

Full-scale comparison of N₂O emissions from N/DN SBR operation versus one-stage deammonification MBBR treating reject water – and optimization with pH set-point



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Reject water treatment, Norrköping, Sweden



	WWTP	Reject water
	135 000 pe	
Nitrogen Load	1650 kg/d	250 kg/d
		1000 m ³ reactor volume
Year 2000-2017		N/DN SBR
Year 2017-		Deammonification MBBR

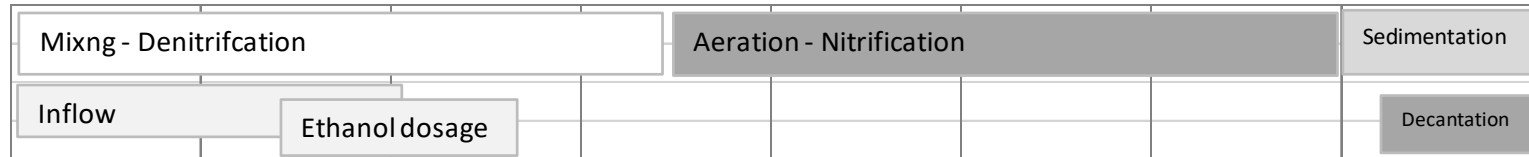




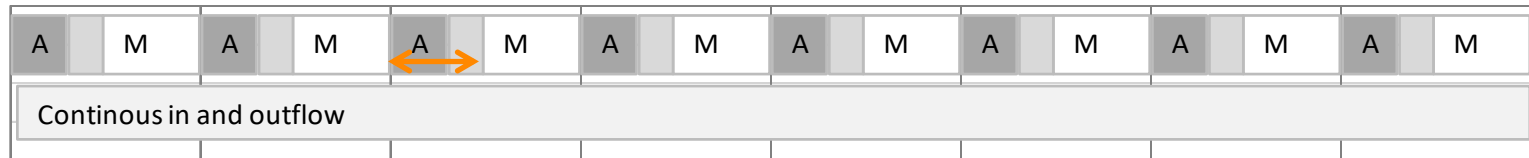
N/DN SBR versus DeAm in MBBR



N/DN
SBR



Deam.
MBBR



Length of aeration regulated by PI-regulator with pH as input

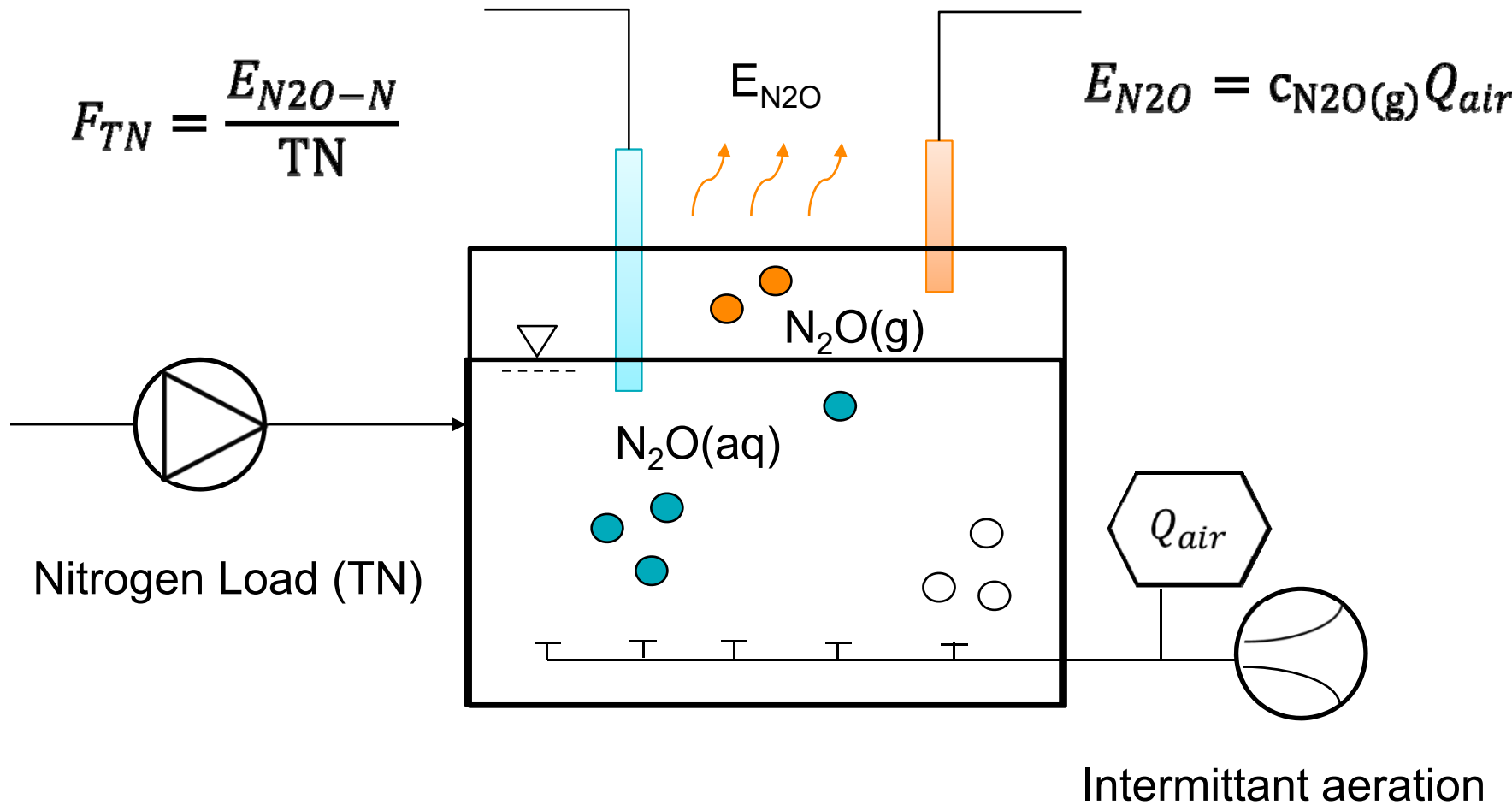




N₂O Measurements Methods

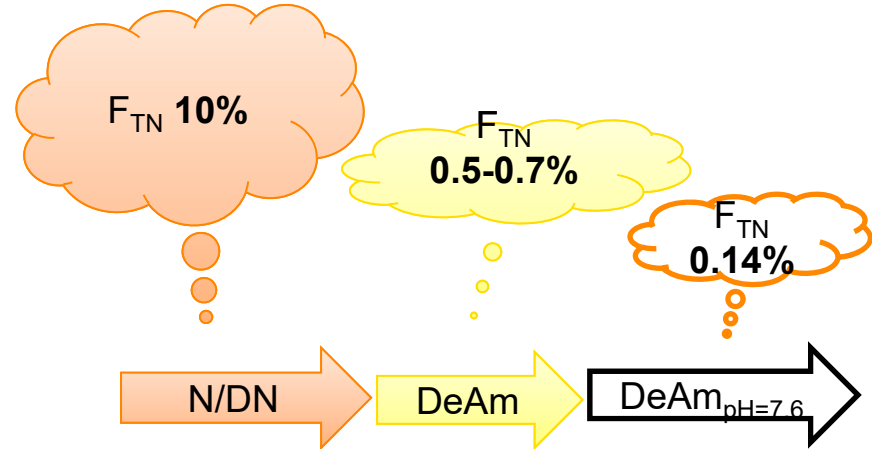
$$F_{TN} = \frac{E_{N2O-N}}{TN}$$

$$E_{N2O} = c_{N2O(g)} Q_{air}$$





Thank You!



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Questions?