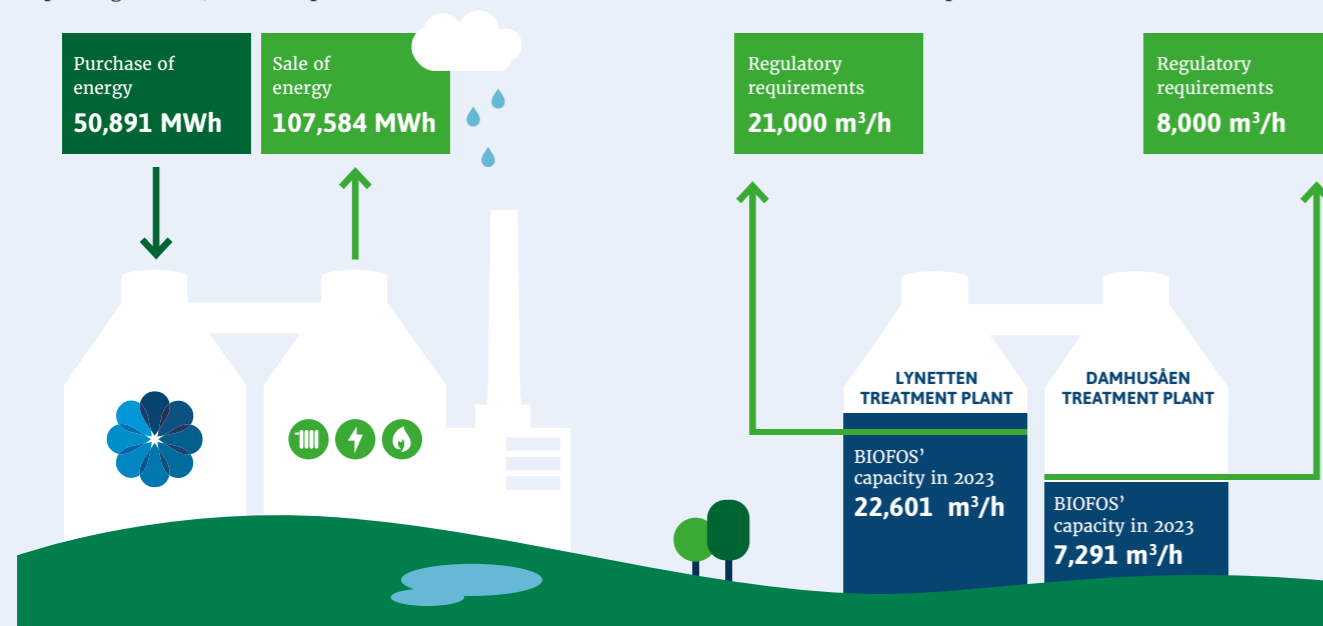
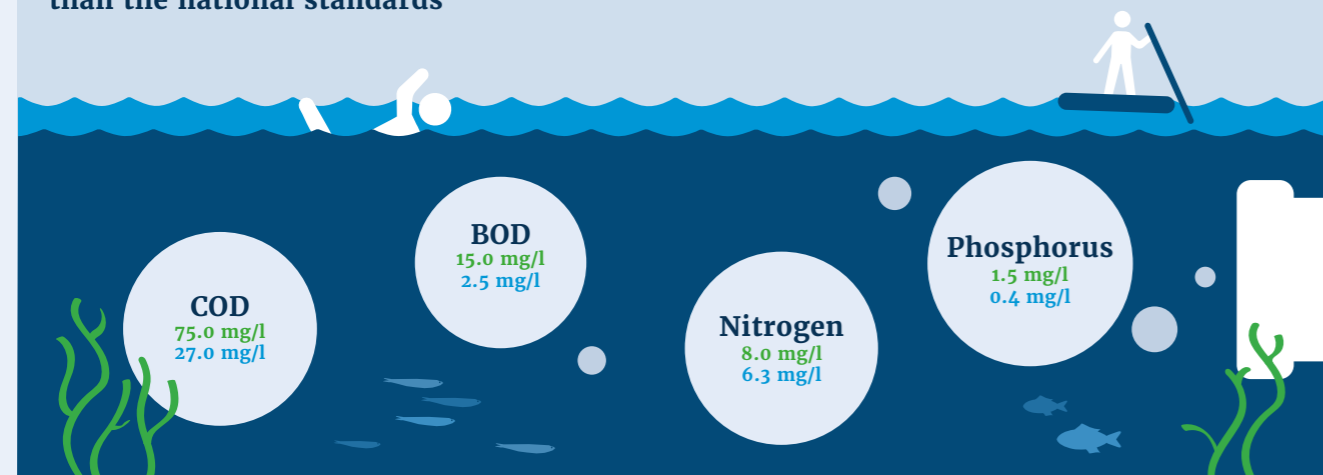


BIOFOS is a water resource recovery plant

We aim to sell more energy to the Greater Copenhagen area, than we purchase



BIOFOS treats the wastewater to a better quality than the national standards



● Legal requirement ● BIOFOS emissions in 2023. Weighted average of effluent concentrations from all three plants

BIOFOS is the largest wastewater company in Denmark. We treat the wastewater of 1.2 million inhabitants in the Greater Copenhagen area at our three plants Lynetten, Avedøre and Damhusåen.

