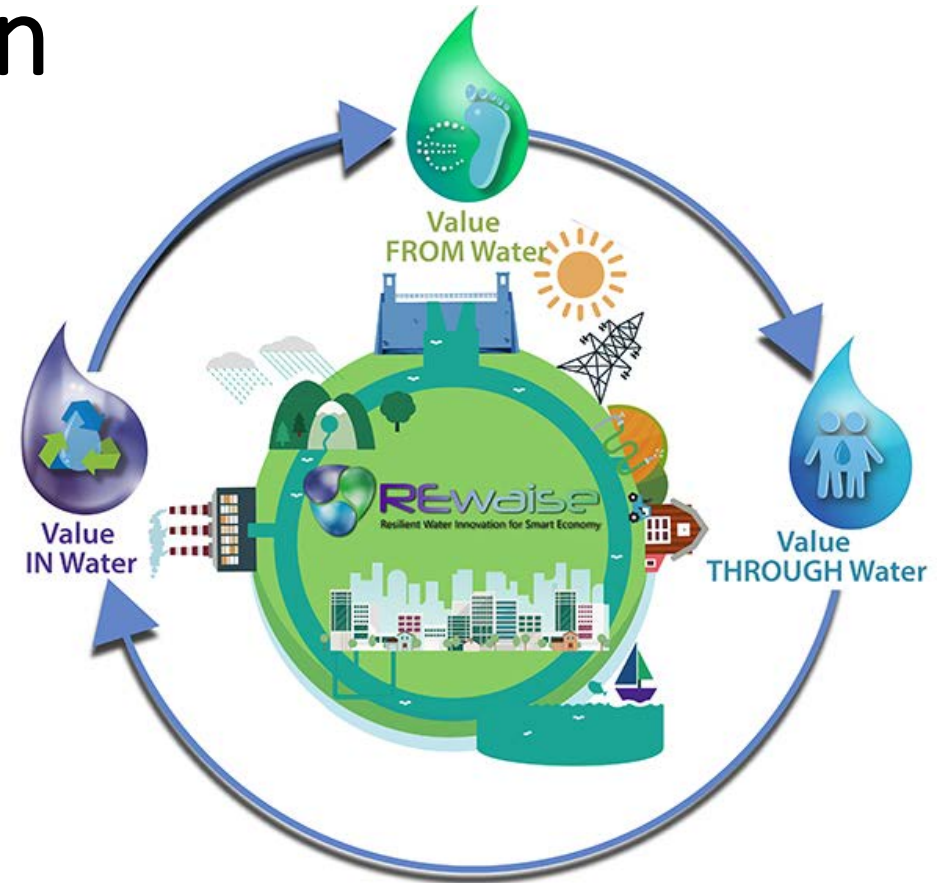


Using Membrane Ultra Filtration Technique

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Large-scale demonstration of rainwater harvesting, membrane ultrafiltration cleaning and reuse

