1 Supplementary materials

1.1 Appendix A

Table S1: General information about each sampled wastewater treatment plant

	Type	**Biological capacity** Population equivalents (P.E.) à g TOD/day	**Hydraulic capacity** (m^3/hour)
Amsterdam	Aeration tank	1.014.000 à 136	30 000
Amstelveen	Aeration tank	125.000 à 136	4 500
Utrecht	Aeration tank	530.000 à 136	15 000
Bennekom	Oxidation ditch/ carrousel	22.000 à 136	1000
Eindhoven	Activated sludge	750.000 à 136	35 000

Table S2: Reported measured concentration of CBZ and MET in influent and effluent of the WWTP sampled in this project. Data were collected from emissieregistratie.nl

	WWTP	**year**	**Concentration** (µg/l)						**Load** (mg/year/P.E)					
			Influent			Effluent			Influent			Effluent		
			Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
CBZ	BNK	2009	0.6	0.615	0.63	0.71	0.755	0.8	29.33	30.94	32.54	36.68	37.89	39.11
		2007				0.5	0.5	0.5				64.9	64.9	64.9
	UTR	2010	0.49	0.56	0.63	0.38	0.57	0.76	33.66	35.61	37.57	26.11	35.71	45.32
	EIN	2007				0.54	0.54	0.54				28.17	28.17	28.17
		2009	0.52	0.545	0.57	0.46	0.545	0.63	28.79	30.32	31.84	23.23	30.91	38.58
		2014				0.44	0.44	0.44				37.98	37.98	37.98
	AMV	2010				1.549	1.549	1.549				158.6	158.6	158.6
	AMS													
MET	BNK	2009	0	0	0	0	0	0	0	0	0	0	0	0
	UTR	2010	302.2	326.4	350.6	4.8	4.85	4.9	20760	20830	20910	292.2	311	329.8
	EIN	2009	77.8	81.4	85	1.1	1.3	1.5	4293	4529	4764	67.36	71.56	75.76
		2014				1.8	4.2	6.6				155.4	362.5	569.7
	AMS													
	AMV													

1.2 Appendix B

Table S3: MiSeq sequencing primers with pad-linker as selected based on (34)

V4P7_index	ATTAGAWACCCBDGTAGTCCGGCTGACTGACT
V4F_seqprim R	AGTCAGTCAG-CC-GGACTACHVGGGTWTCTAAT
V3F_seqprim F	TATGGTAATT-GG-CCTACGGGNGGCWGCAG

