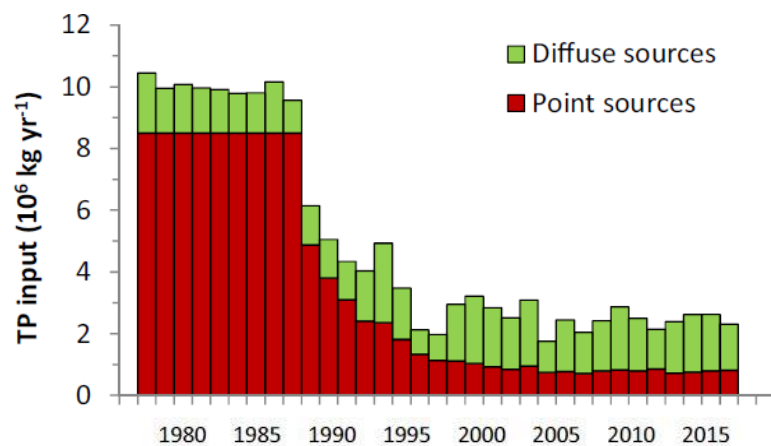
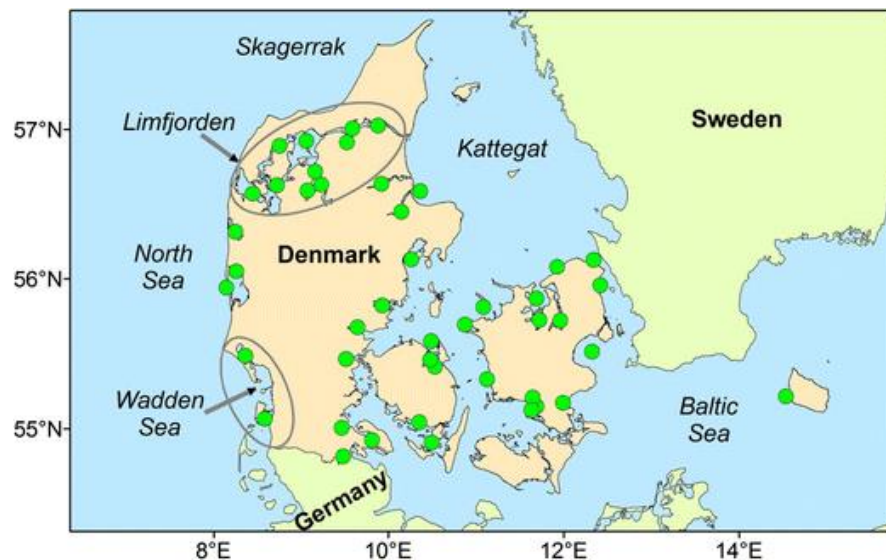


