AlgaeService for LIFE No. LIFE17 ENV/LT/000407

GLONY – GOSPODARKA EKOLOGICZNA EKOSYSTEMÓW WODNYCH

„Algae - Economy Based Ecological Service of Aquatic Ecosystems/ Glony - Gospodarka ekologiczna"

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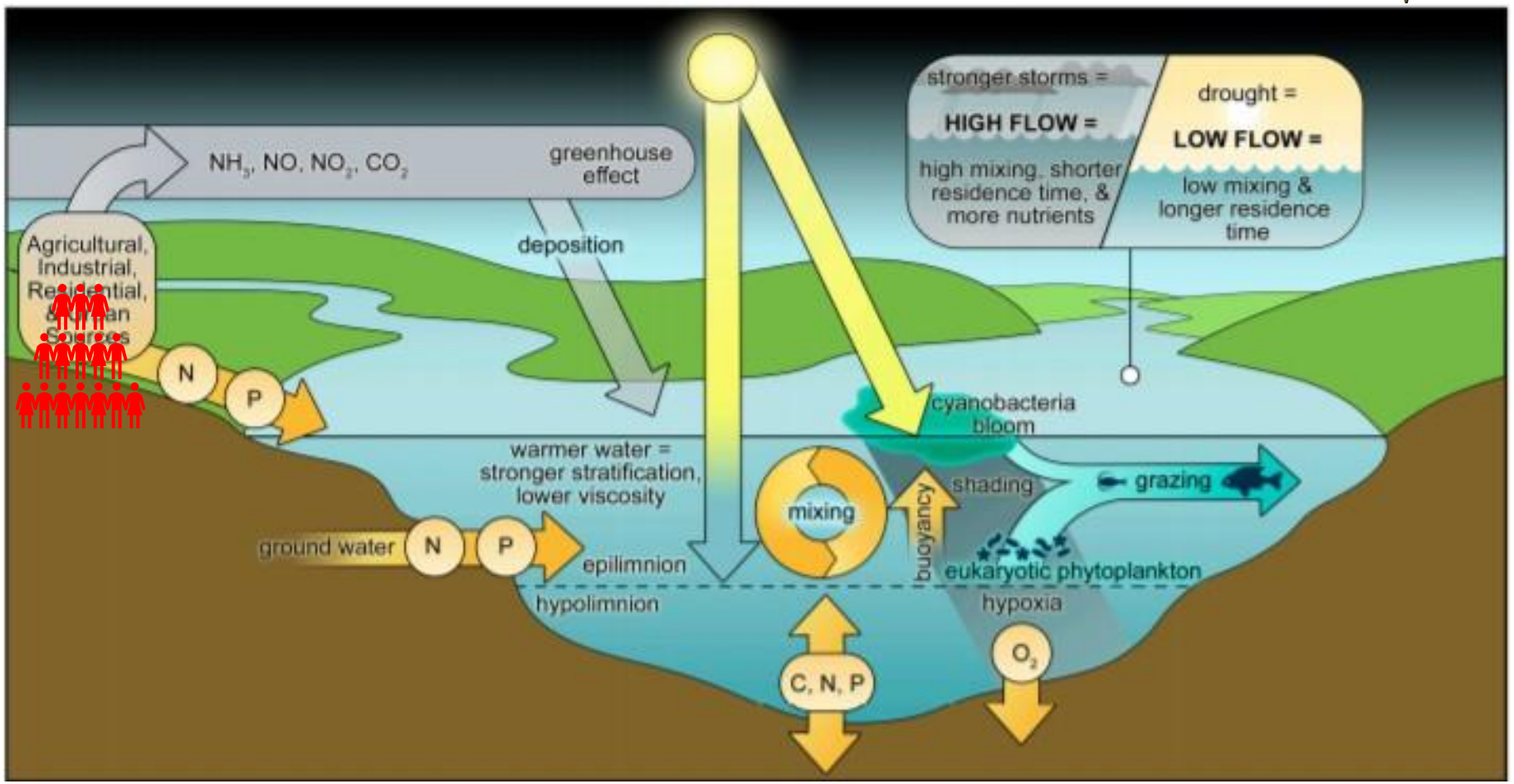
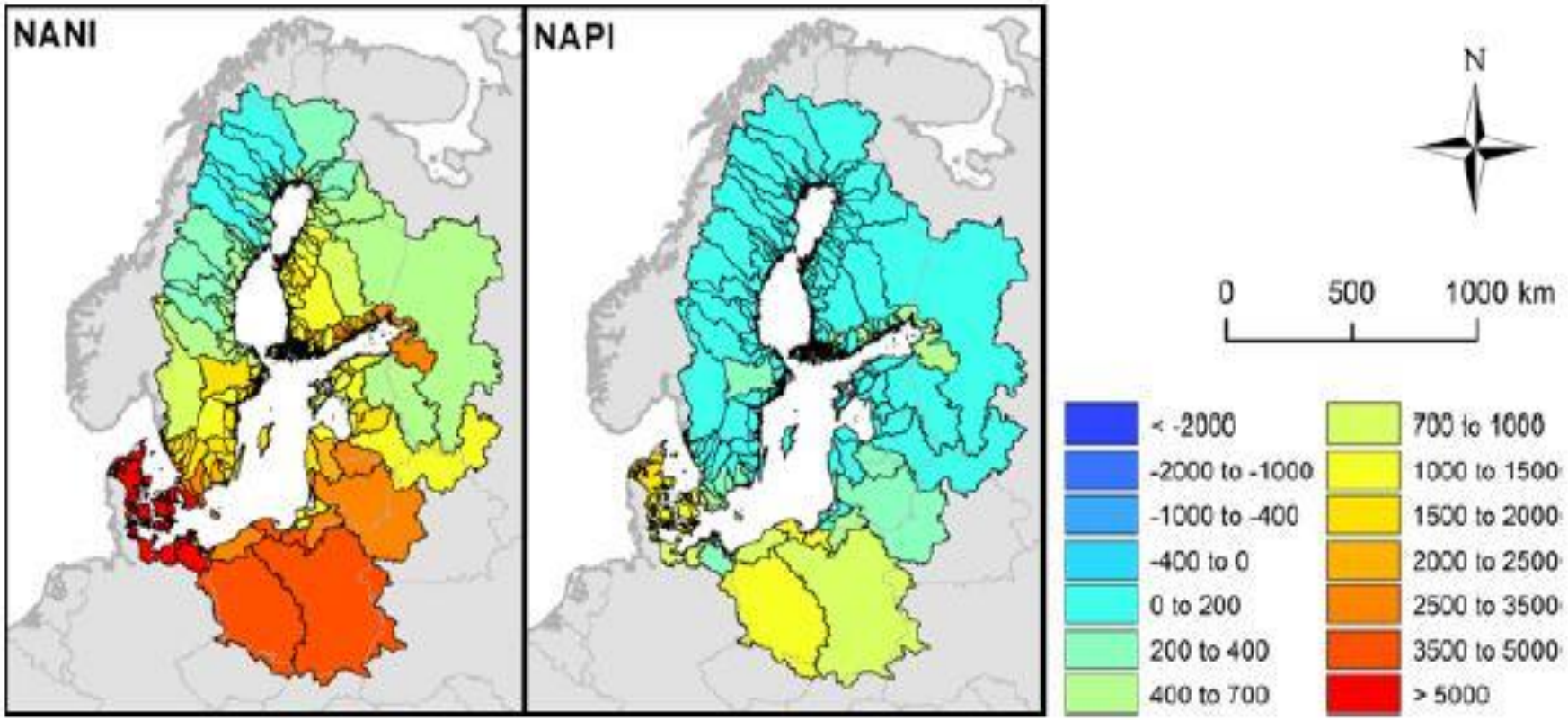
Sinice, makroglony, eutrofizacja i zmiany klimatu…
Cyanobacteria, macroalgae, eutrophication and climate change……