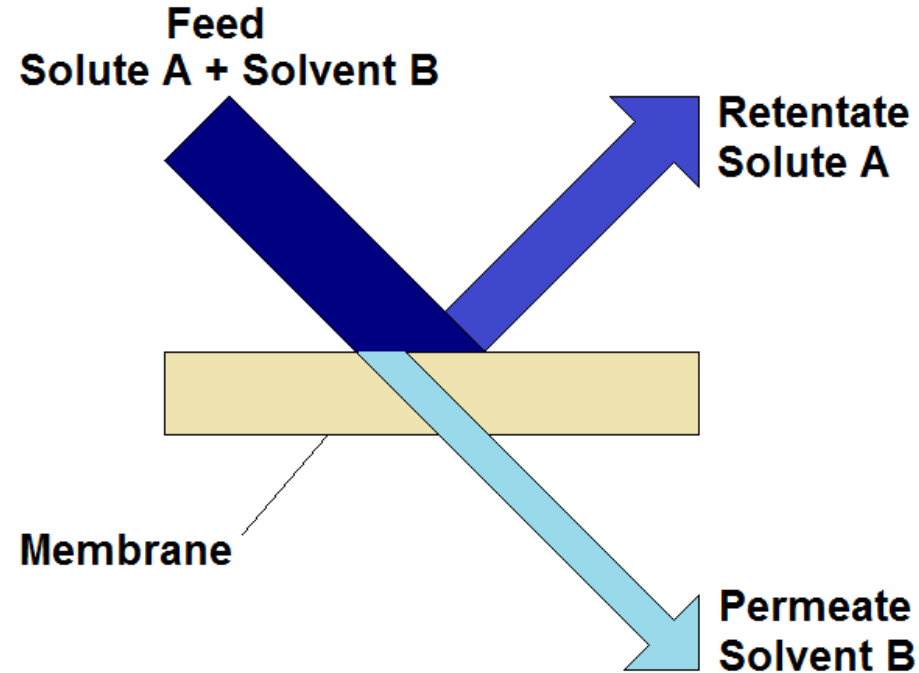


Large-scale demonstration of rainwater harvesting, membrane ultrafiltration cleaning and reuse



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What is a
membrane?



Membrane (lat.: membrana = thin skin)

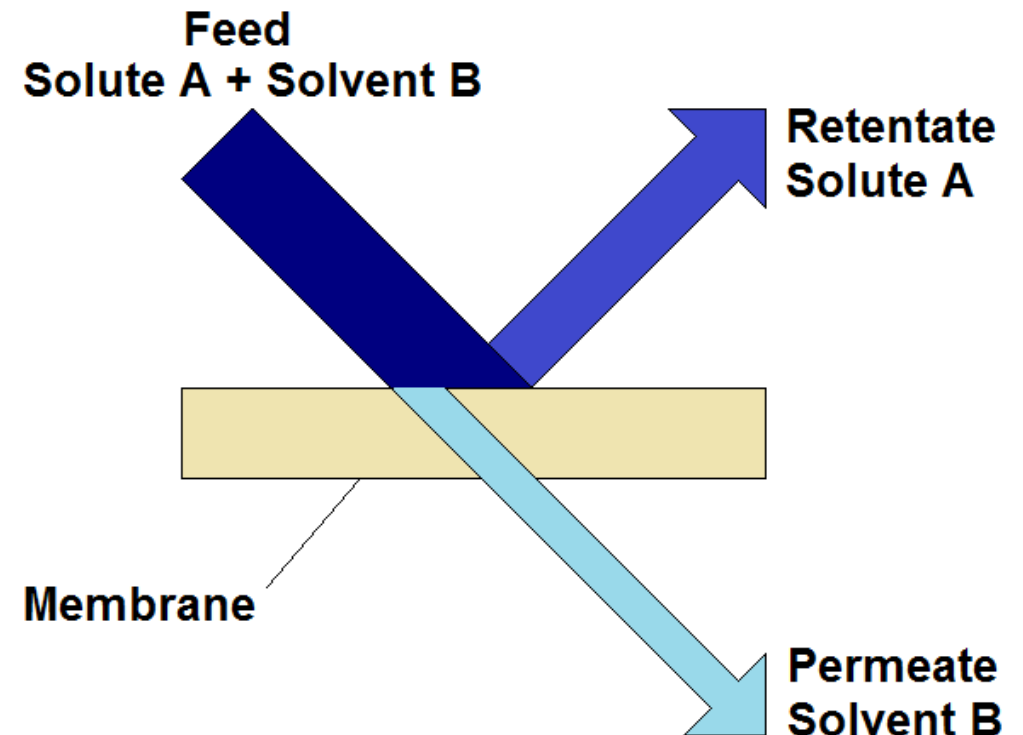
Structure, having lateral dimensions much greater than its thickness, through which mass transfer may occur under a variety of driving forces (*IUPAC Definition, 1996*).

Membrane processes

- Membrane Filtration (DMF) in plate module configuration retains pollutants
- Fastest growing category of separation processes
- Combining high selectivity with high separation capacity
- Compact and modular design