New P filter demo site at Fensholt in Denmark

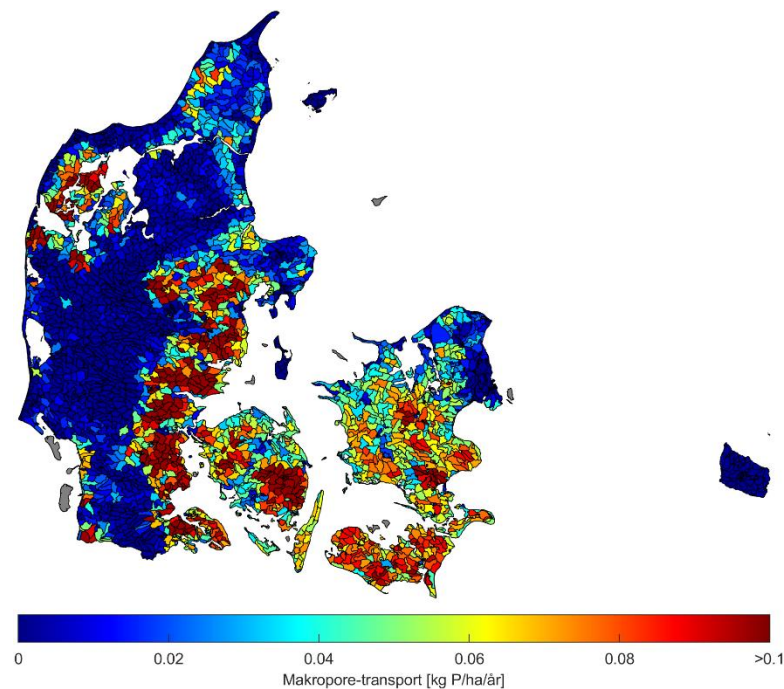
Lorenzo Pugliese

Goswin Johann Heckrath

P losses in DK

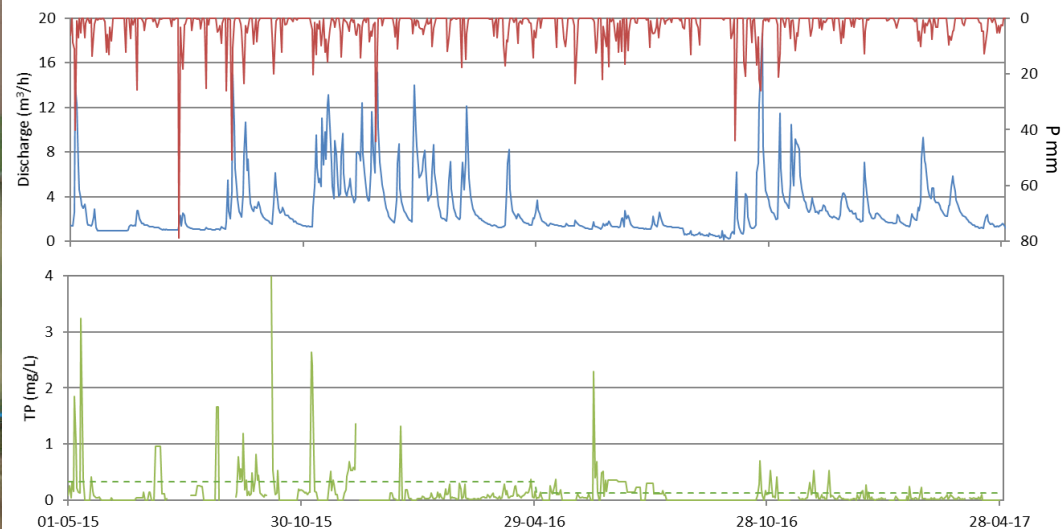
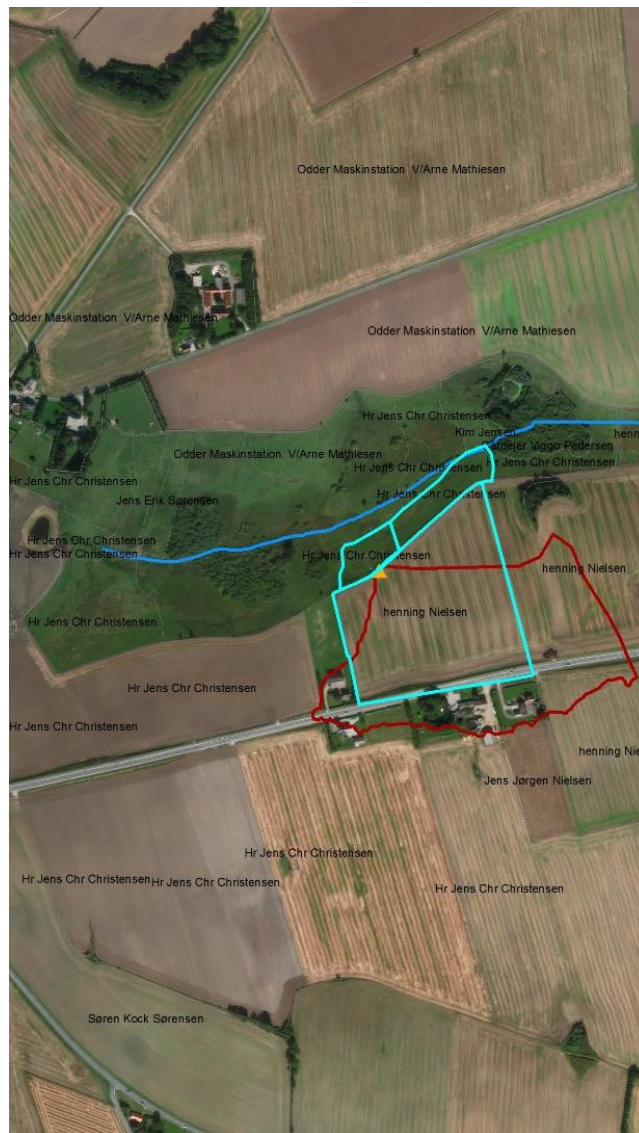