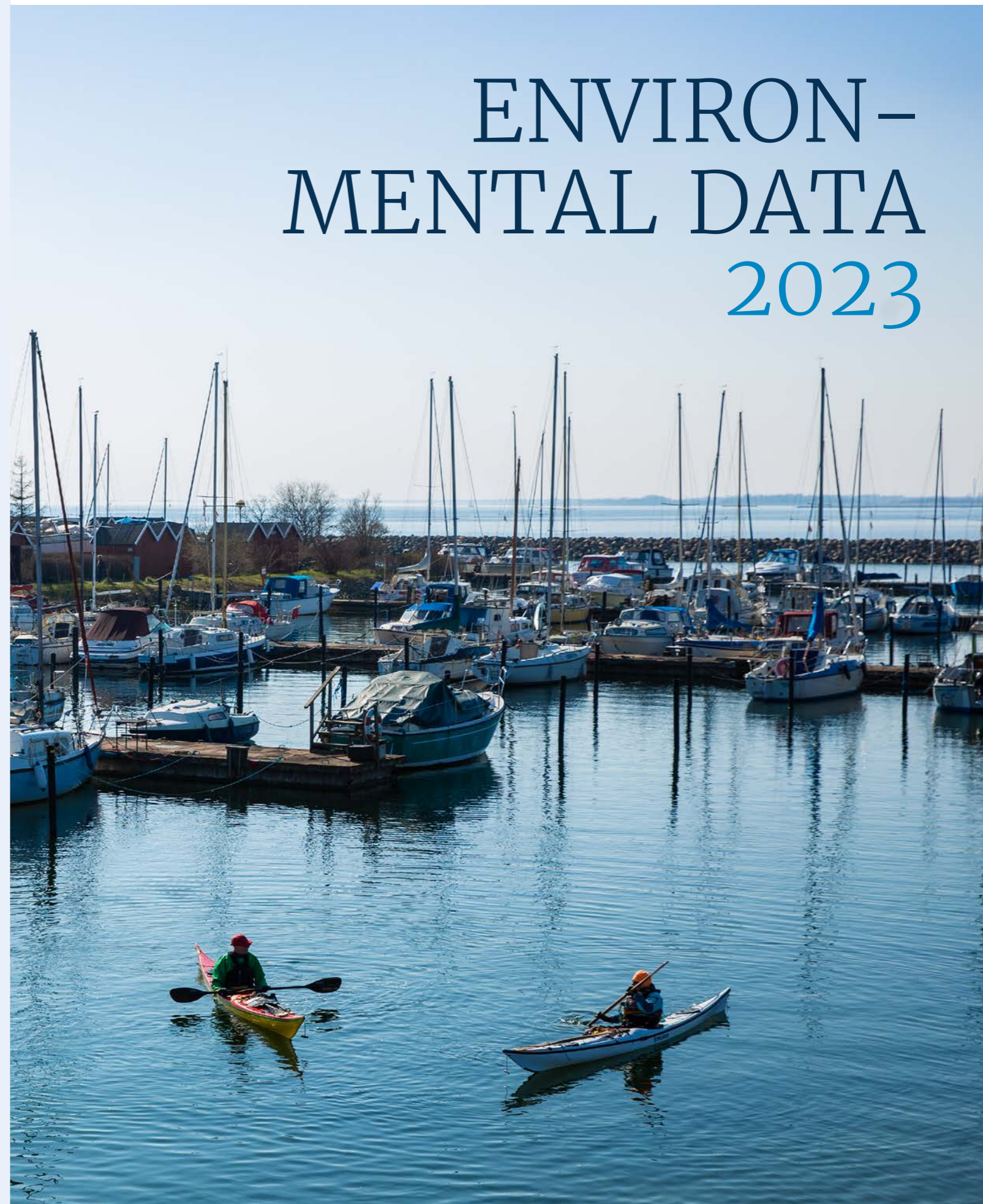
We use the resources in the wastewater to produce climate friendly energy in the form of electricity, biogas and district heating for the supply network.

BIOFOS also has an active school service, where school children receive education in wastewater, environment and sustainable energy.

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ENVIRONMENTAL DATA 2023



WASTEWATER TREATMENT

INCOMING FLOWS	UNIT	WWTP LYNETTEN	WWTP AVEDØRE	WWTP DAMHUSÅEN	TOTAL	DATA IS DETERMINED BY
Wastewater						
Volume of water	mill. m ³ /year	65.8	28.3	34.6	128.7	M
Organic matter in wastewater						
COD	t/year	43,493	14,024	17,316	74,833	C
Nutrients in wastewater						
Phosphorus	t/year	430	142	191	763	C
Nitrogen	t/year	3,731	1,174	1,631	6,536	C
Suspended solids	t/year	21,849	7,269	9,694	38,812	C
OUTGOING FLOWS						
Organic matter in treated wastewater						
COD	t/year	2,111	706	1,053	3,870	C
Nutrients in treated wastewater						
Phosphorus	t/year	22	25	23	70	C
Nitrogen	t/year	517	175	199	891	C
Suspended solids	t/year	557	175	507	1,240	C
Bypassed mechanical treated wastewater						
Volume ¹	mill. m ³ /year	1.14	0.20	4.63	5.97	M
Organic matter in mechanically treated wastewater						
COD	t/year	558	23	977	1,558	C
Nutrients in mechanically treated wastewater						
Phosphorus	t/year	6	0	15	21	C
Nitrogen	t/year	50	2	109	160	C
Suspended solids	t/year	253	12	630	895	C

