Europeiska jordbruksfonden för landsbygdsutveckling: Europa investerar i landsbygdsområden

Lokalt ledd utveckling
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SKÅNES ESS

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REGITO
Research Center on Water and Health

OSBY KOMMUN

HOLA LAKE II

Breanäs Workshop September 13-15, 2022

Wetlands have been created in the forest

HÖVIDSTORP

Photo: Daniel Bergman

This wetland is monitored in the project

HÖVIDSTORP

Photo: Daniel Bergman

We monitor a wetland that was created at Grimsboda

GRIMSBODA

Photo: Agne Andersson

We placed a new bouy with a heavy anchor where the depth was 10.5 m

Lake Immeln 2022-08-23, sample point I-P8

Photo: Johan Forssblad

18 sediment cores were taken from a depth of 1.5 m

Lake Immeln 2022-09-02

Photo: Heléne Annadotter

Sejle mire: Colour of water: 1384 mg Pt/l (420 nm)

Lake Immeln 2022-09-02, Sejle mire

Photo: Johan Forssblad

Sejle mire: pH 3.99 – More acid than the acid reference 4.01!

Lake Immeln 2022-09-02, Sejle mire

Photo: Heléne Annadotter

Sediment experiment with Lake Immeln water

Lake Immeln sediment experiment 2022-09-07, column 1–18

Photo: Johan Forssblad

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Björnvik 19 november 2012 with 0,81-1,1 mg microcystins/l
Extremely high levels! The median value is 0,002 mg/l

BJÖRNVIK, LAKE IMMELN 2012-11-19

Photo: Agne Andersson

2 september 2021, an Icelandic sheepdog was poisoned by a neurotoxin. The water where the dog swam was clear but...

Lake Immeln

Photo: Johan Forssblad

... the cyanobacterium Oscillatoria limosa was present at the bottom

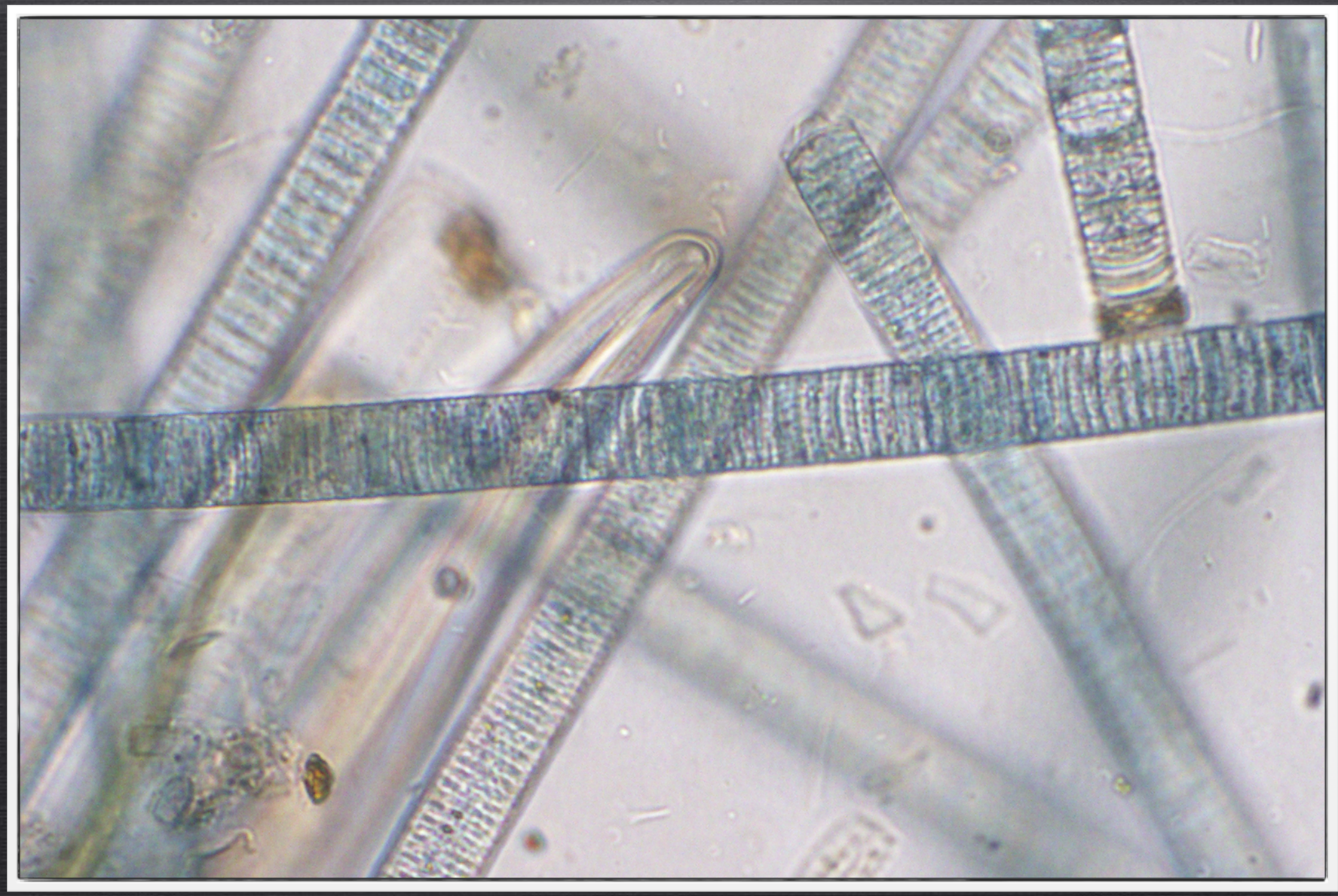


Photo: Johan Forssblad

Some days later, a dog died after swimming at Järsövik, Lake Immeln, where the cyanobacteria Oscillatoria, Phormidium and Woronichinia were present