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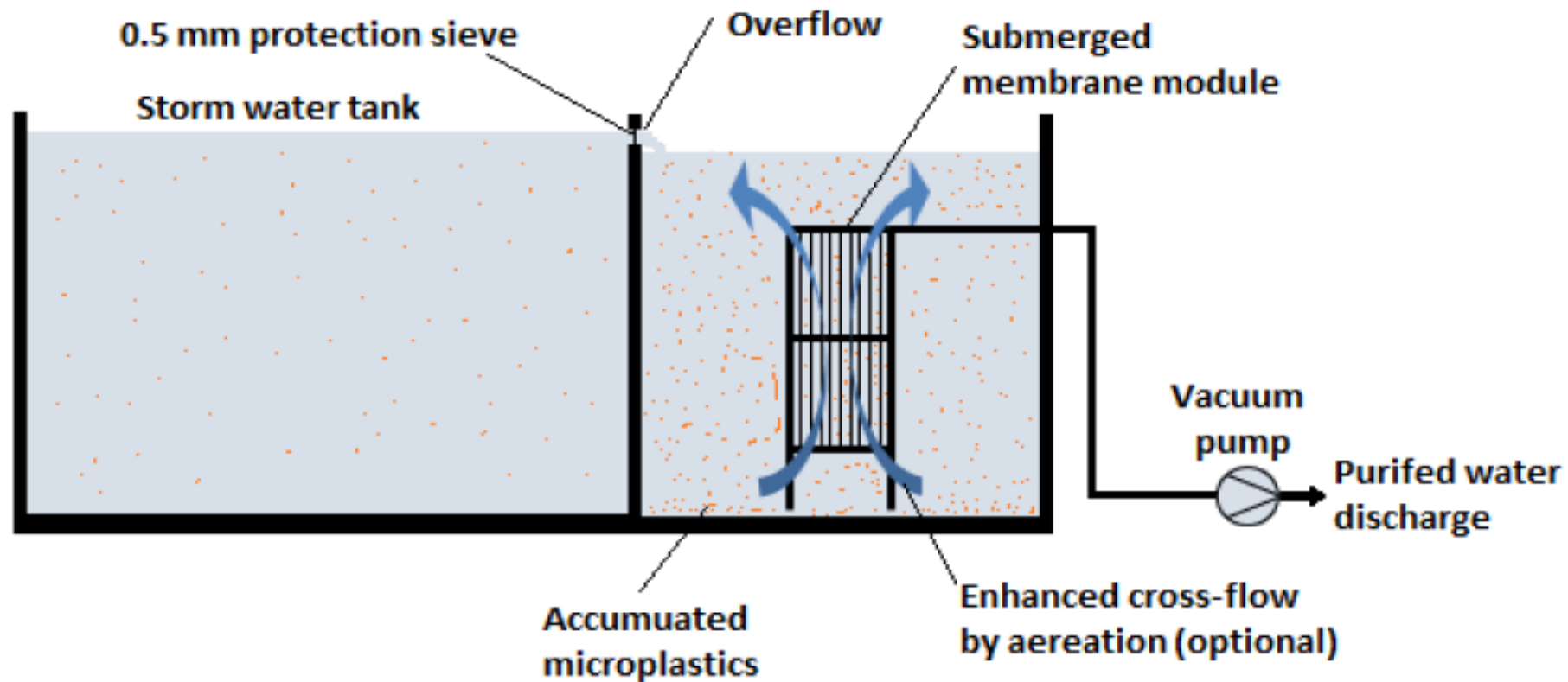


Pilot installed at storm water
pond in July 2021
Lund, Sweden

Membrane processes



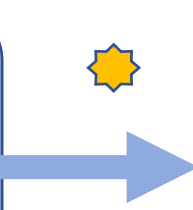
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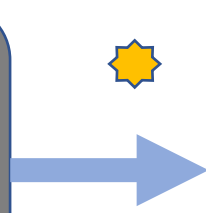
Direct Membrane Filtration (DMF) in plate module configuration retains pollutants down to 1 nm.

☀ sampling points

Pond

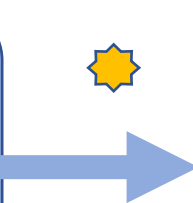


Membrane UF

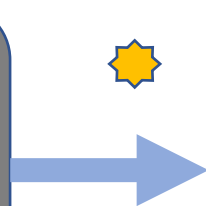


☀ sampling points

Pond



Membrane UF



REWAISE and Fanplesstic-sea collaboration!

Next steps:

- Samples prepared at Lund University
- Analysis by Aalborg University
- Optimising the prototype for improving the quality beyond membrane filtration
- Techno-economical evaluation
- Prototyping of a site specific membrane ultrafiltration unit for treatment of rain- and stormwater
- Scalability



Thanks!

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