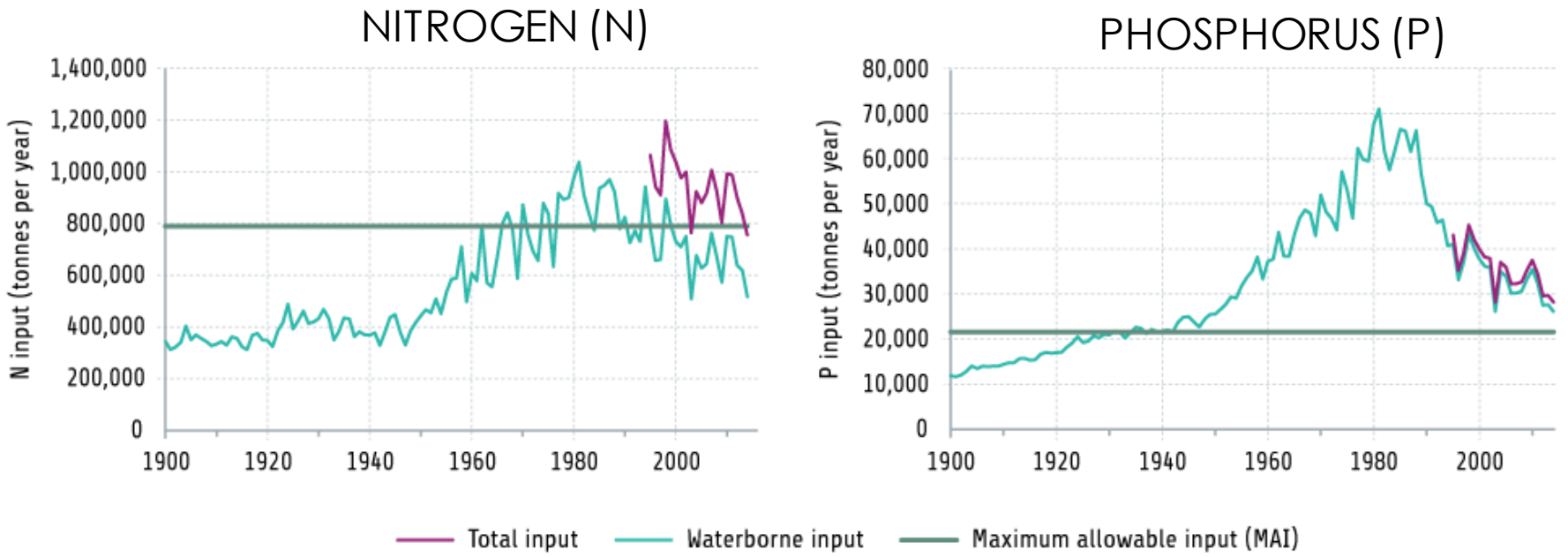
Paerl, H.W., 2018. *Toxins*, *10*(2), p.76.

Hong i in. 2012 r. published the values of nutrient inputs from the catchment area to the Baltic Sea



NANI – azot kg N km^2 yr^1
NAPI – fosfor kg N km^2 yr^1

HELCOM, 2012. The Fifth Baltic Sea Pollution Load Compilation (PLC-5) – An Executive Summary. Balt. Sea Environ. Proc. No. 128ª
HELCOM, 2015. Updated Fifth Baltic Sea pollution load compilation (PLC-5.5). Baltic Sea Environment Proceedings No. 145