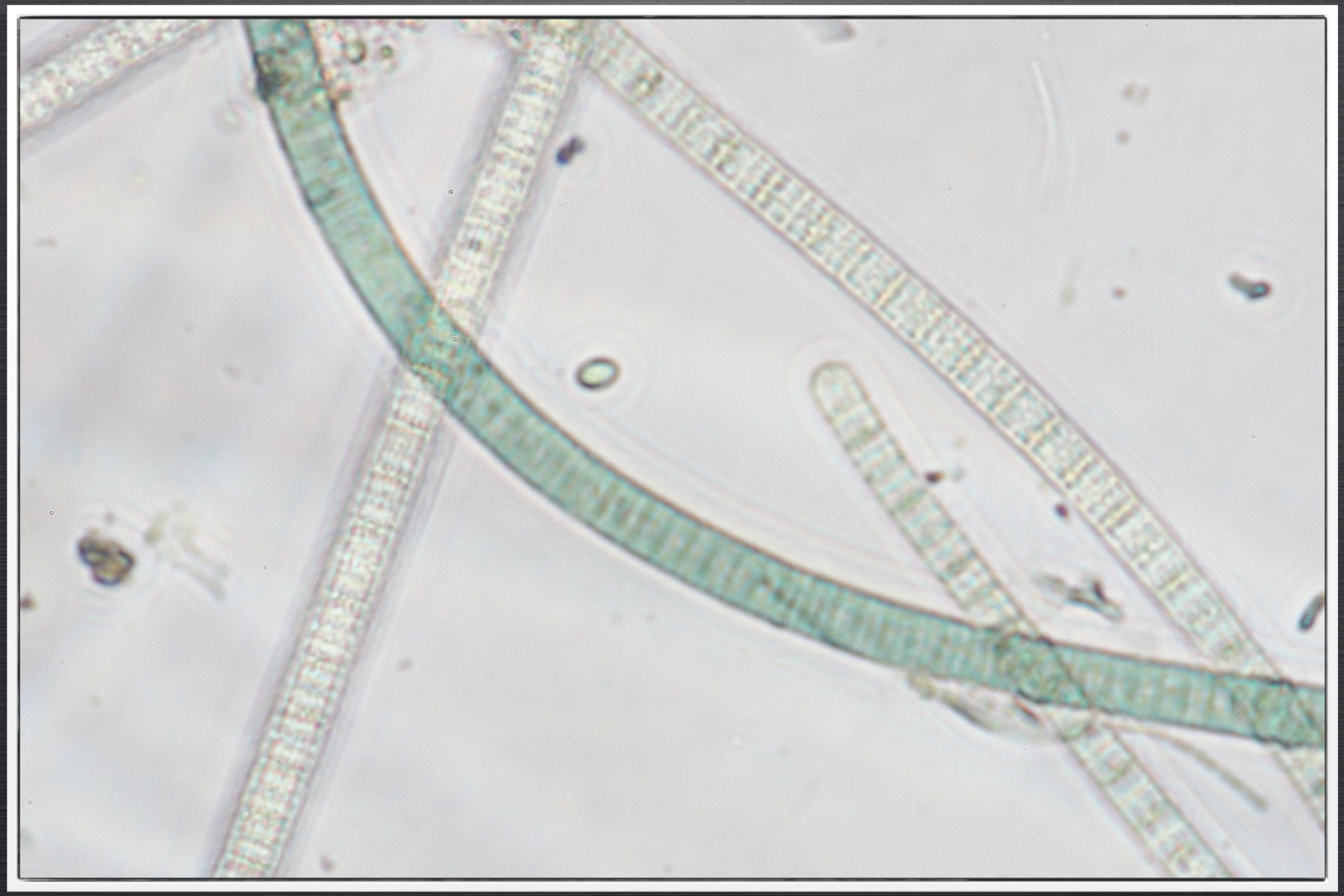


Photo: Johan Forssblad

Anatoxin-a

Lake Immeln

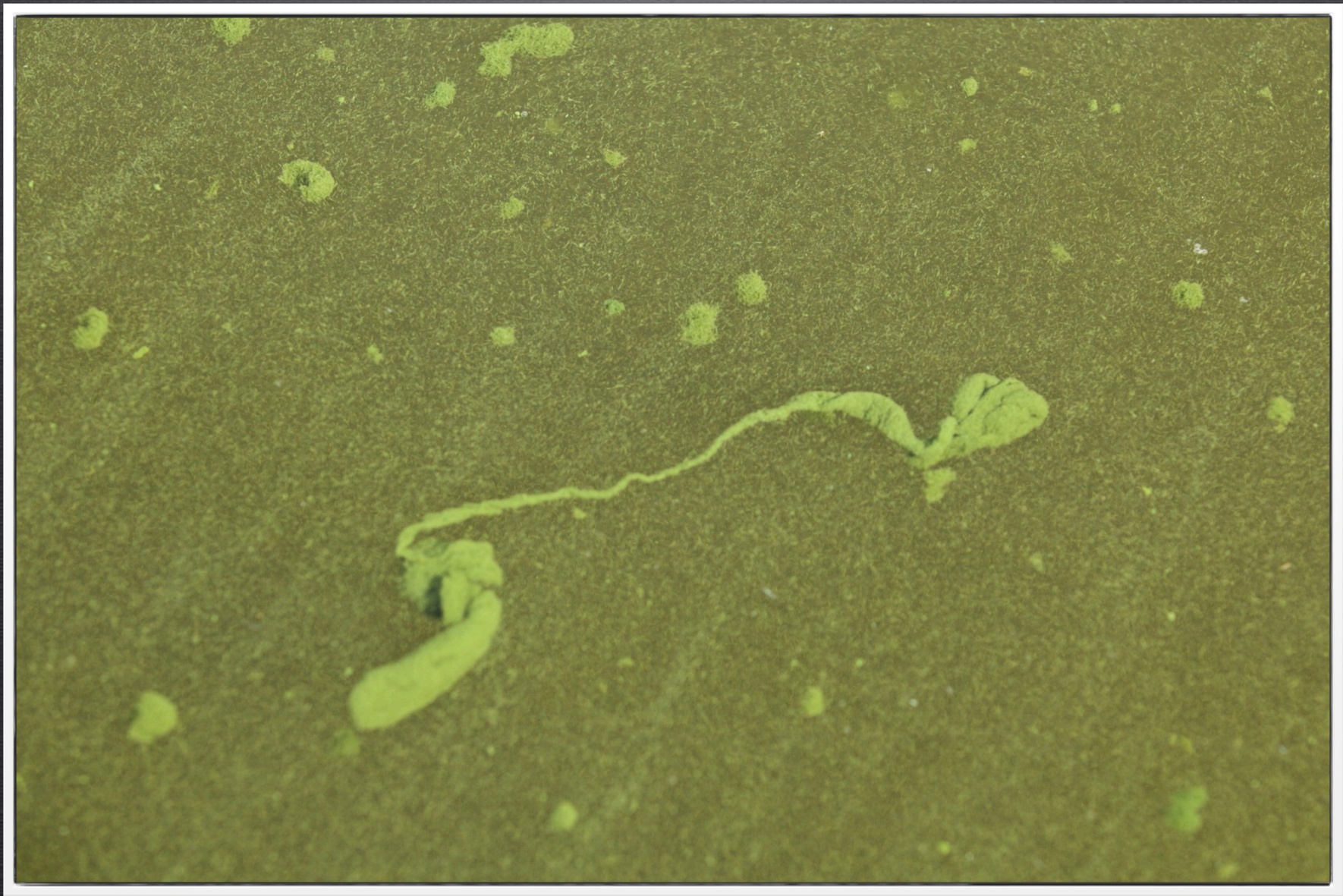
Photo: Agne Andersson

One of the challenges of the project "Save Lake Immeln" and Hola Lake II
Why have we got cyanobacteria in Lake Immeln?

Lake Immeln

Photo: Johan Forssblad

When cyanobacteria become a problem, it is common to suppose that the external load of phosphorus is too high, but...