1.3 Appendix C

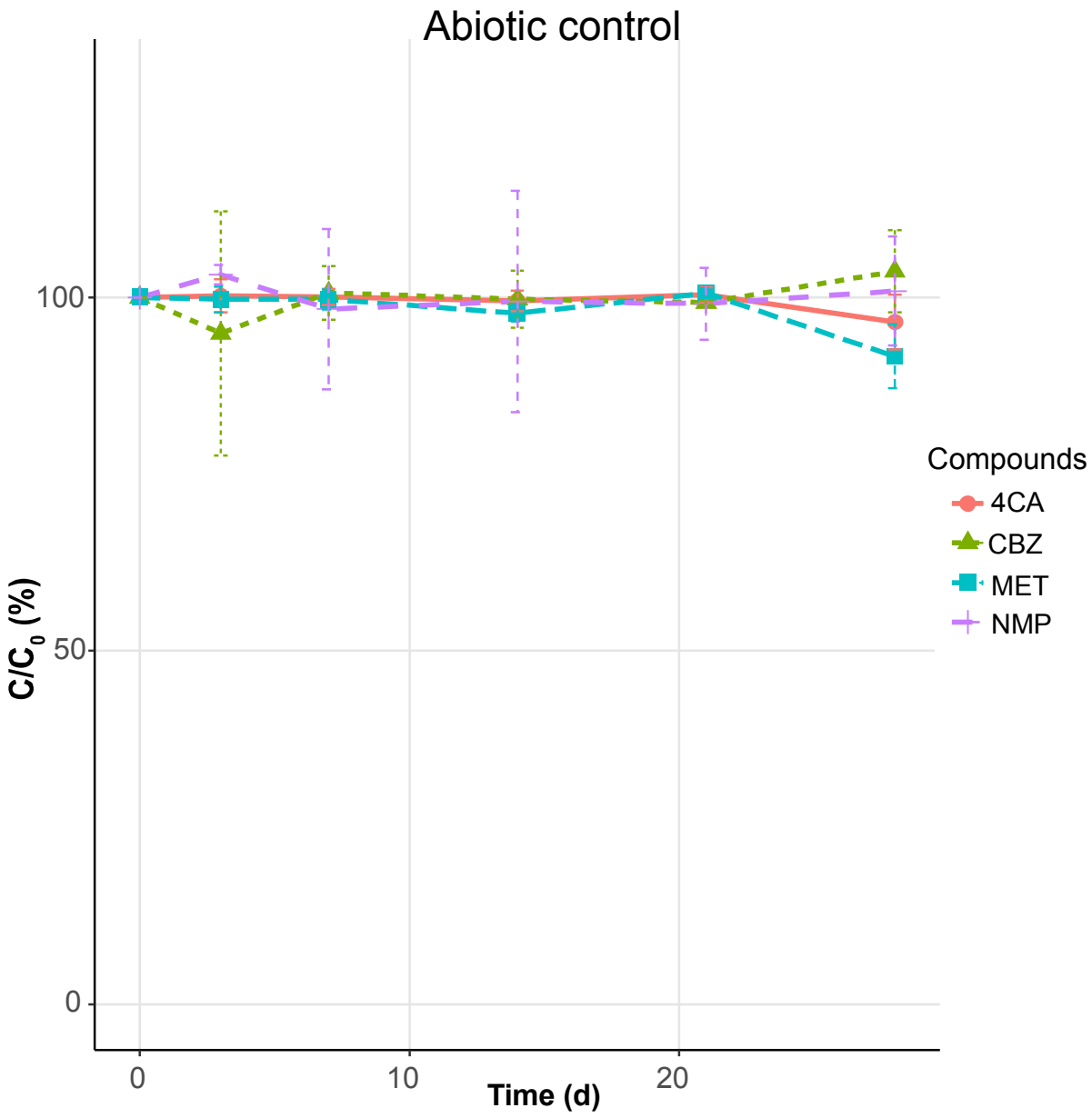

Fig. S1: C/C_0 (%) of 4-chloroaniline (4CA), carbamazepine (CBZ), metformin (MET) and N-methylpiperazine (NMP) in the abiotic controls.