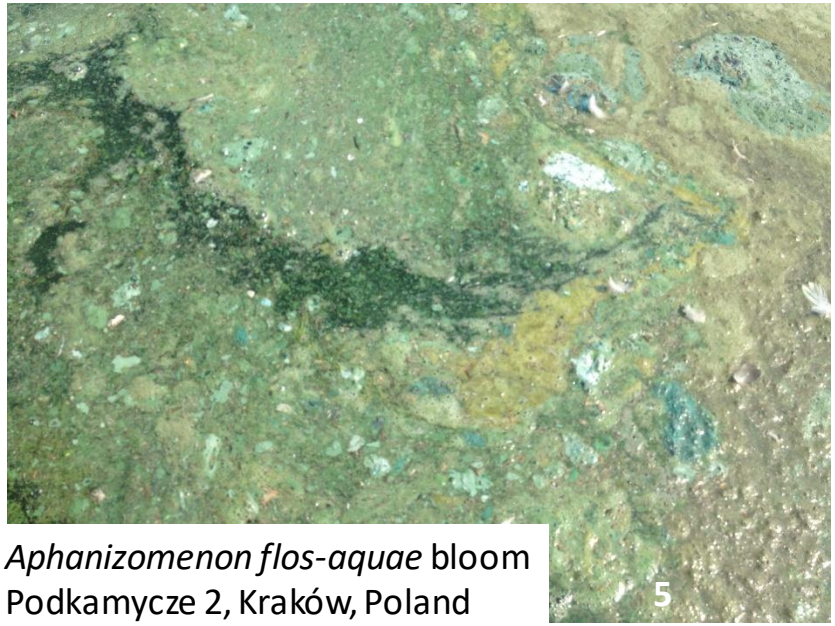
Nutrients input (changes over time) to the Baltic Sea (1900-2014)
Left chart – nitrogen inputs.
Right chart – phosphorus inputs.
The green line shows the maximum permissible inflows (MAI).
Source: Commission on the Protection of the Baltic Sea Environment (Helsinki Commission) HELCOM (https://helcom.fi/; access 13 July 2021).

2014
Vistula introduced 65 thousands of tonnes N_{tot} and 8 thousands of tonnes P_{tot}

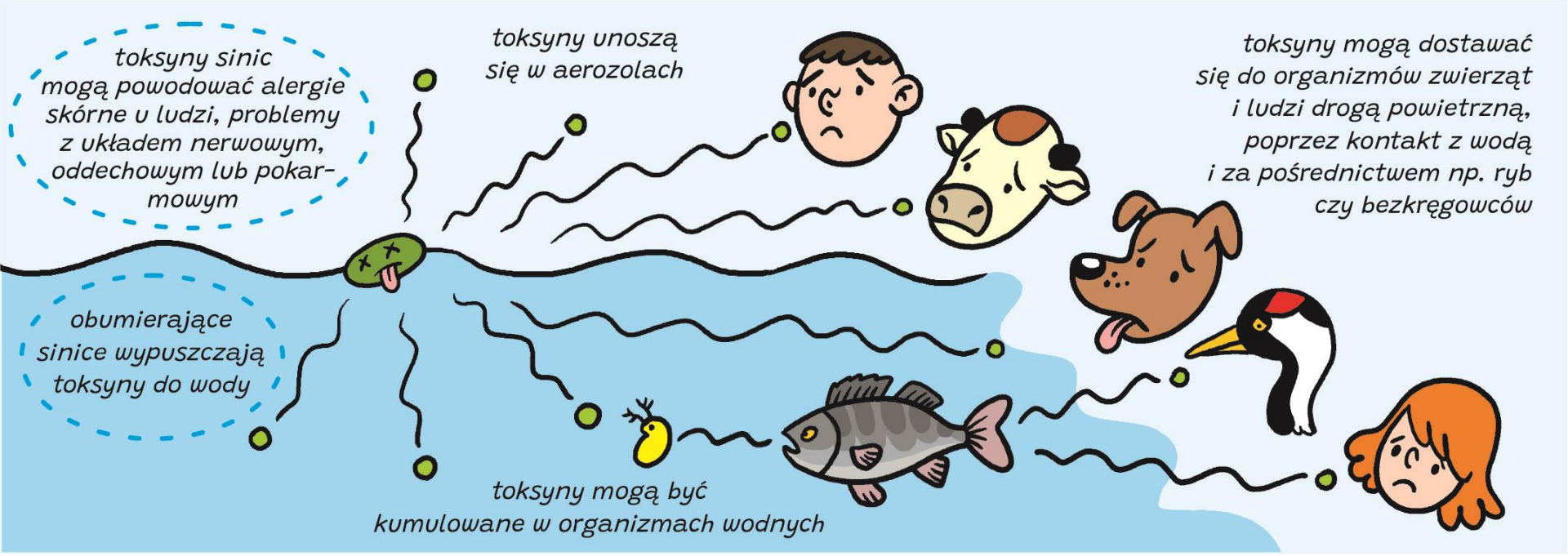
2018
Vistula introduced 54 thousands of tonnes N_{tot} and 3 thousands of tonnes P_{tot}