Lake Finjasjön

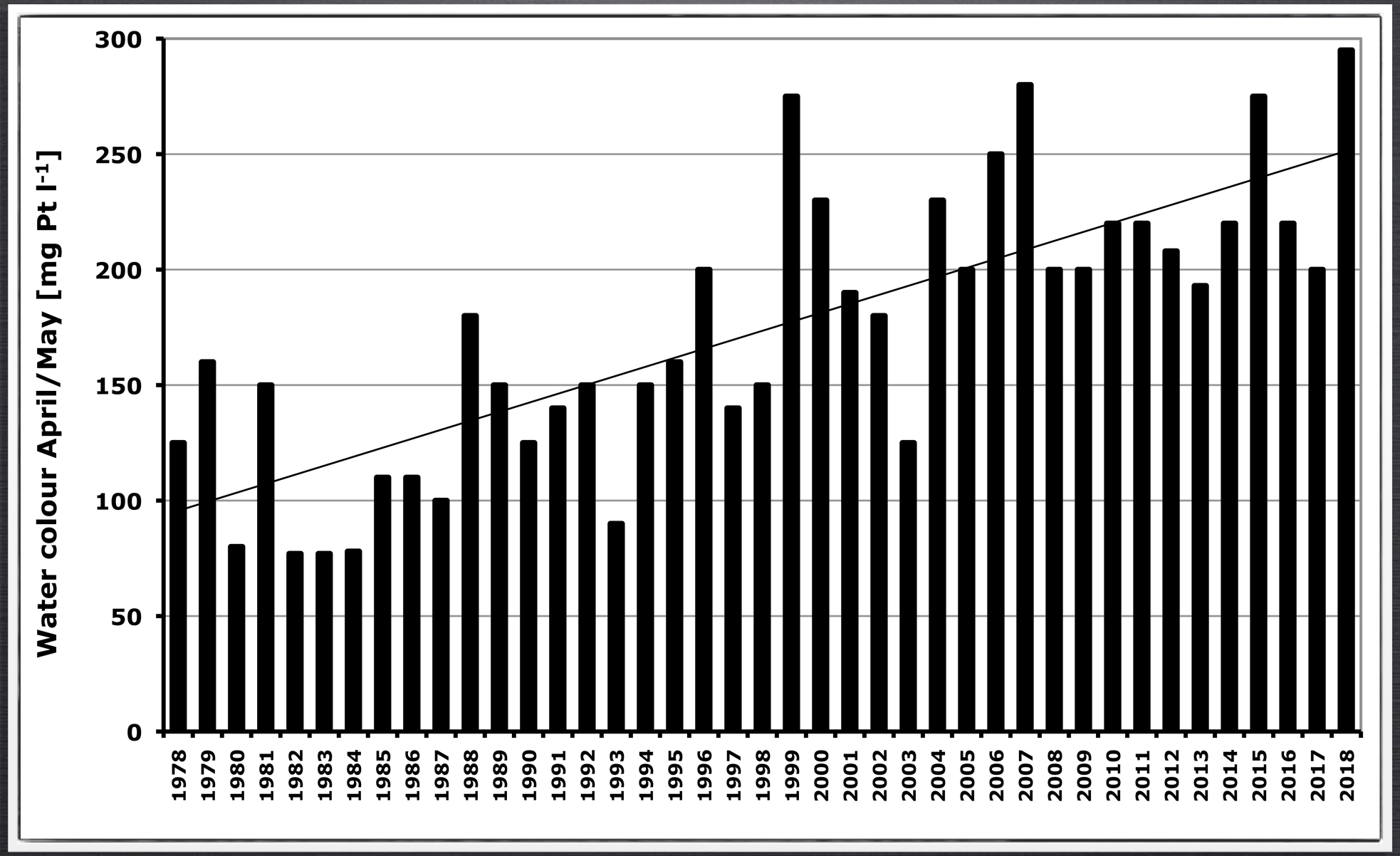
Photo: Johan Forssblad

... in Lake Immeln, the average level of TP is 11 µg TP/l

Lake Immeln 2017-08-24

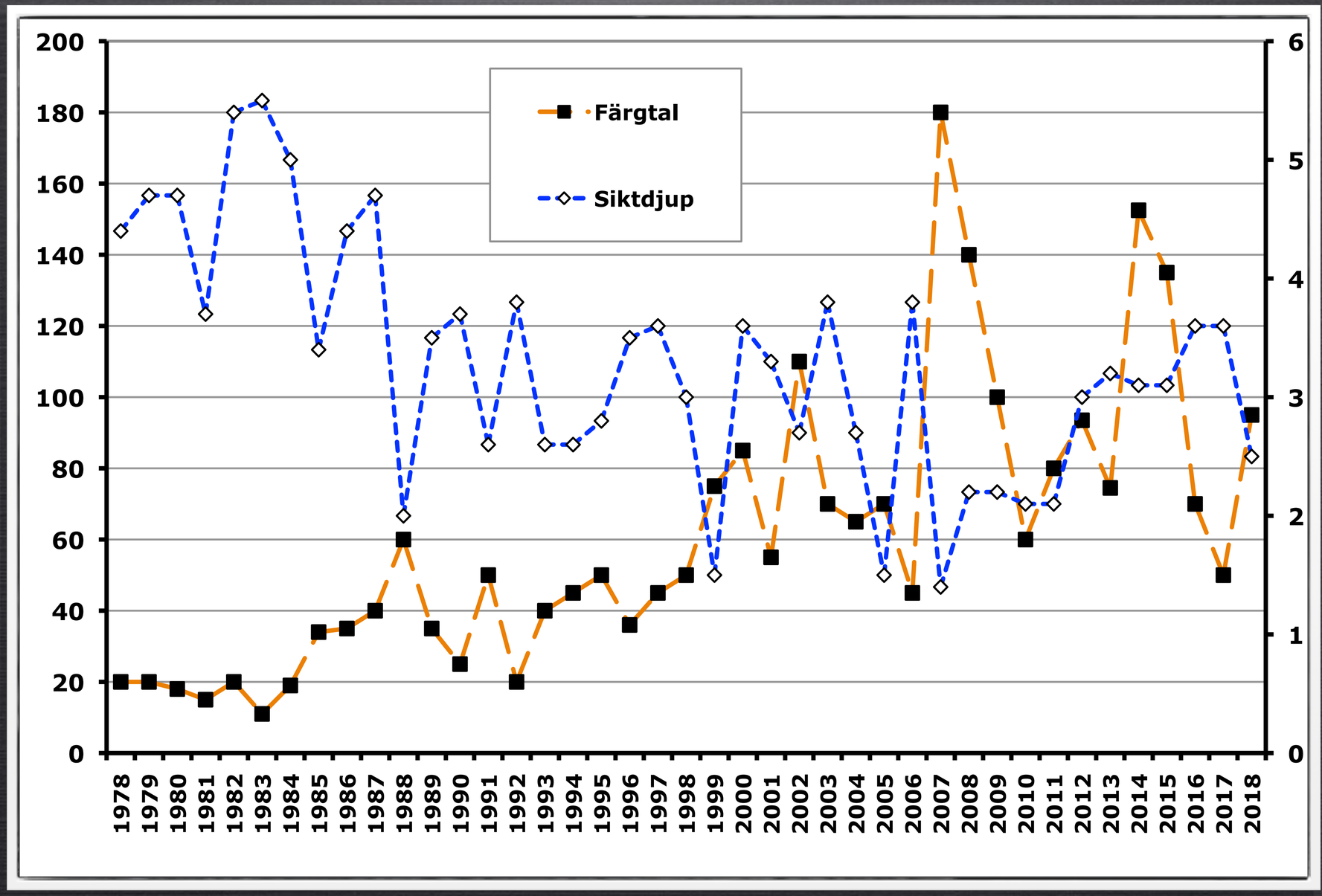
Photo: Johan Forssblad

Since 1978, the water colour has increased in the largest inflow, River Ekeshultsån



