



# What do we want to achieve with the project AlgaeService for LIFE?

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COORDINATOR:



PARTNERS:



# What do we want to achieve?

Test and demonstrate the solutions to mitigate eutrophication

- Human activity
- Increase of nutrients
- **ALGAL BLOOMS**

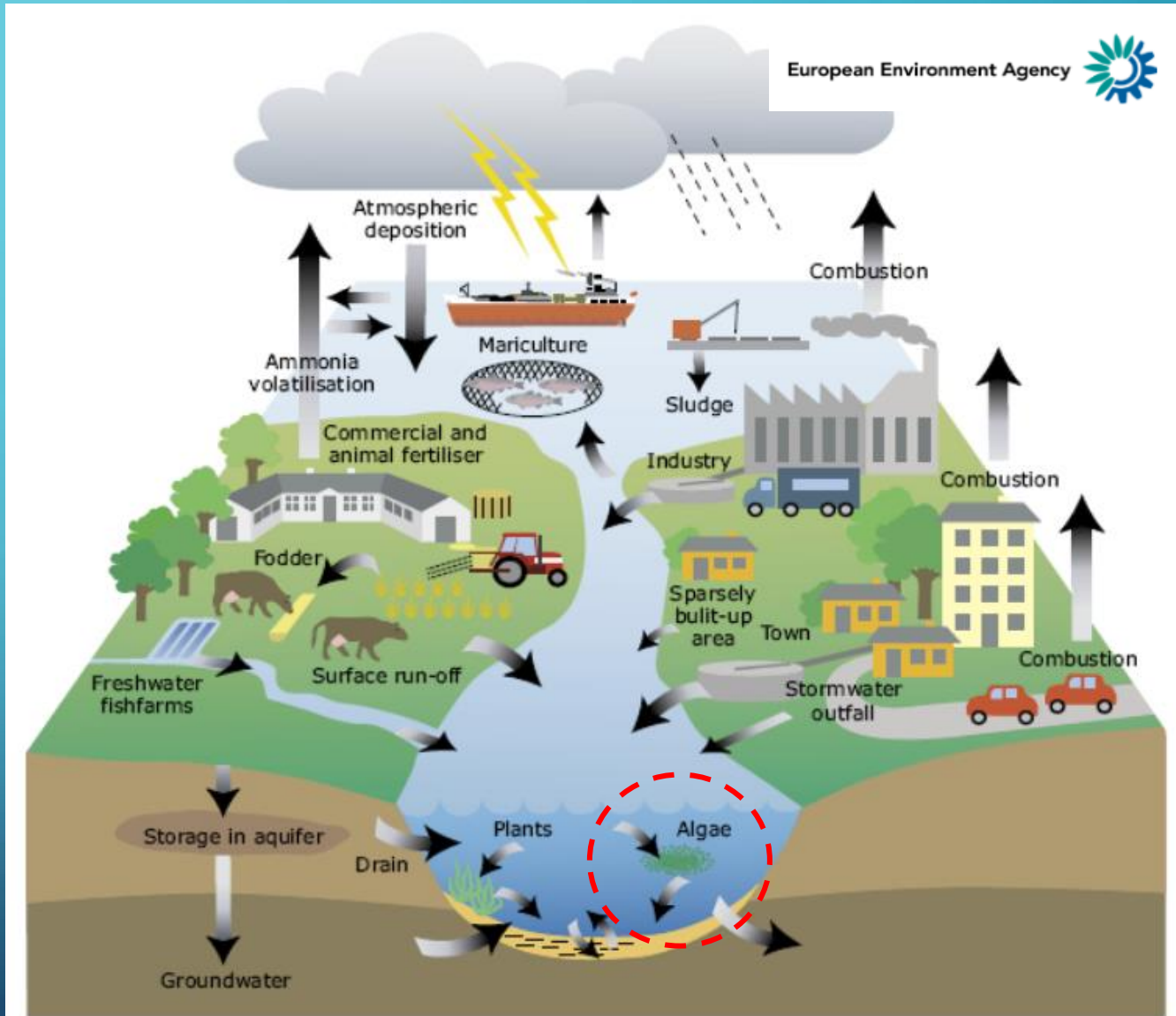
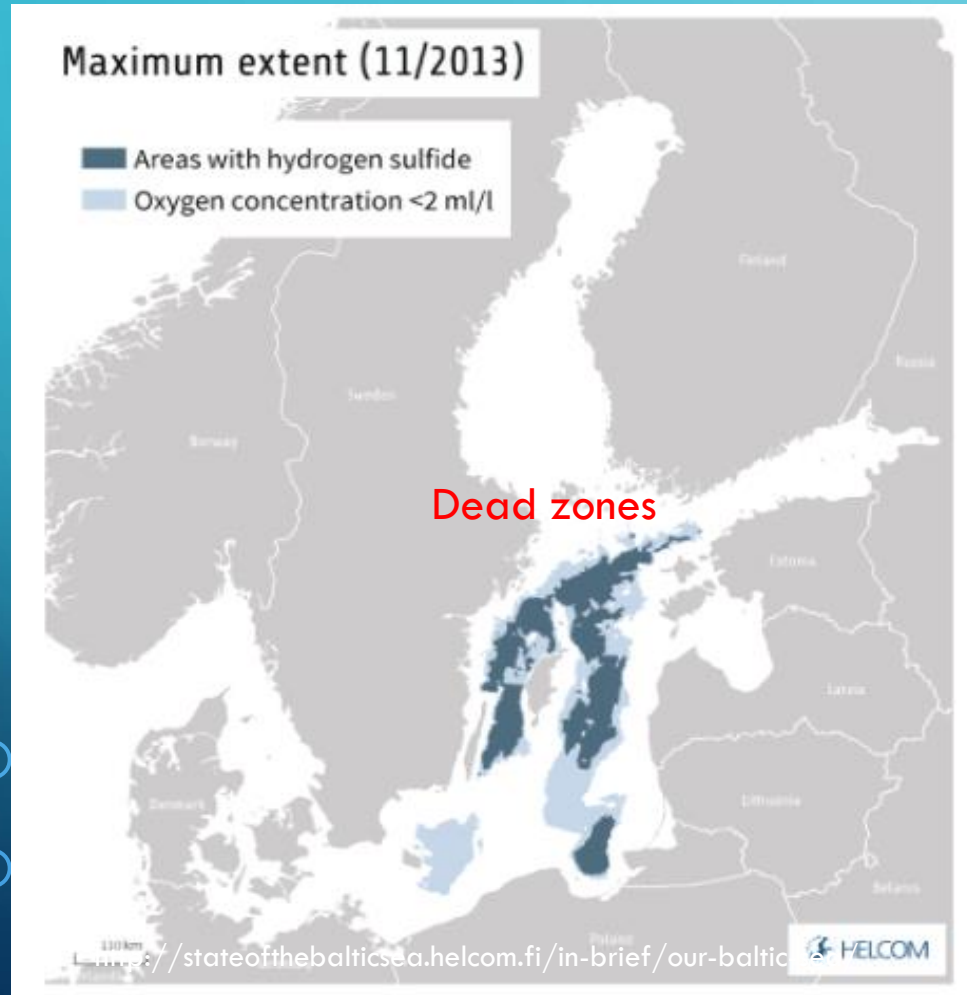


