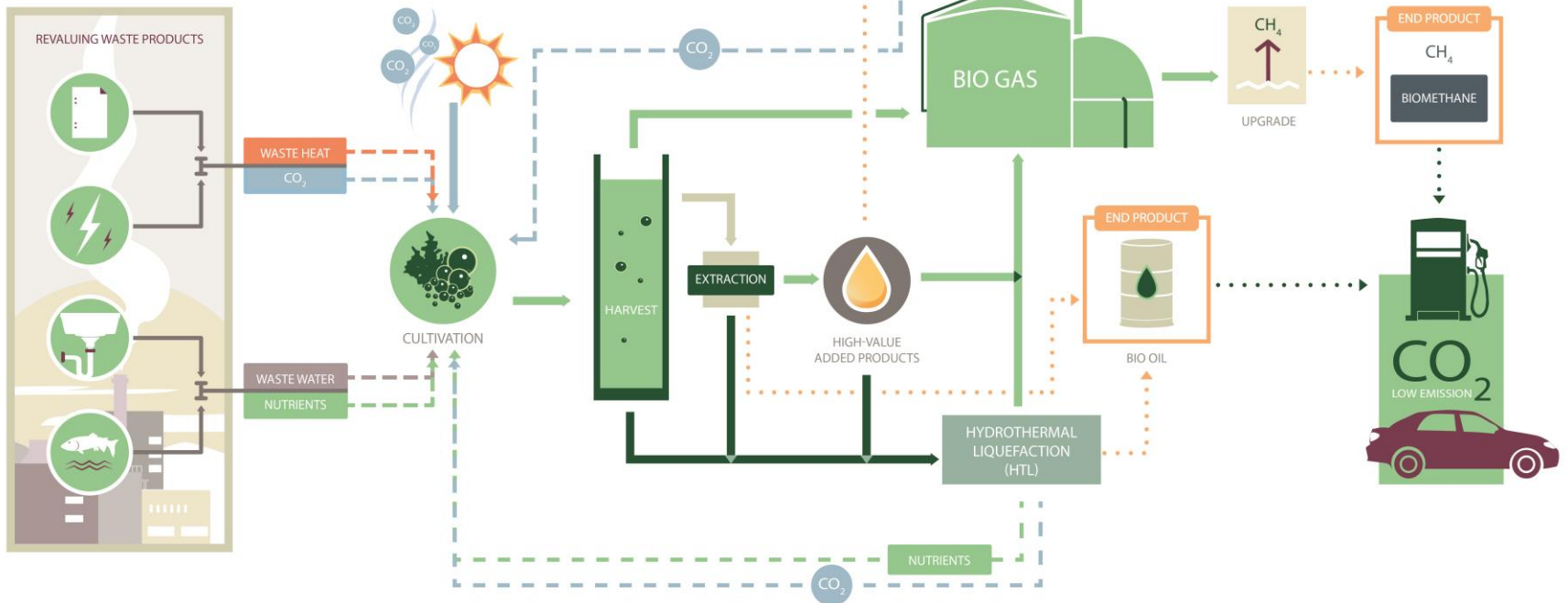
## Partners

BioFuel Region AB  
Nattviken Invest - Hugo Wikström  
NIBIO Bodö  
Mid Sweden University  
Novia – University of Applied Science, Vaasa  
**University of Vaasa**

## Financiers

Botnia-Atlantica, Länsstyrelserna i Västerbotten  
och Västernorrland, Österbottens förbund,  
Kempestiftelserna, Arctic Seaweed, partners