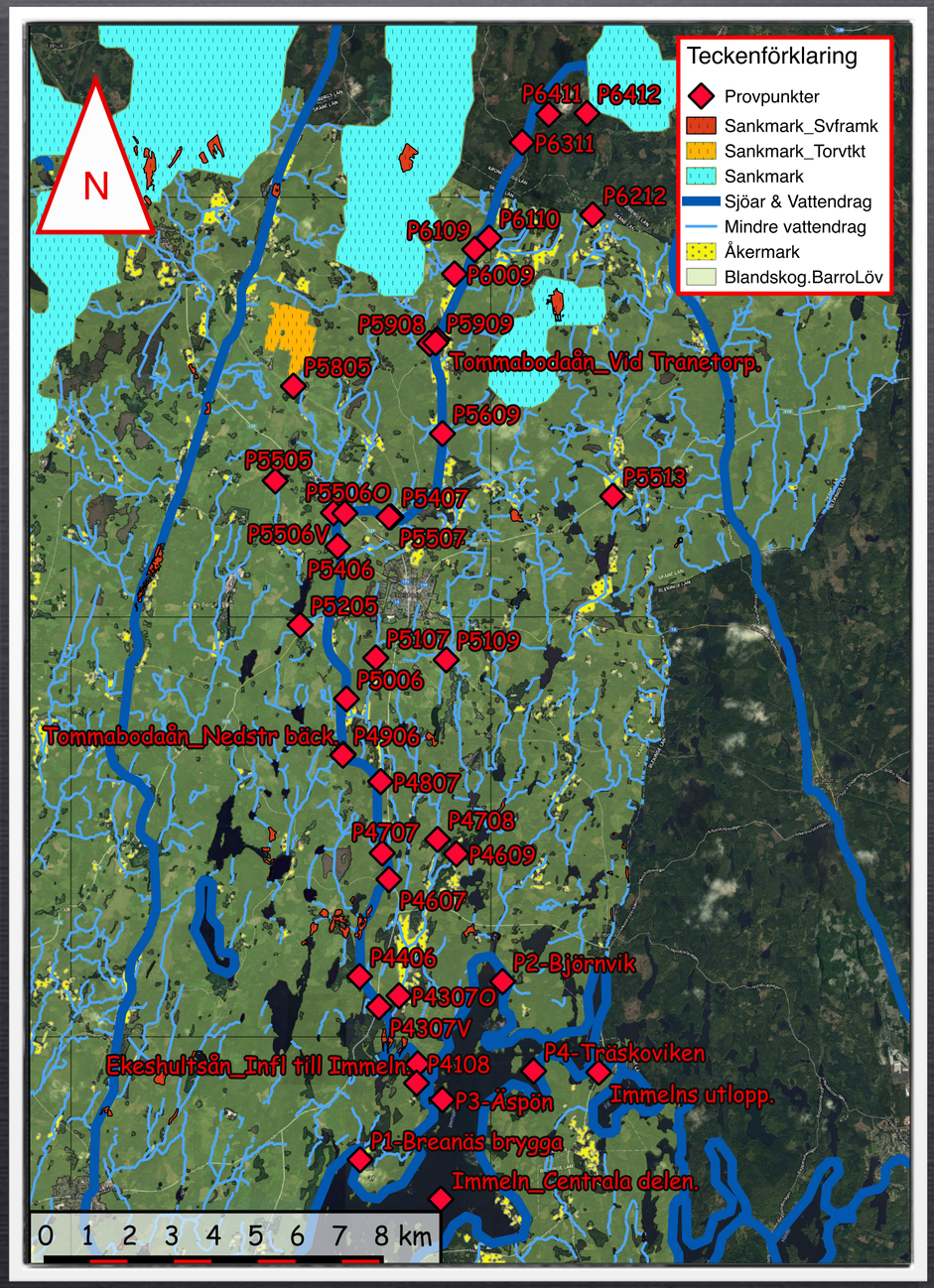
Layout: Heléne Annadotter

In last Hola Lake project, we made certain observations...