Figure 4. Overview of the land aquatic cycle and sources of pollution<sup>31</sup>

# What do we want to achieve?

- ALGAL BLOOMS



## What do we want to achieve?

Test and demonstrate the solutions to mitigate eutrophication

- Identify affected regions and water bodies by mapping algal blooms (interactive map, distant methods)
- Manufacture specialized prototypes to collect cyanobacteria or macroalgae, remove this biomass from water bodies (help ecosystem to restore, protect humans and other aquatic organisms, reduce the loads of nutrient to the Baltic Sea)



- Test harvesting effect in small and larger inland water bodies (whole ecosystem vs. hot spots)

ENVIRONMENT BENEFITS

# What to do with the harvested biomass?

*Waste vs. valuable recourse*

## Low-value bioproducts

### ENERGY

Biodiesel,  
biogas,  
biohydrogen



### AGRICULTURE

Green fertilizers



### ECOLOGICAL SERVICE

Wastewater treatment,  
phycoremediation



## High-value bioproducts

### COSMETIC INDUSTRY

Algae extracts in creams,  
serums and other products



### PHARMACY INDUSTRY

Anti-inflammatory, anti-cancer drugs,  
antioxidants, dyes for diagnostics



### BIOMATERIALS

Solar batteries, bioplastics,  
paper



### FOOD INDUSTRY

Natural dyes, food supplements,  
functional food for animals



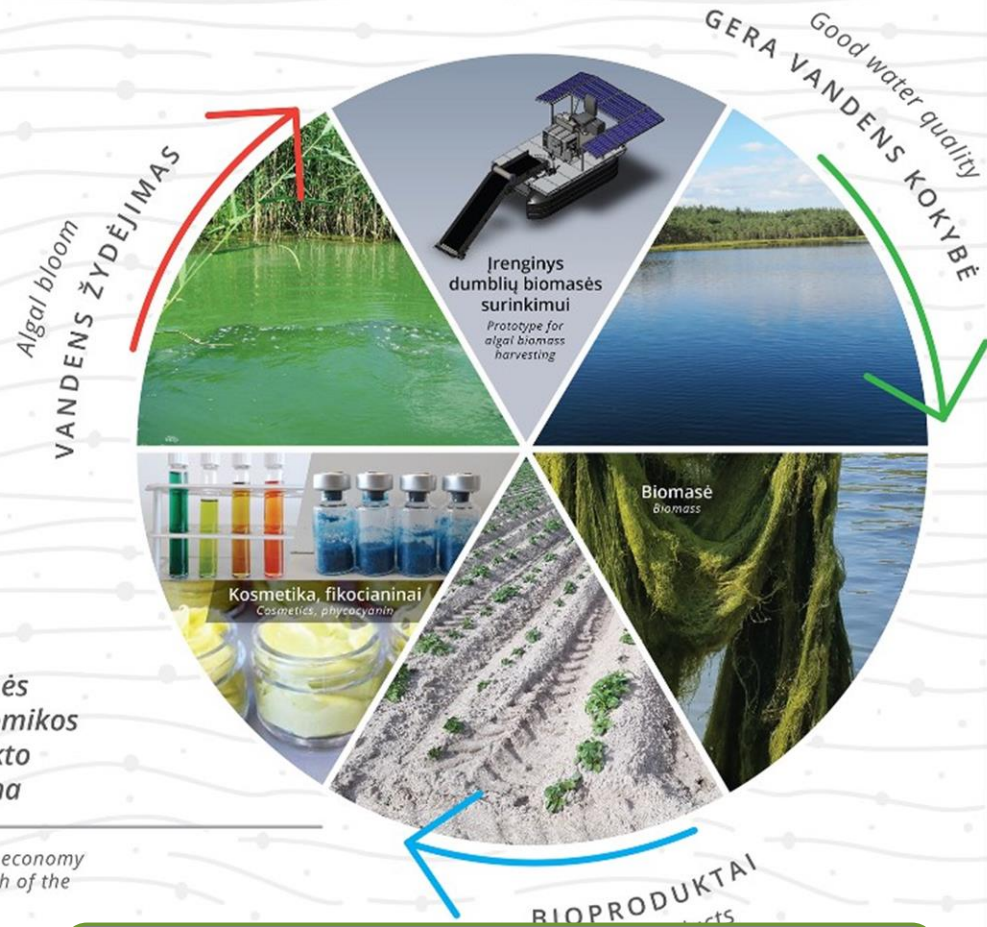
## What to do with the harvested biomass?