1.4 Appendix D

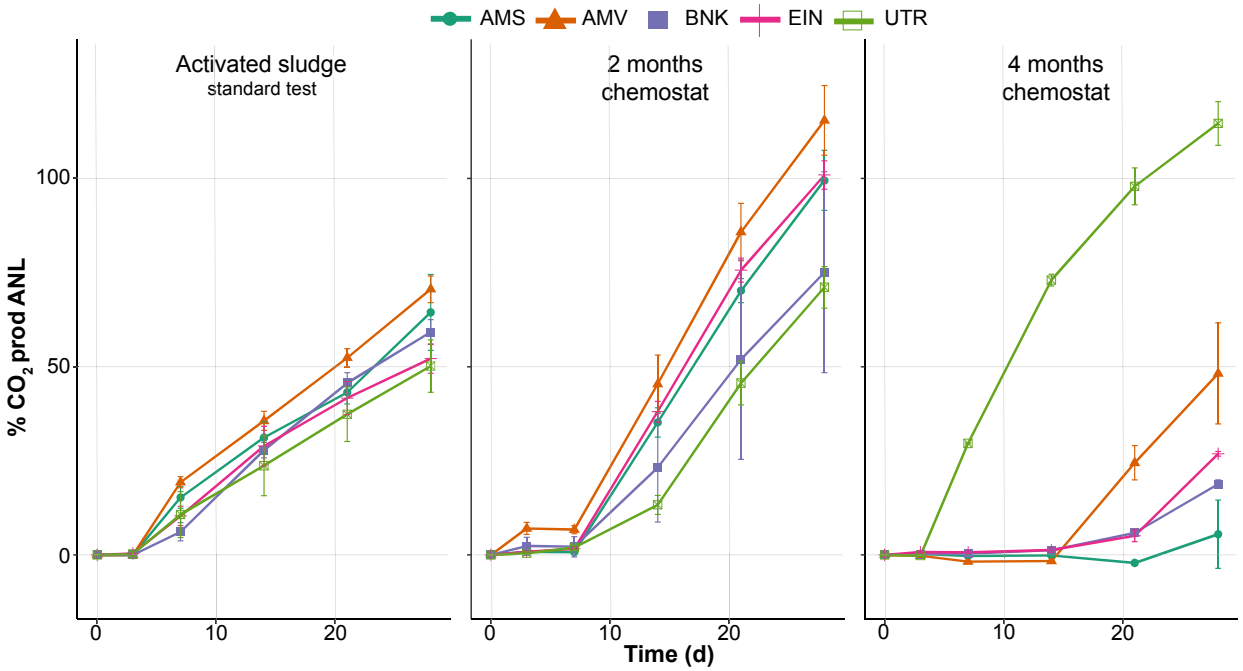

Fig. S2: % of CO_2 production from ANL by activated sludge (autumn) (A) and chemostat-exposed communities in biodegradability tests.