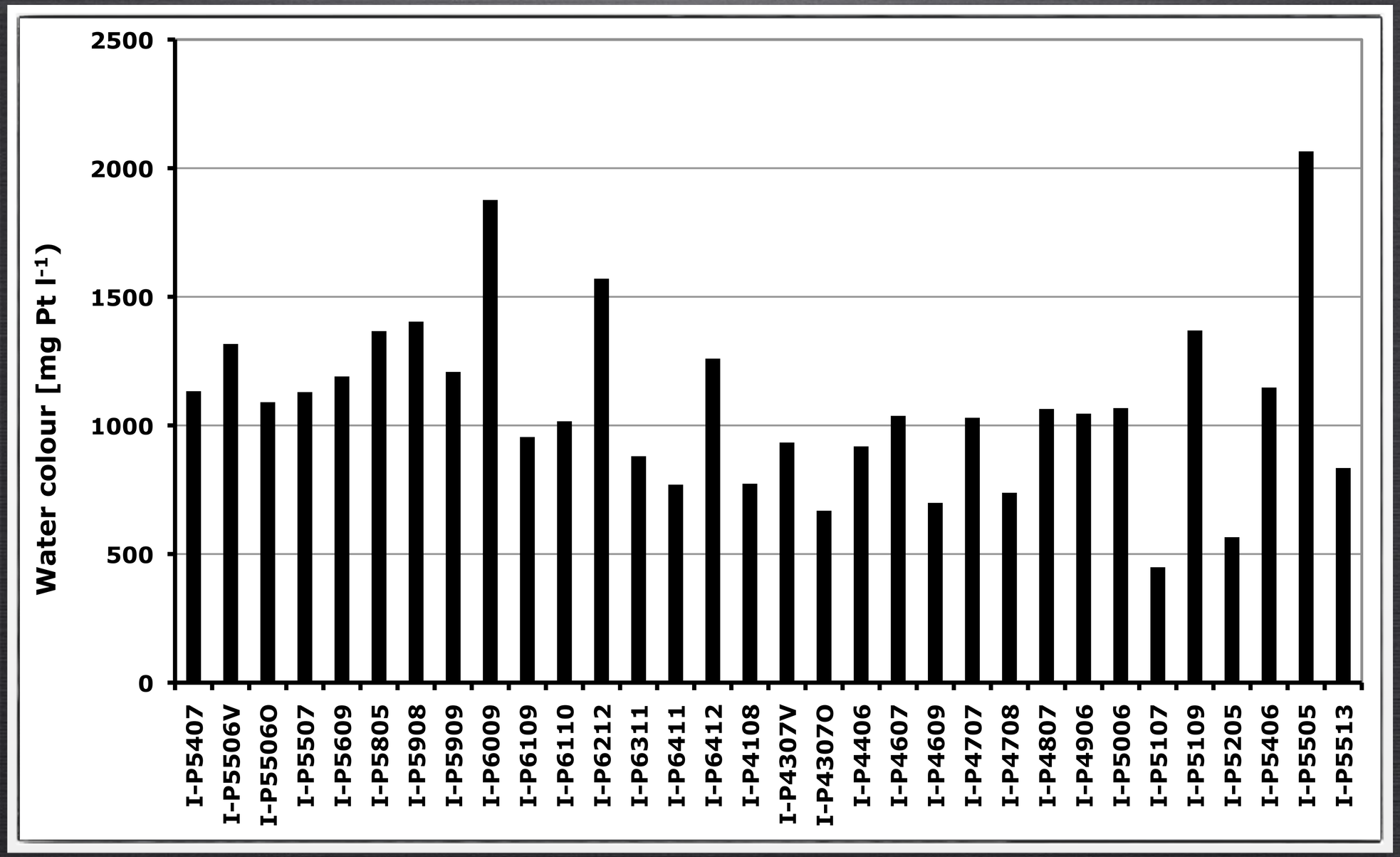
Layout: Heléne Annadotter

The catchment of River Ekeshultsån



Layout: Martin Larsson

The water colour is extremely high in the catchment



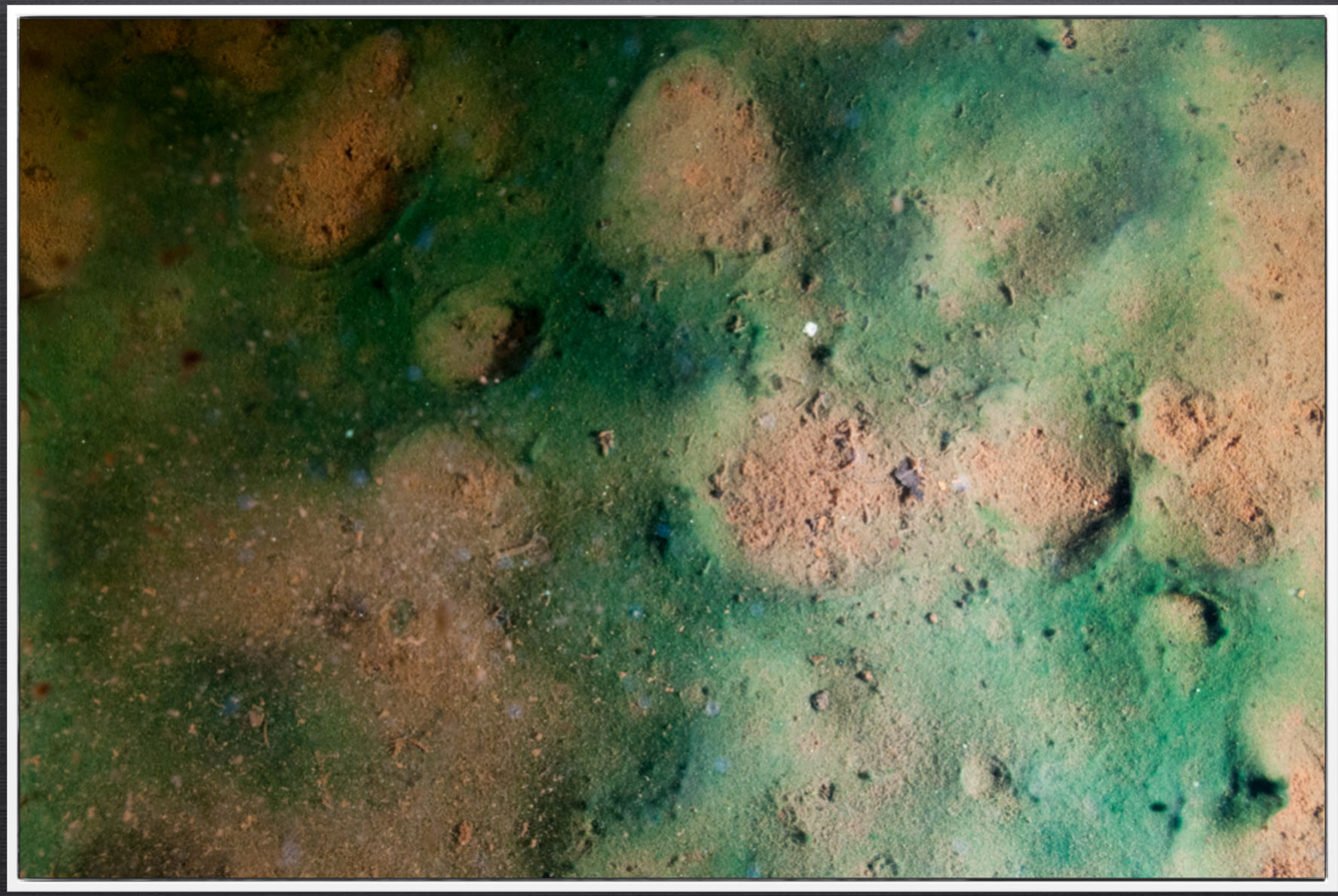
Layout: Heléne Annadotter

Two important challenges to clarify in Hola Lake II:

A Brook in the catchment of Lake Immeln

Photo: Johan Forssblad

What is the connection between high water colour and the cyanobacteria that proliferate in Lake Immeln? Which factors are crucial?



Cyanobacterial mat dominated by Oscillatoria limosa

Photo: Patrik Svensson

Will the sediment experiment give us a clue?

Lake Immeln sediment experiment 2022-09-07, column 1–18

Photo: Johan Forssblad

Sediment experiment with and without oxygen

Lake Immeln sediment experiment 2022-09-07, column 7 & 8

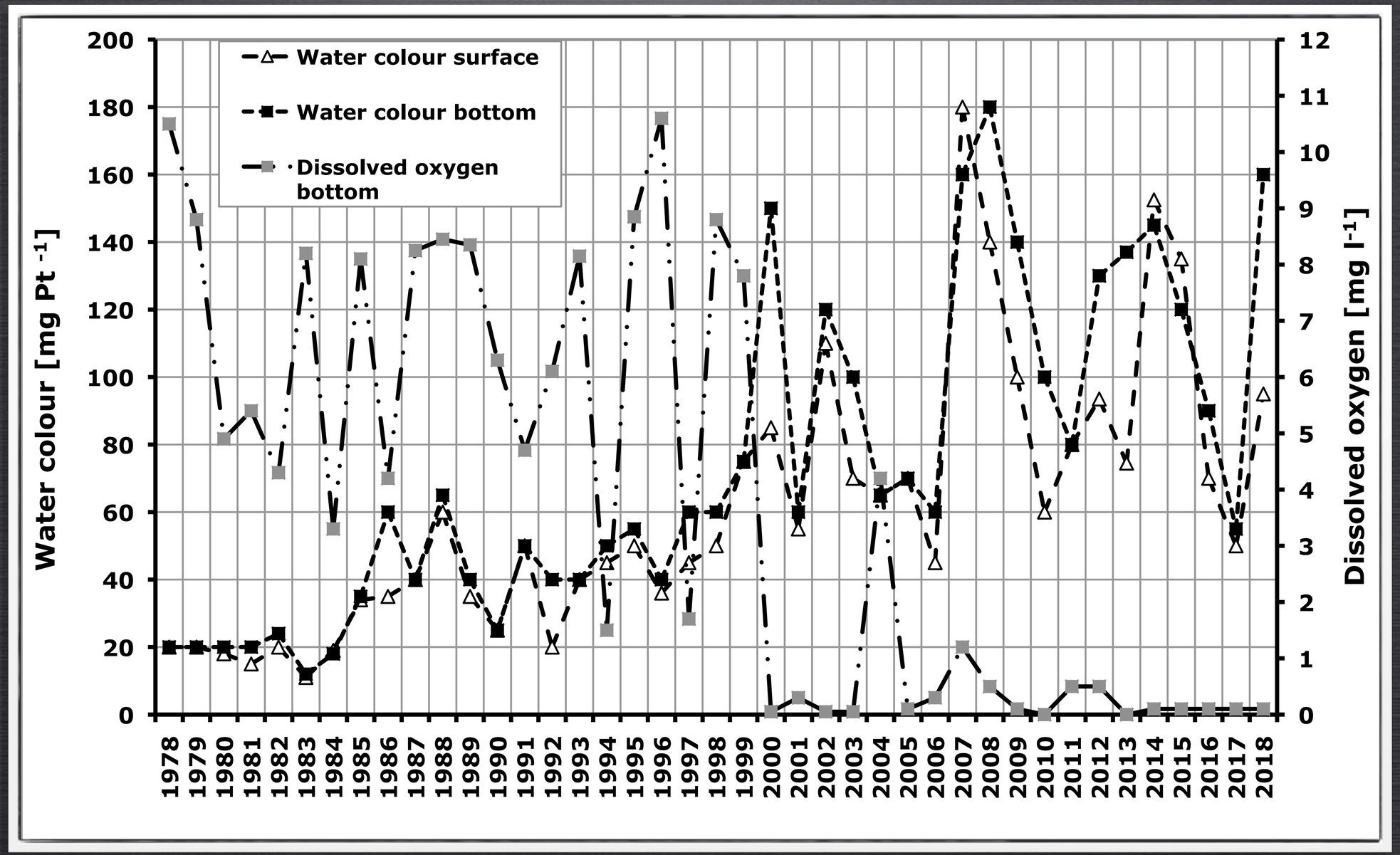
Photo: Johan Forssblad

Challenge 2: Which changes in the catchment ...