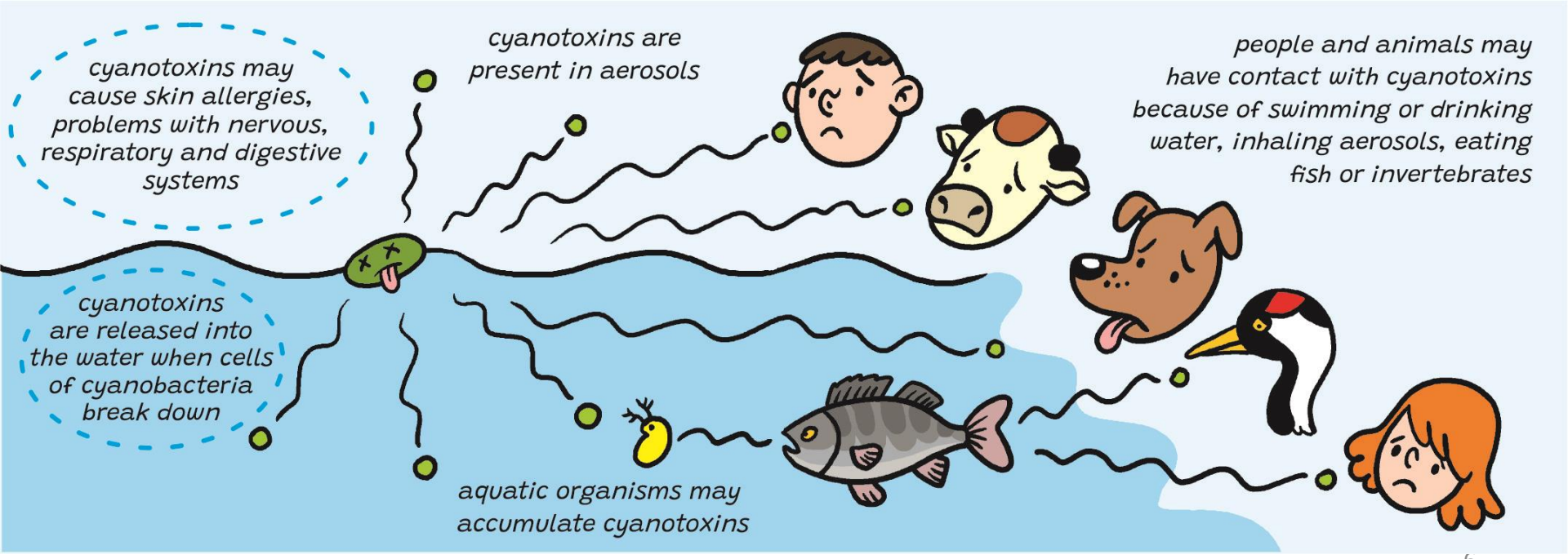
Why cyanobacteria blooms are interested?