1.5 Appendix E

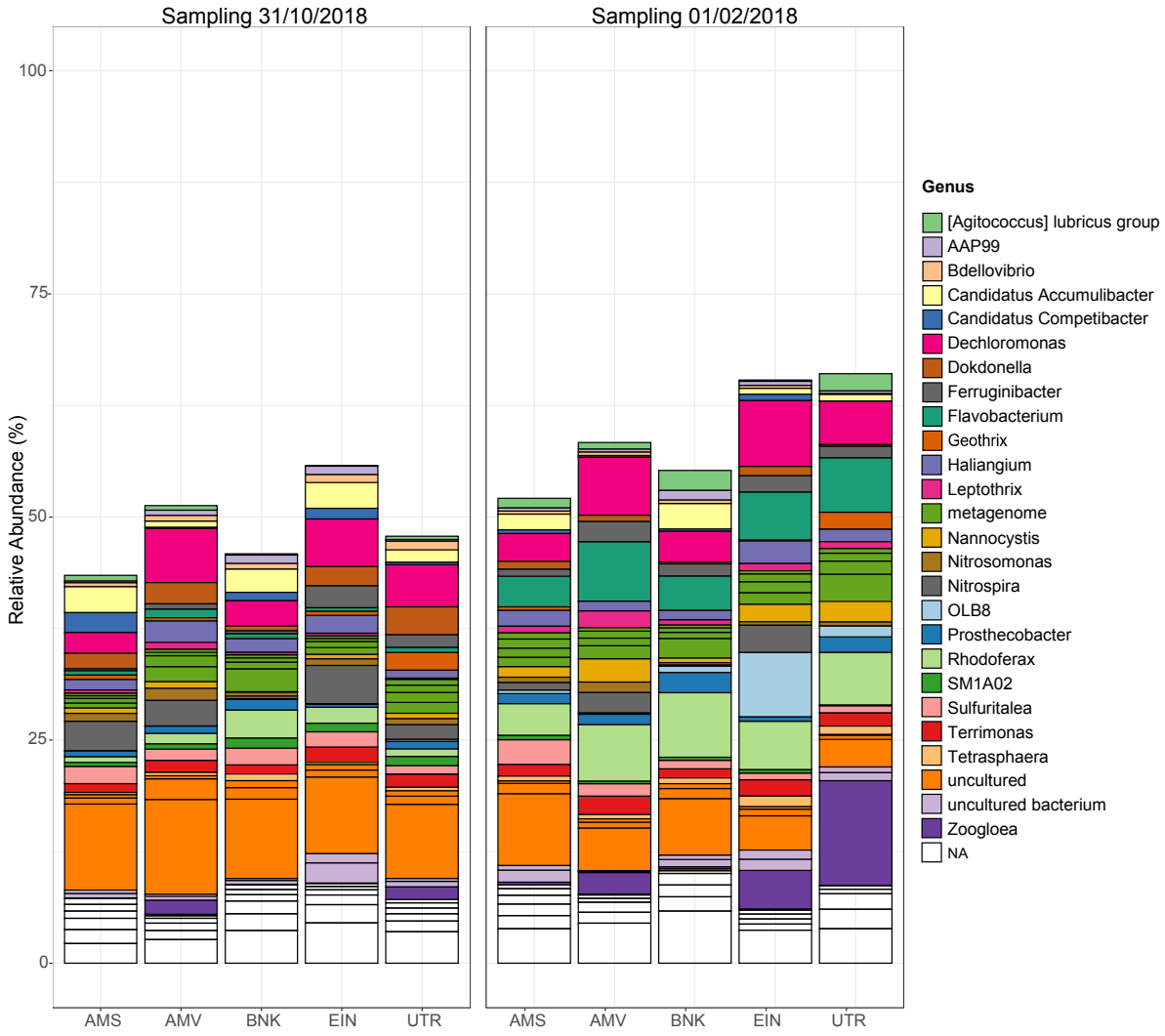

Fig. S3: Genus and relative abundance (%) of the dominant taxa (>0.5%) in the different activated sludges sampled in autumn (31/10/2018) and winter (01/02/2018). Amsterdam (AMS), Amstelveen (AMV), Bennekom (BNK), Eindhoven (EIN), Utrecht (UTR). NA means that no genus could be assigned.

1.6 Appendix F

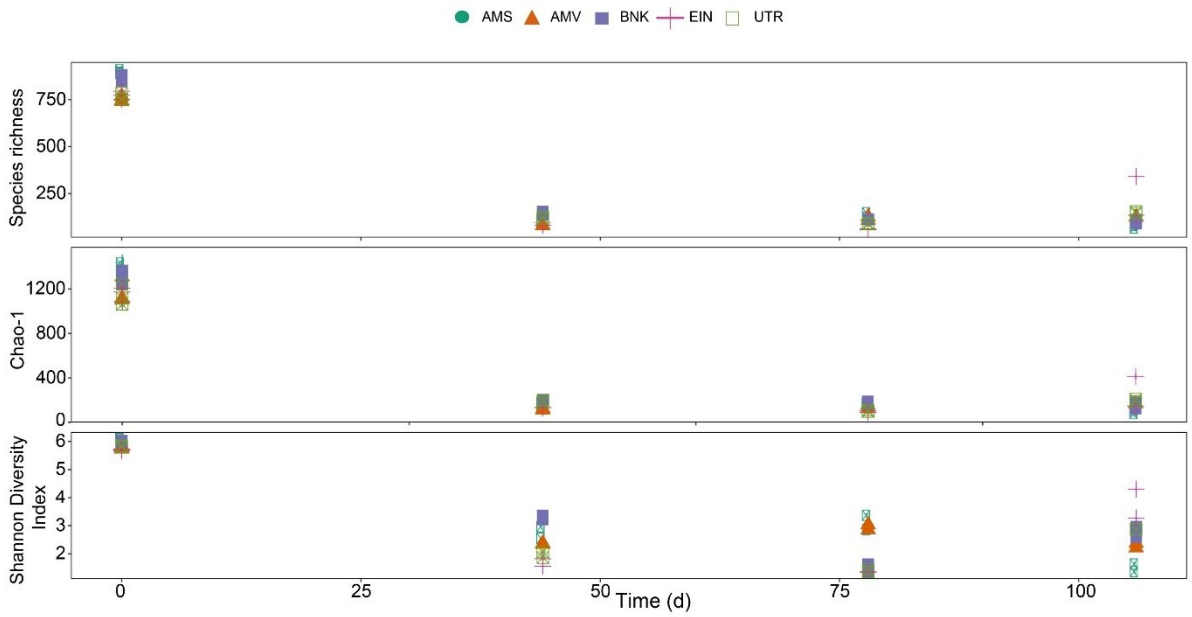

Fig. S4: Alpha diversity analysis of each chemostat sample over time (d). Species richness (number of OTUs/sample). Each colour represents a chemostat inoculated with activated sludge from each location: Amsterdam (AMS), Amstelveen (AMV), Bennekom (BNK), Eindhoven (EIN), Utrecht (UTR).