Lake Immeln area

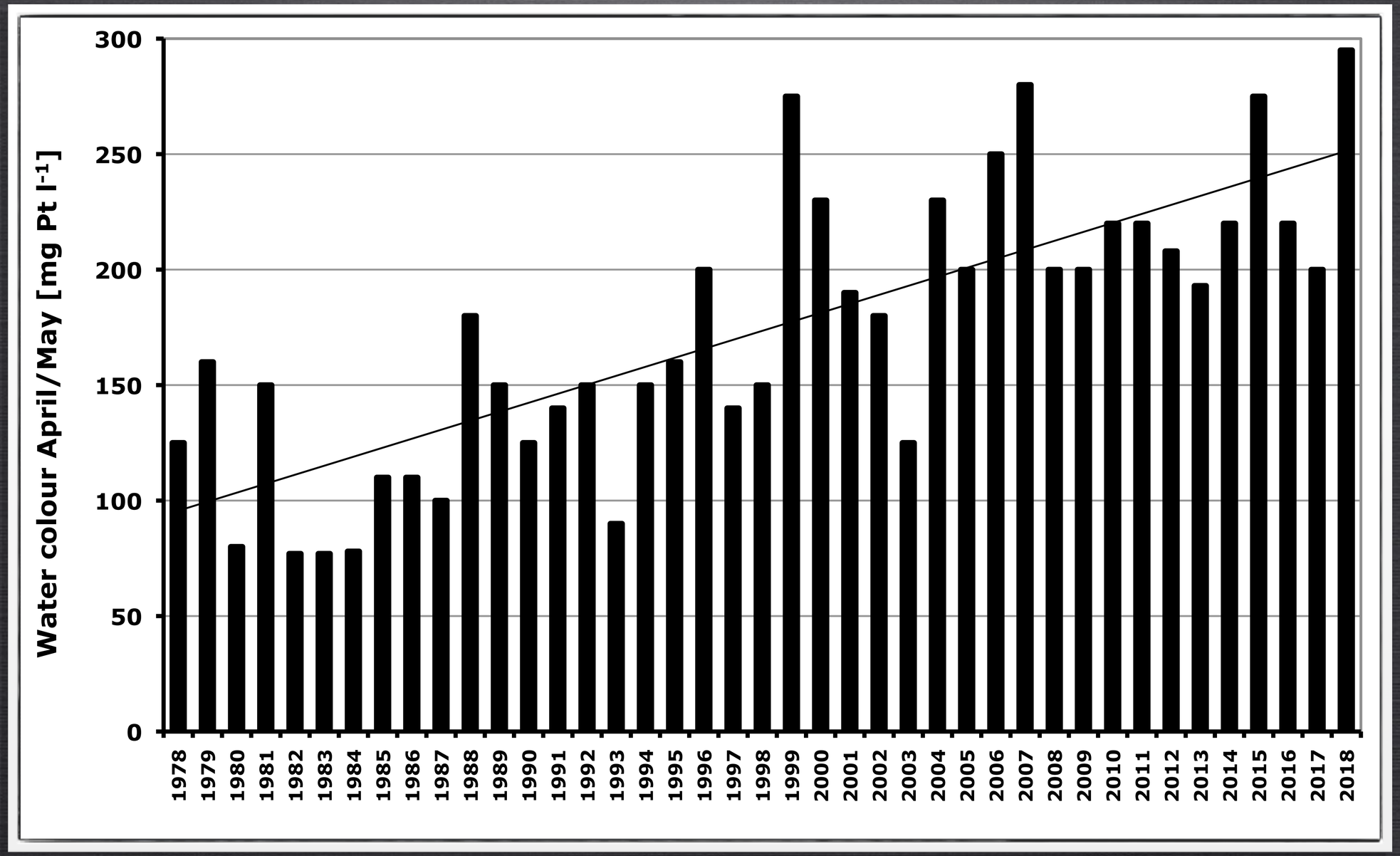
Photo: Johan Forssblad

... has contributed to the increased water colour in the lake ...



Layout: Heléne Annadotter

... and in the largest inflow, River Ekeshultsån



Layout: Heléne Annadotter

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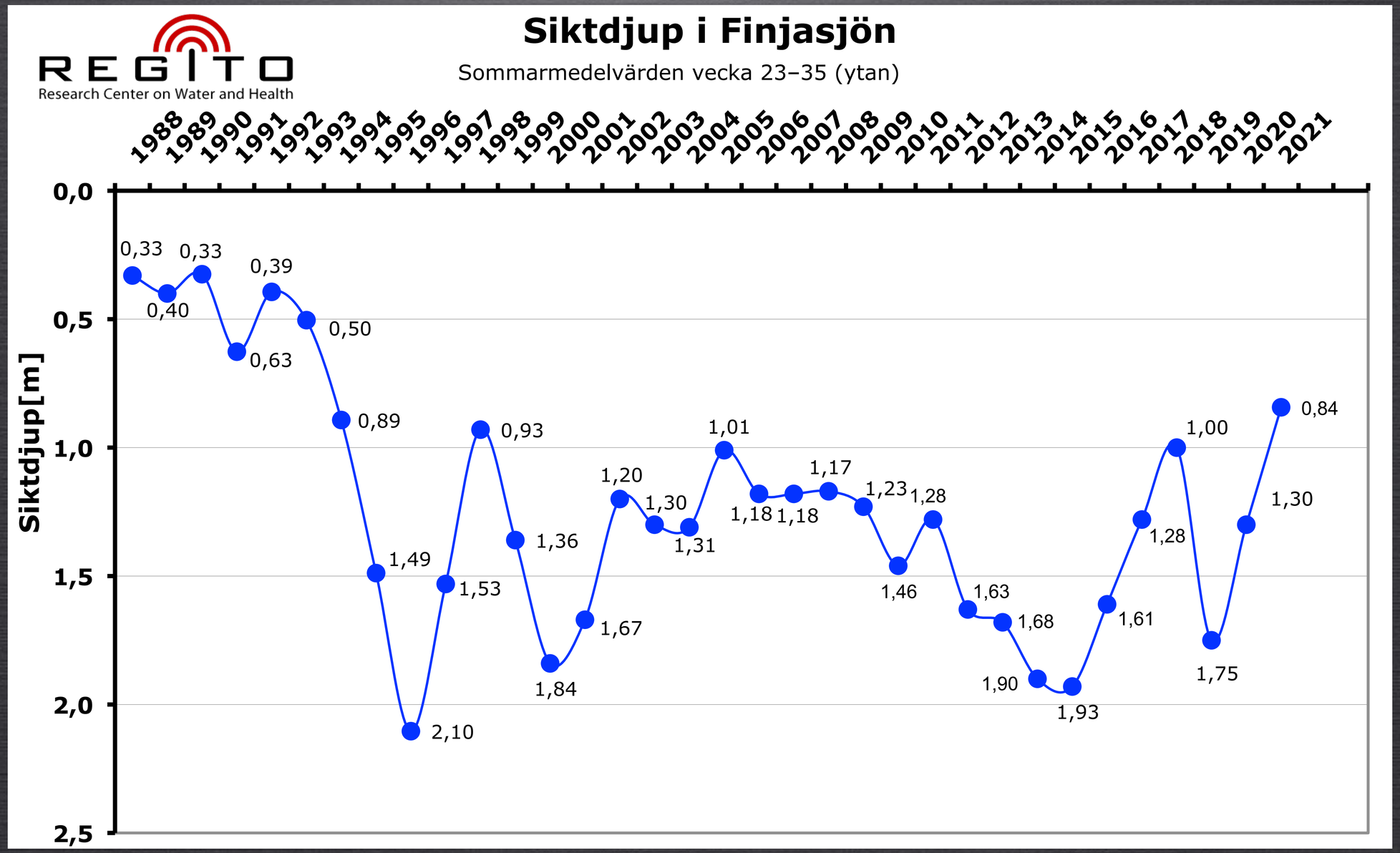
Everybody probably want to know:

What has happened in Lake Finjasjön?