Aphanizomenon flos-aquae bloom
Podkamycze 2, Kraków, Poland



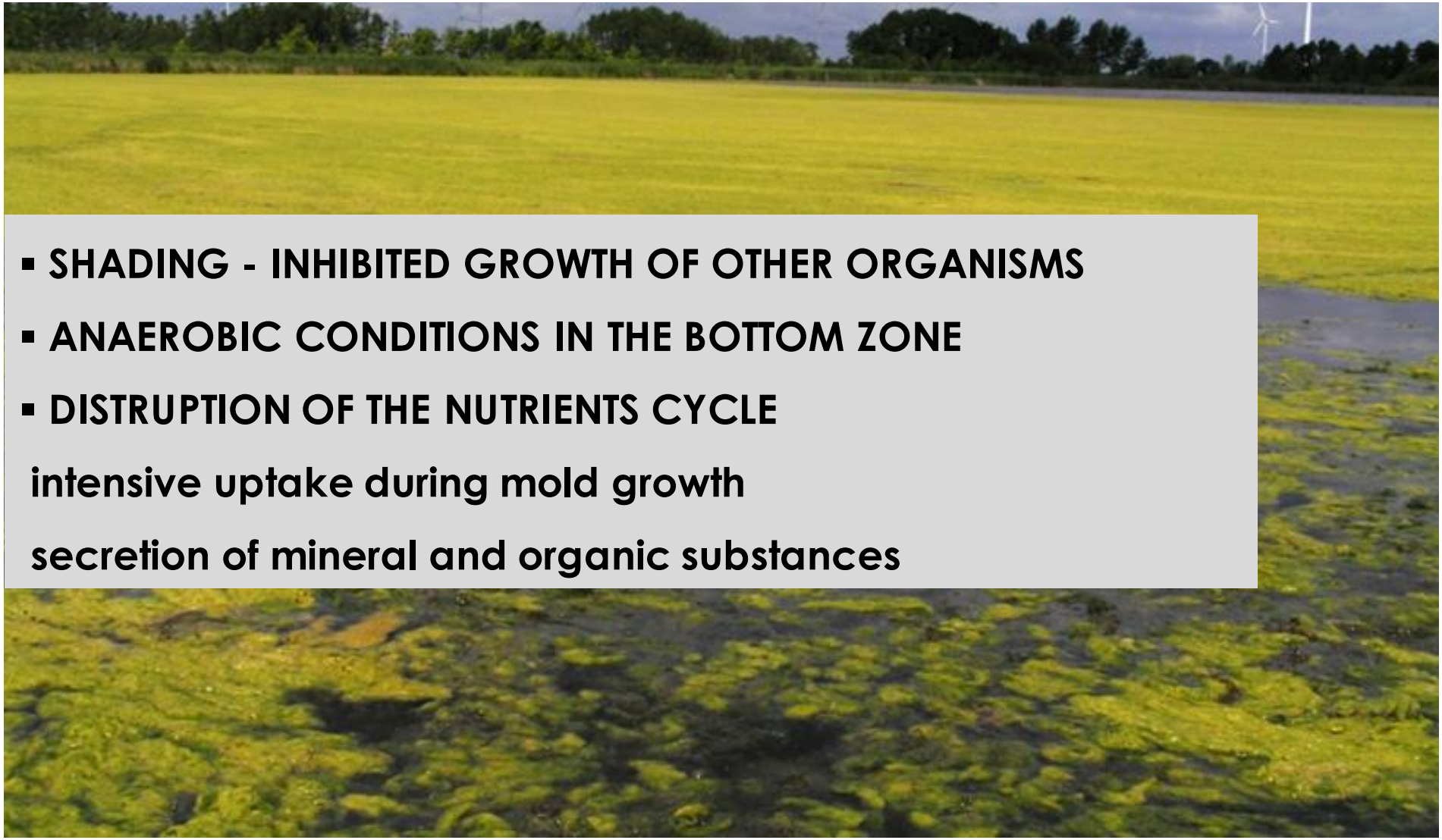
Aphanizomenon flos-aquae bloom
Podkamycze 2, Kraków, Poland