- Limited application of harvested wild algal biomass for useful products
- Testing for **low-value** products
  - Biogas production
  - Agriculture
- Testing for **high-value** products
  - Phycocyanin
  - Macroalgae extracts for cosmetics



VALUABLE BIOPRODUCTS

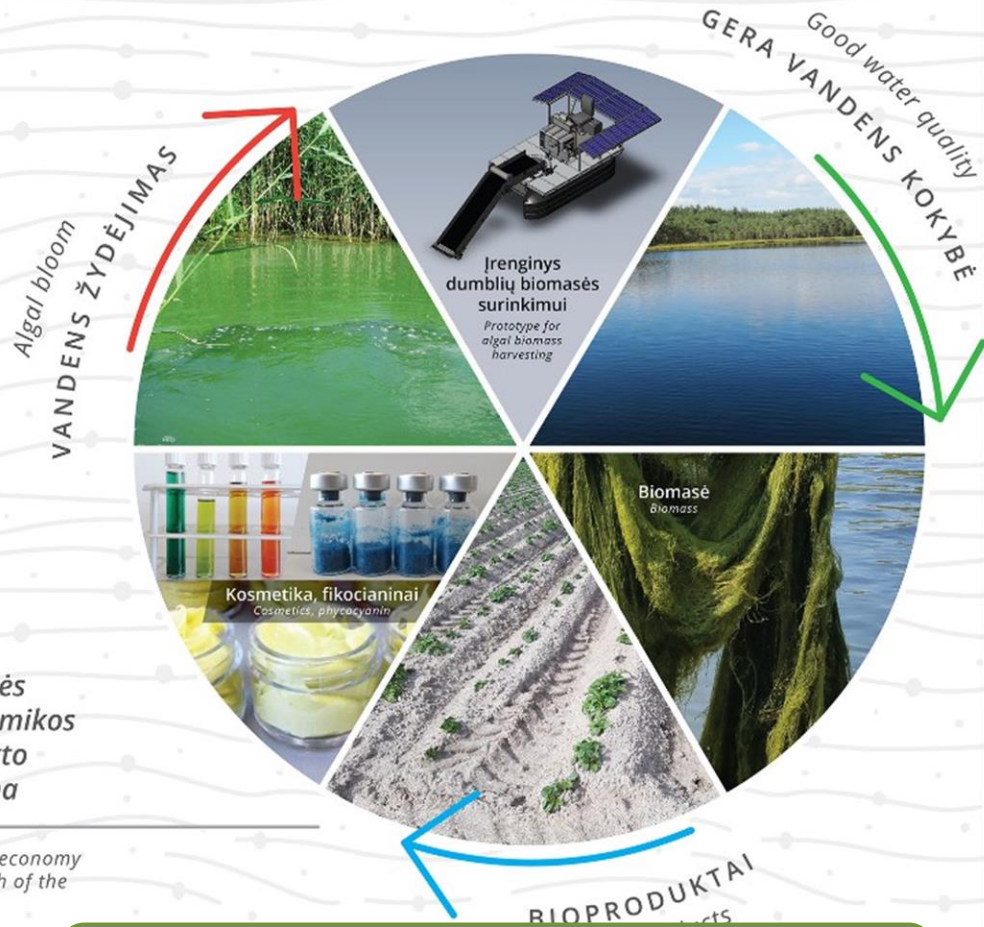
# ENVIRONMENT BENEFITS



# VALUABLE BIOPRODUCTS



# ENVIRONMENT BENEFITS



# VALUABLE BIOPRODUCTS



# COSTS

# Thank you for the attention



Project website: <https://algaeservice.gamtostyrimai.lt/background-information/>

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