Secchi depth in Lake Finjasjön, summer average 1988-2021



Layout: Johan Forssblad

Total phosphorus in Lake Finjasjön, summer average 1988-2021

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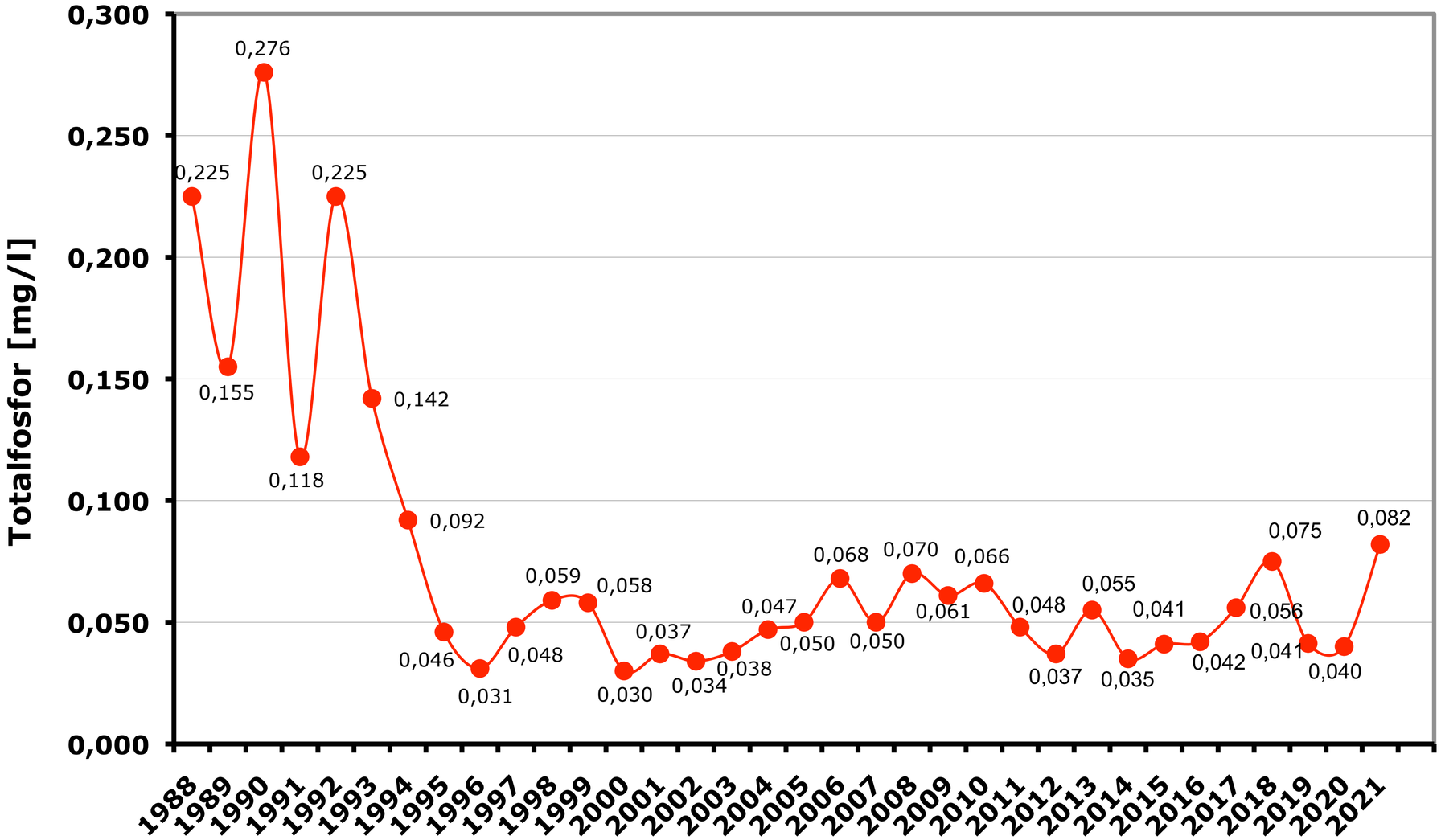
Totalfosfor i Finjasjön

Sommarmedelvärden (ytan) vecka 23–35



Layout: Johan Forssblad

Chlorophyll a in Lake Finjasjön, summer average 1988-2021

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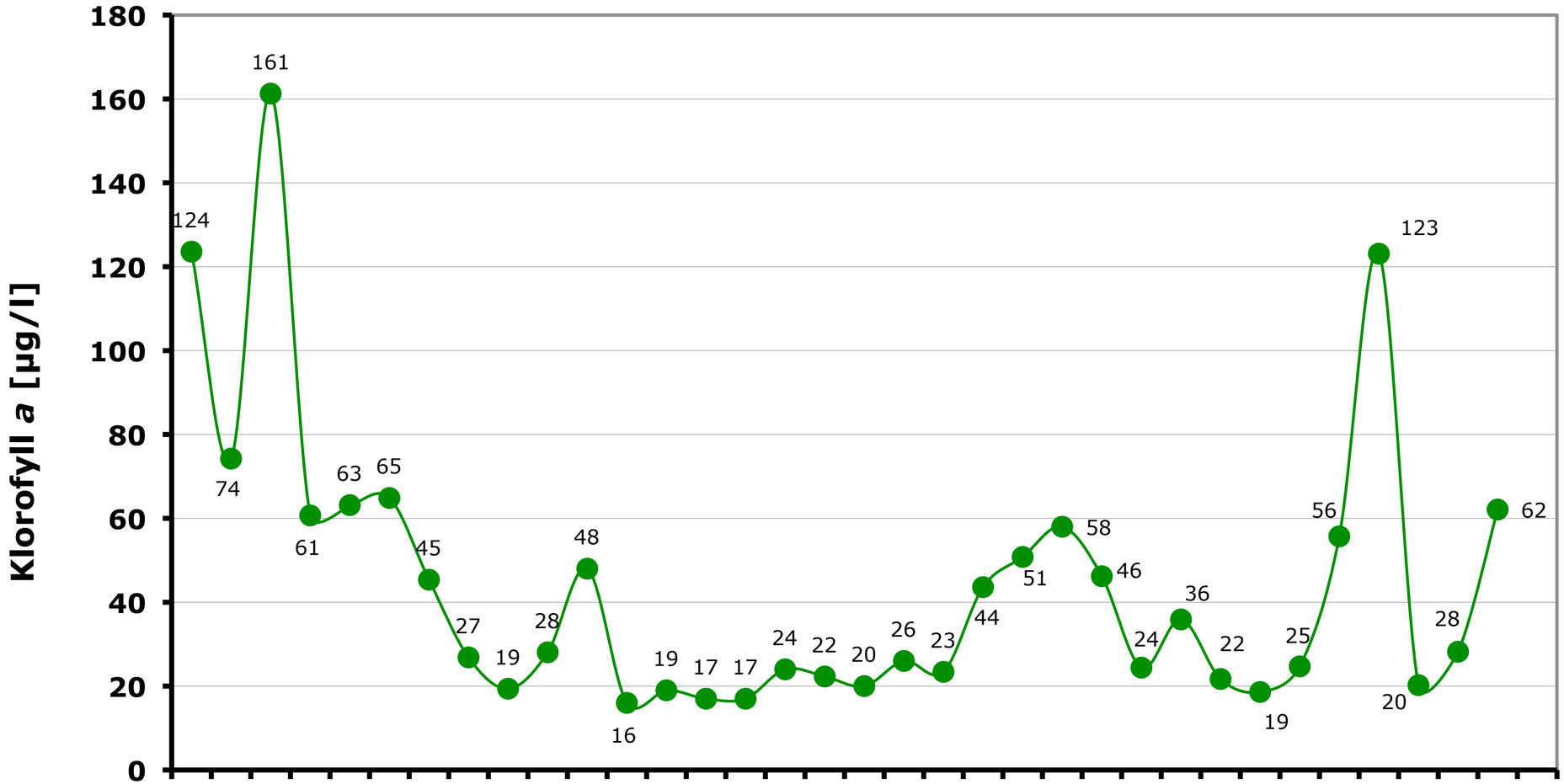
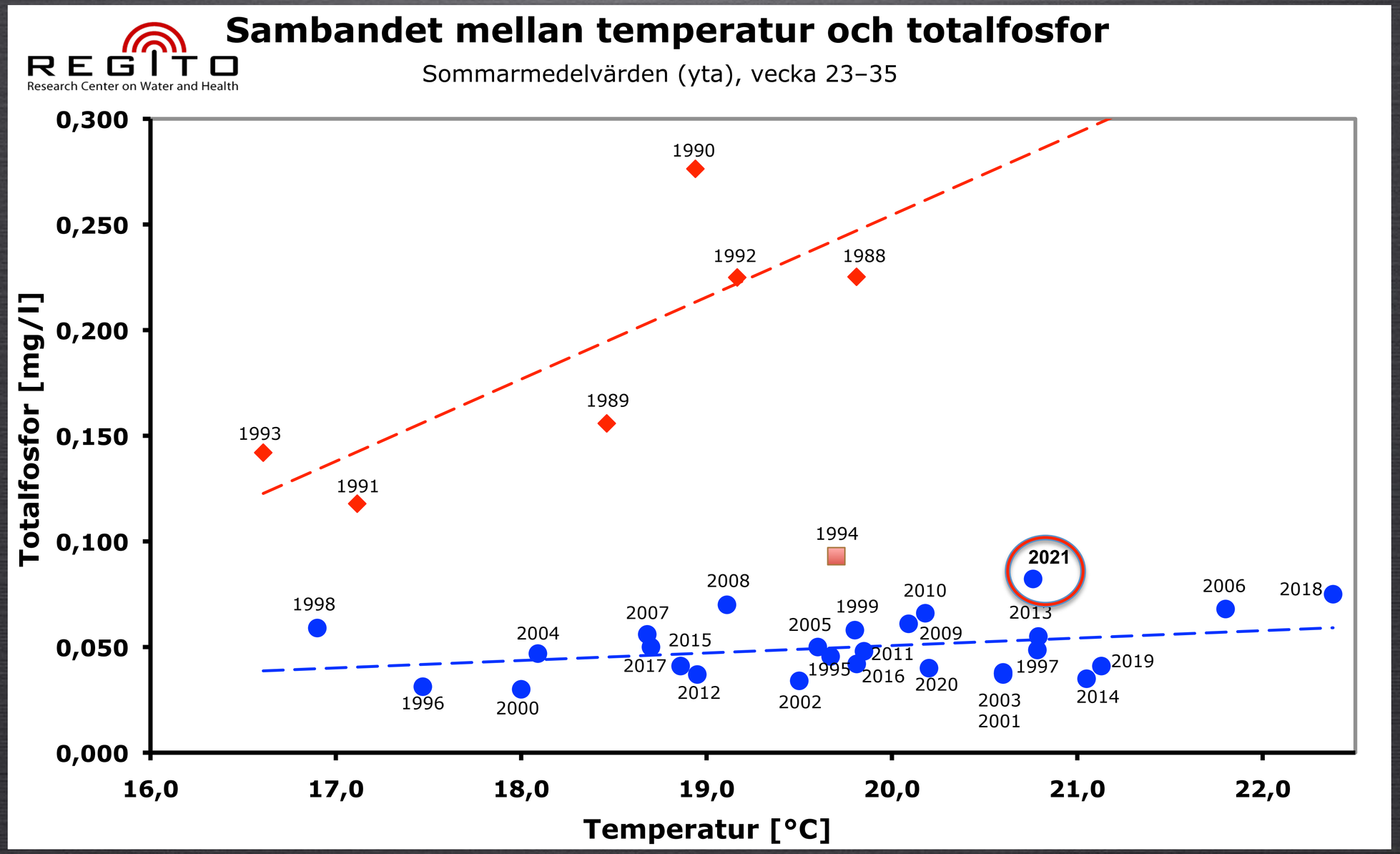
Klorofyll *a* i Finjasjön