PROJECT COURSE

REVALUATION OF WASTE PRODUCTS

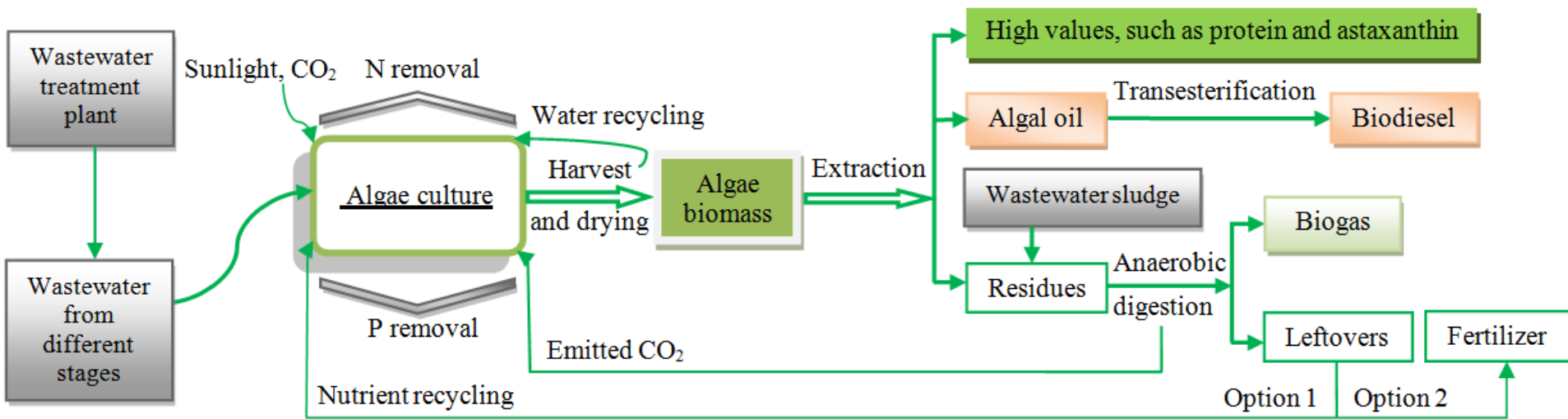
CULTIVATION

HARVEST

TRANSFORMATION

SYSTEM ANALYSIS

# Wastewater cleaning



# New publications



[4] Zhu, L. \*, Hiltunen, E., Li, Z. \*, 2018. Using magnetic materials to harvest microalgal biomass: evaluation of harvesting and detachment efficiency. **Environmental Technology** (SCI, IF 1.666), <http://dx.doi.org/10.1080/09593330.2017.1415379>.

This work was supported by the TransAlgae Project from EU's Bothnia-Atlantica programme and the Startup grant from the Wuhan University in China.

[3] Zhu, L. \*, Li, Z., Hiltunen, E., 2018. Microalgae *Chlorella vulgaris* biomass harvesting by natural flocculant: effects on biomass sedimentation, spent medium recycling and lipid extraction. **Biotechnology for Biofuels** (SCI, IF 5.497) 11(1), 183, DOI: 10.1186/s13068-018-1183-z.

This work was supported by the TransAlgae Project from EU's Bothnia-Atlantica programme and the Startup grant from the Wuhan University in China.

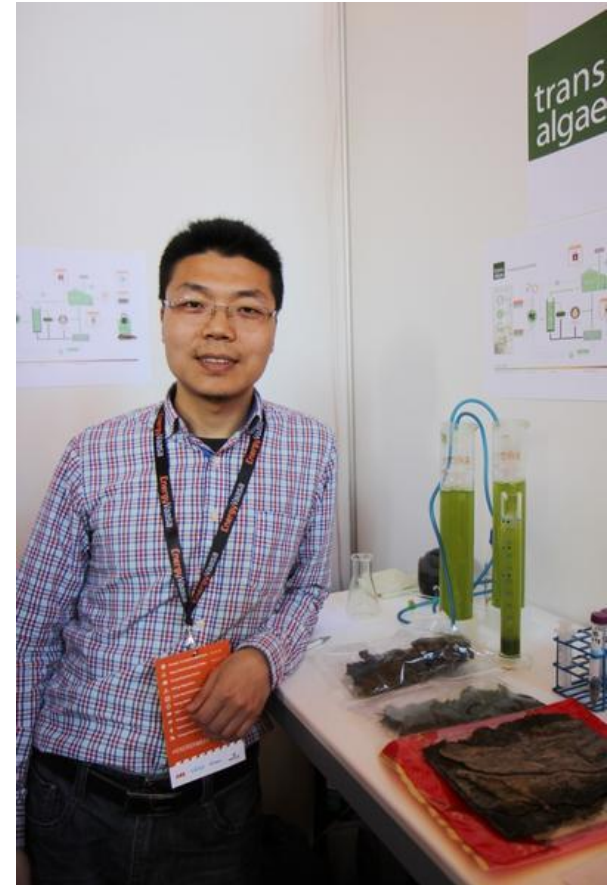
[2] Zhu, L. \*, Li, Z., Hiltunen, E., 2018. Theoretical assessment of biomethane production from algal residues after biodiesel production. **Wiley Interdisciplinary Reviews: Energy and Environment** (SCI, IF 2.514) 7, e273. DOI: 10.1002/wene.273.

[1] Zhu, L. \*, Nugroho, Y.K., Shakeel, S.R., Li, Z. \*, Martinkauppi, B., Hiltunen, E., 2017. Using microalgae to produce liquid transportation biodiesel: What is next? **Renewable and Sustainable Energy Reviews** (SCI, IF 9.184) 78, 391–400.

This work was supported by the TransAlgae Project from EU's Bothnia-Atlantica programme and the Startup grant from the Wuhan University in China.

PhD Liandong Zhu  
officially step into a  
new position in  
Wuhan University  
since 1st September.

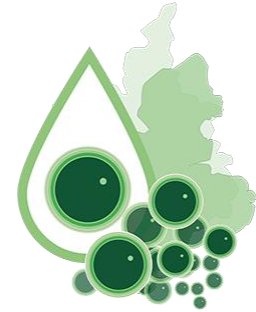
Up to 31<sup>st</sup> of  
July 2018 he was still  
working on Kone  
funds grant.



[www.biofuelregion.se/transalgae](http://www.biofuelregion.se/transalgae)

TransAlgae project thanks

VAMK for possibility to have a meeting here –  
and all other partners.



Our quests -You are wellcome to  
the seminar!

Enjoy the presentations!