Rys. T. Samojlik

NEGATIVE IMPACT OF MACROALGAE MATS ON THE ECOSYSTEM



- SHADING - INHIBITED GROWTH OF OTHER ORGANISMS
- ANAEROBIC CONDITIONS IN THE BOTTOM ZONE
- DISTRUPTION OF THE NUTRIENTS CYCLE

intensive uptake during mold growth

secretion of mineral and organic substances

Algae Service for Life

PROJECT AIMS

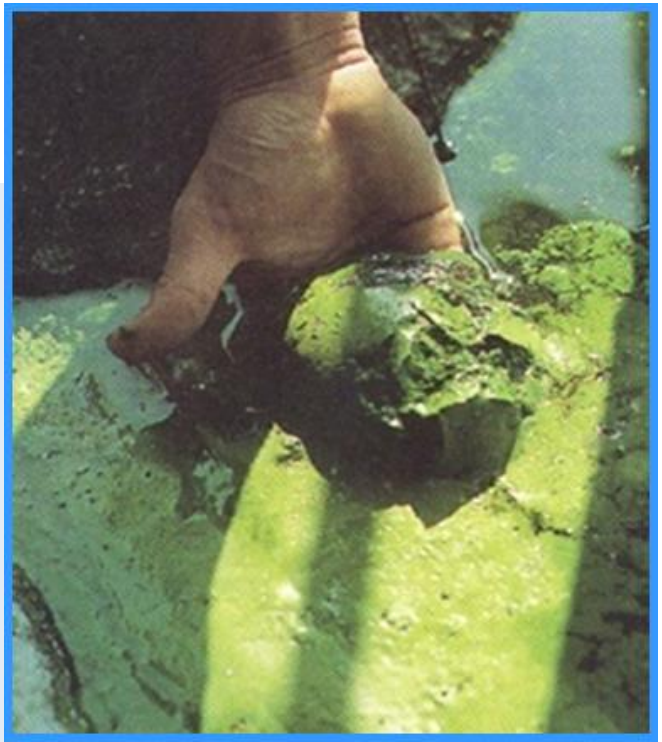
1. Constructing two different prototypes of aquatic harvesters for harvesting excess cyanobacteria and macroalgae biomass

2. Testing methods for in situ assessment of cyanobacterial biomass; traditional methods vs. modern methods (UAV)

3. To test the use of harvested cyanobacteria and macroalgae biomass for use in high and low quality products

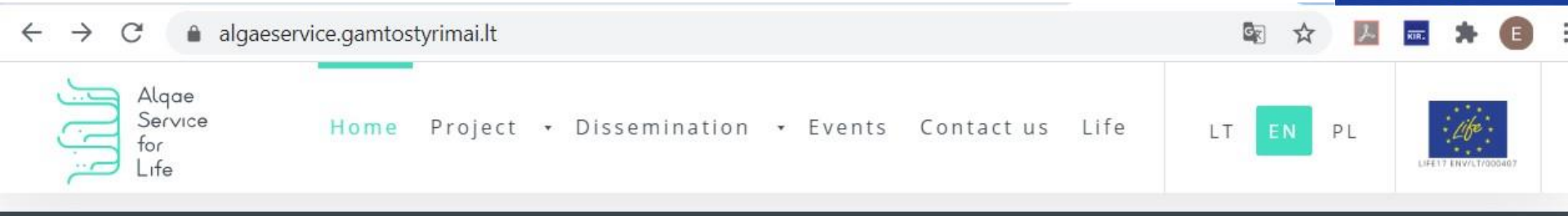
4. Raising public awareness of cyanobacterial blooms and disseminating project results

COLLECTING THE BIOMASS OF CYANOBACTERIA AND MACROALAGE



- Taking up 7.8 tonnes of biomass we will reduce:
- Up to 15 tonnes CO_2,
- 50 kg nitrogen,
- 3 kg phosphorus,
- 0.38 kg cyanotoxins

Raising public awareness of cyanobacterial blooms and disseminating project results



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ArcGIS application

Mark an algal blooms in water bodies!

Click and mark

Scan QR code and mark

Interactive map of ArcGIS application

Questionnaire

Water blooms

Contact us

Get in touch >

https://algaeservice.gamtostyrimai.lt/category/be-kategorijos-en/

Questionnaire:
https://docs.google.com/forms/d/e/1FAIpQLSd3EemWUQLa2iGsos8azU0yO7WlsolzepfUZnnFP21WP_8a-A/viewform

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DZIĘKUJĘ
THANK YOU!

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