Riemann et al. (2016)



Andersen and Heckrath (2020)

Catchment area



May 2015/16	Catchment area (ha)	8.4
	P (mm)	349
	Q/P (-)	0.30
	TP (kg/ha)	1.1
	Flow weighted average TP (mg/L)	0.32
May 2016/17	P (mm)	246
	Q/P (-)	0.28
	TP (kg/ha)	0.3
	Flow weighted average TP (mg/L)	0.13

System Design

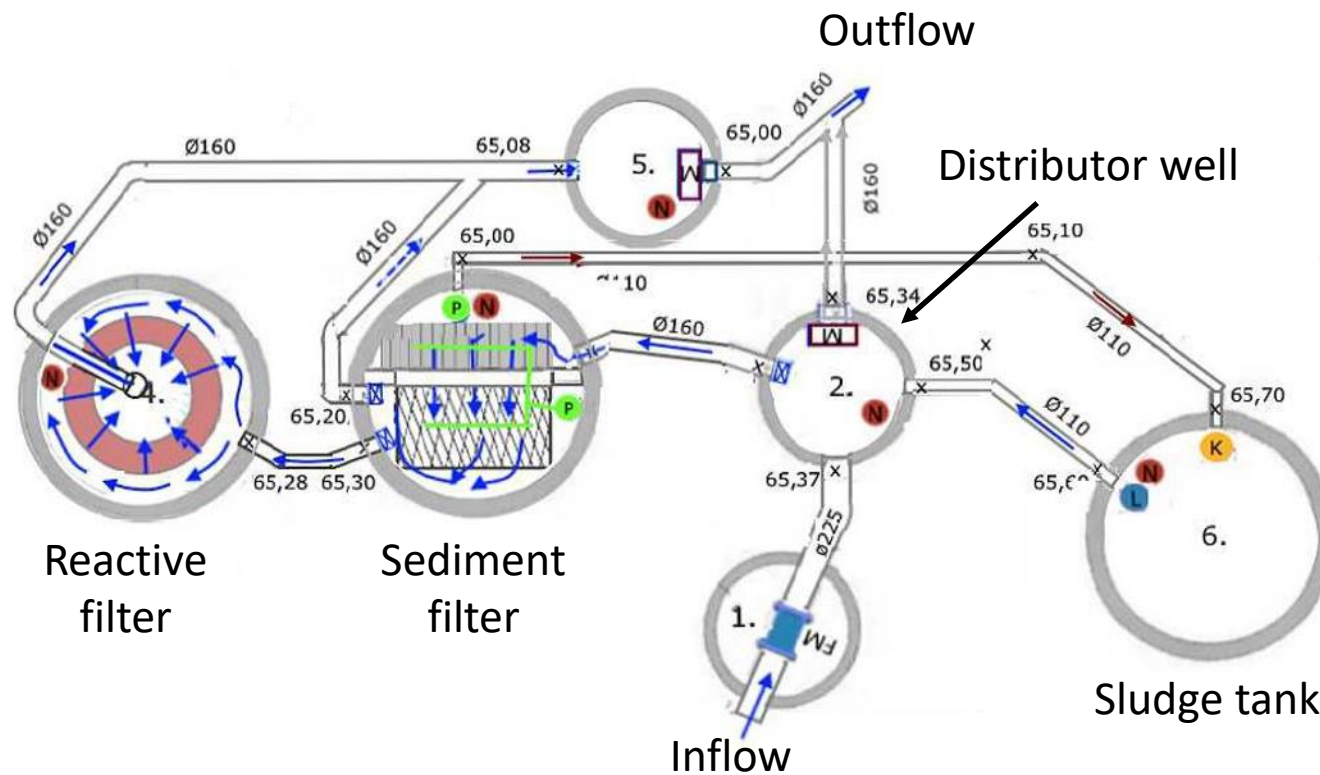
0

2

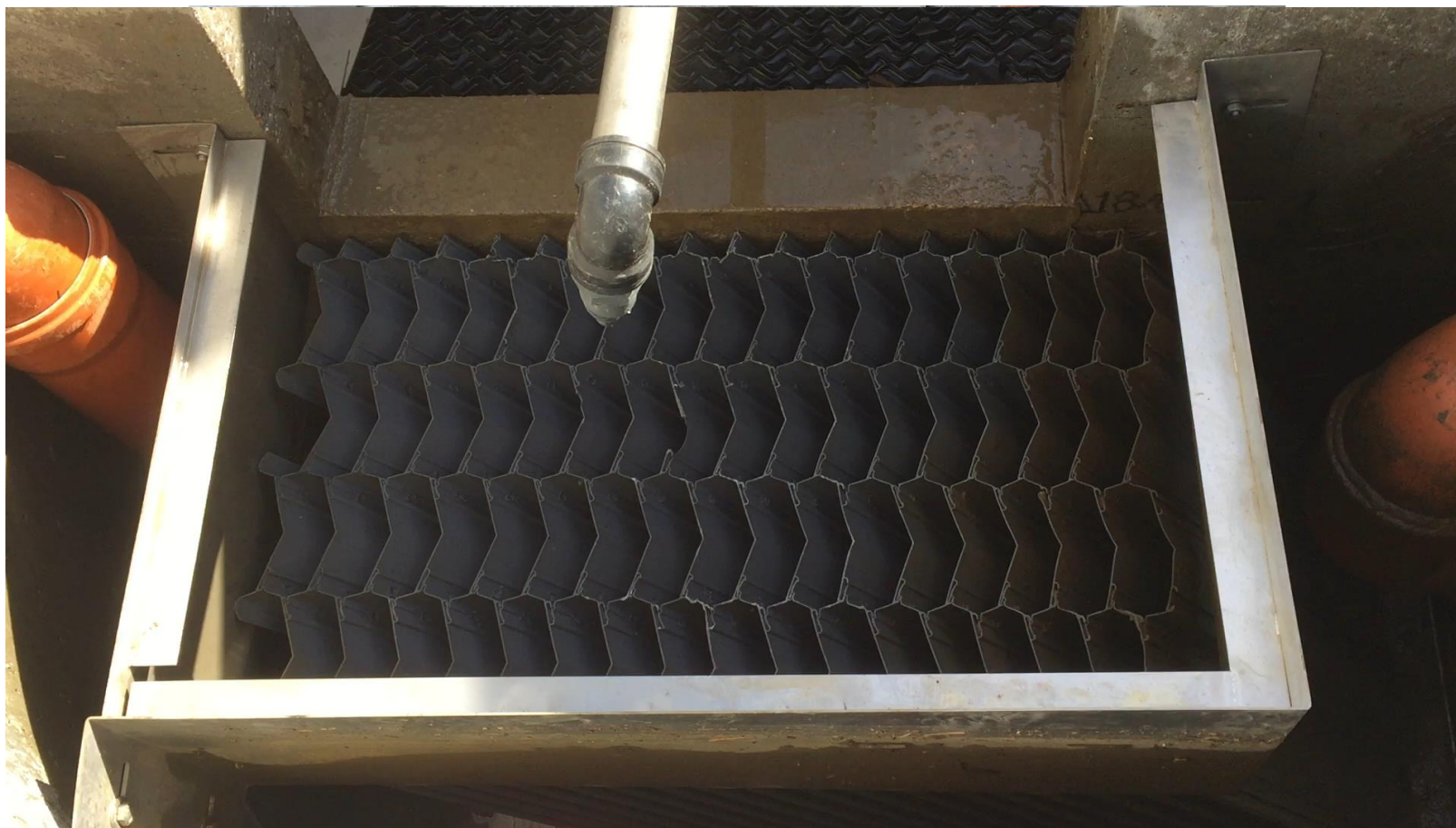
4

8

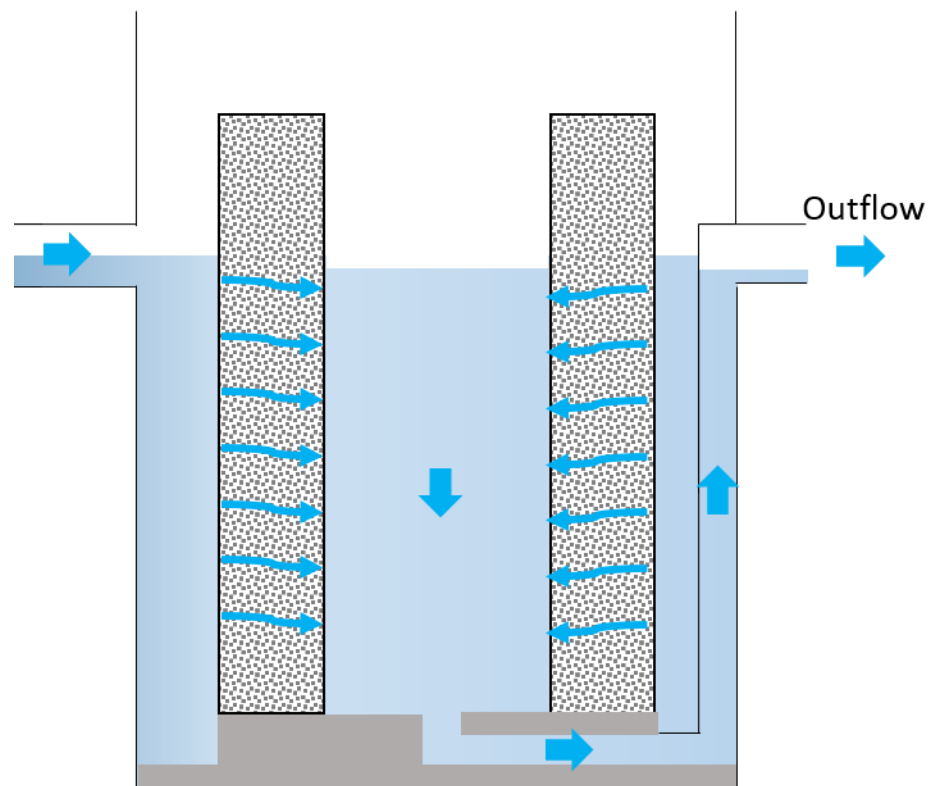
12



Sediment filter



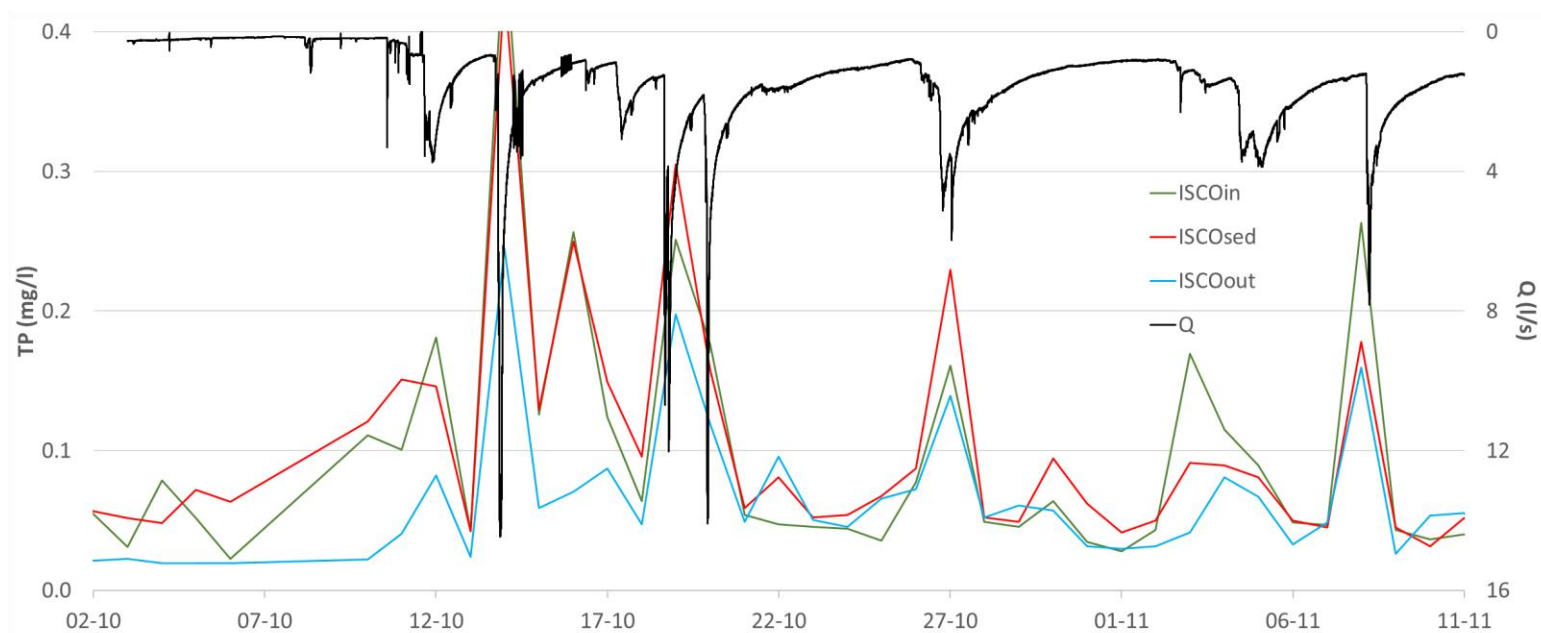
Reactive filter



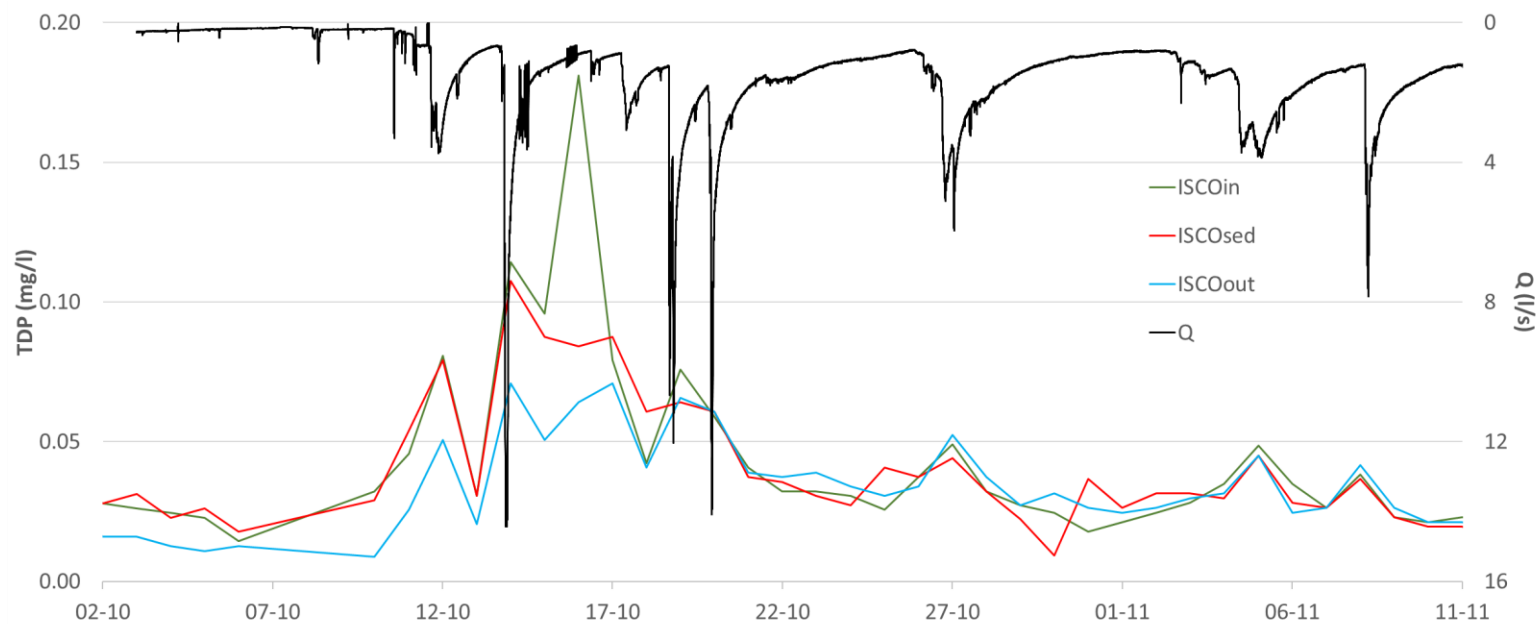
Monitoring programme



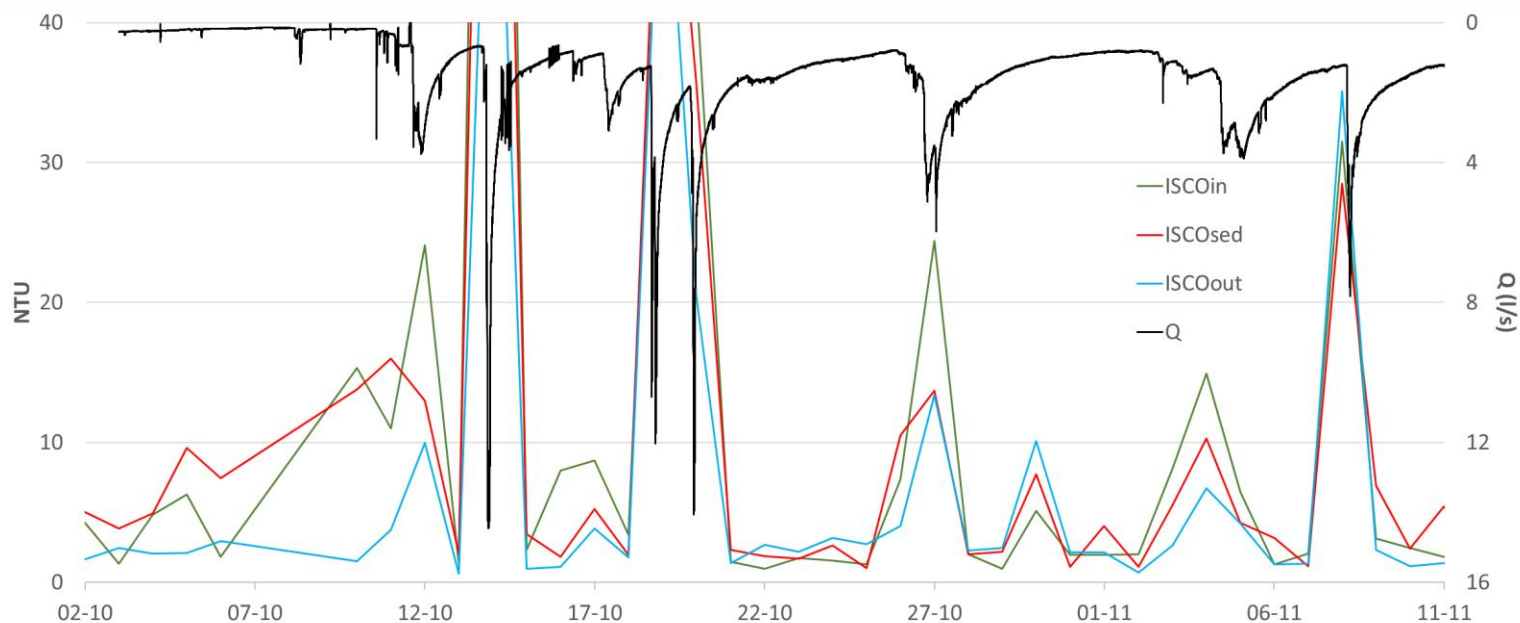
Results – Total phosphorus



Results – Dissolved reactive phosphorus



Results – Turbidity



	Q (m ³)	Average removal (%)					
		ISCOin-ISCOout			ISCOsed-ISCOout		
		TP	TDP	Turb	TP	TDP	Turb
Until 18 oct	1413	51	39	44	59	40	53
After 18 oct	3538	1	-6	-8	15	-13	5
feb-20	6346	19	-1	13	18	-5	17

Challenges

- ***Sediment retention***
- *Replacement of reactive filter material*

Possible improvements

- Alternative physical removal of sediments (?)
- Flocculation with aluminium and iron



AARHUS
UNIVERSITY

Interreg
North Sea Region
NuReDrain
European Regional Development Fund



EUROPEAN UNION

An aerial photograph showing a large area of agricultural land that has been flooded. The water is a murky brown color, and the surrounding fields are green. In the background, there is a small village with several houses and a church. The sky is overcast.

Q & A

Lorenzo.Pugliese@agro.au.dk