Sommarmedelvärden (yta) vecka 23–35



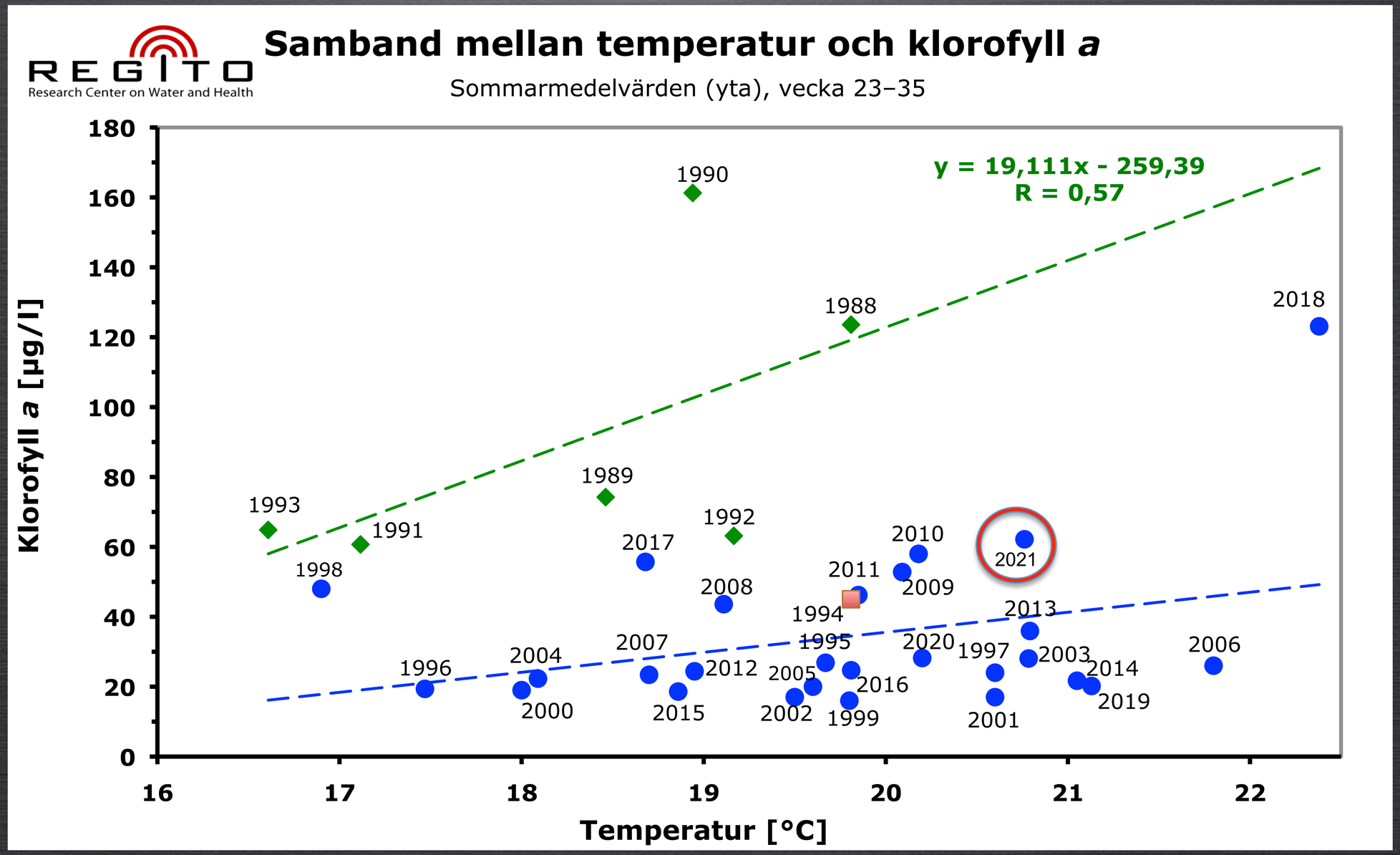
Layout: Johan Forssblad

Total phosphorus vs. temperature in Lake Finjasjön, summer average 1988–2021



Layout: Johan Forssblad

Chlorophyll a vs. temperature in Lake Finjasjön, summer average 1988-2021



Layout: Johan Forssblad

Thank you for watching!