¹ Without precipitation adjustment

SLUDGE TREATMENT

	UNIT	WWTP LYNETTEN	WWTP AVEDØRE	WWTP DAMHUSÅEN	TOTAL	DATA IS DETERMINED BY
Own production of sludge	t DM/year	12,485	5,394	4,536	22,415	C
Sludge transported to other WWTP	t DM/year	710	-	3,935	4,645	C
Sludge transported to agricultural land	t DM/year	-	-	601	601	C
Sludge from other WWTP						
From WWTP Lynetten	t DM/year	-	710	-	710	C
From WWTP Damhusåen	t DM/year	2,931	1,004	-	3,935	C
From other wastewater utilities	t DM/year	121	878	-	999	C
Total incinerated sludge	t DM/year	14,827	7,986	-	22,813	C

FLUE GAS FROM INCINERATOR

OUTGOING FLOWS	UNIT	WWTP LYNETTEN	WWTP AVEDØRE	WWTP DAMHUSÅEN	TOTAL	DATA IS DETERMINED BY
Quantity of flue gas	mill. Nm ³ /year	127	56	-	183	C
Carbon monoxide	t/year	0.44	0.31	-	0.75	C
Carbon dioxide	t/year	12,877	10,623	-	23,500	C
Sulphur dioxide	kg/year	15	883	-	898	C
Particles	kg/year	3	26.0	-	29.0	C
Hydrochloric acid	kg/year	7	17	-	24	C
Ammonia	kg/year	119	109	-	228	C
Nitrogen oxides	kg/year	4,675	3,755	-	8,430	C
Dioxin	mg/year	0.78	0.17	-	0.95	C
TOC	kg/year	41.0	-	-	41.0	C

ENERGY

CONSUMPTION	UNIT	WWTP LYNETTEN	WWTP AVEDØRE	WWTP DAMHUSÅEN	TOTAL	DATA IS DETERMINED BY
Electricity	Mwh/year	21,061	11,347	9,161	41,569	M
Heat	Mwh/year	509	80	728	1,317	M
Fuel oil	m ³ /year	3	9	-	12	M

PRODUCTION

Heat ²	Mwh/year	53,958	3,914	6,589	64,461	M
Hereof from flue gas	Mwh/year	15,092	-	-	15,092	M
Biogas – own production	Nm ³ /year	9,491,610	5,555,186	2,923,071	17,969,867	M
Electricity from solar cells	Mwh/year	-	-	633	633	M
Electricity from biogas engine	Mwh/year	-	2,456	2,875	5,331	M

SALE AND OUTGOING FLOWS

Sale of district heating	Mwh/year	40,558	-	5,526	46,084	M
Sale of electricity	Mwh/year	-	2,456	2,875	5,331	M
Sale of biogas	Nm ³ /year	5,994,013	3,164,843	-	9,158,856	M
Emission of biogas	Nm ³ /year	-	9,012	3,200	12,212	C
Biogas for torch	Nm ³ /year	111,611	90,006	618,633	820,250	C

² WWTP Lynetten = heat water exchanger + boiler + exported heat to district heating system from incinerator

WWTP Avedøre = biogas motor + exported heat to district heating system from incinerator

WWTP Damhusåen = biogas motor + boiler

CONSUMPTION

	UNIT	WWTP LYNETTEN	WWTP AVEDØRE	WWTP DAMHUSÅEN	TOTAL	DATA IS DETERMINED BY
Precipitation chemicals	t/year	2,420	1,147	633	4,200	M
Lye/NaOH (50 %)	t/year	278	313	-	591	M
Ammonia solution (24 %)	t/year	6	-	-	6.0	M
Polymers	t/year	158	50	59	267	M
Activated carbon	t/year	10	7	-	17	M
Drinking water	m ³ /year	32,705	32,933	12,328	77,966	M

WASTE AND RESIDUE

REUSE	UNIT	WWTP LYNETTEN	WWTP AVEDØRE	WWTP DAMHUSÅEN	TOTAL	DATA IS DETERMINED BY
Ash	t DM/year	3,733	1,849	-	5,582	M
Sand	t/year	276	-	187	463	M

INCINERATION

Small combustibles	t/year	40	2	8	51	M
Screenings	t/year	610	-	202	812	M

LANDFILL

Internal landfill site						
Ash	t DM/year	1,219 ³	40	-	1,259	M
Sand	t/year	-	447	-	447	M
External landfill site						
Flue gas waste	t DM/year	500	64	-	564	M

³ In 2023, 1,219 tonnes of ash were deposited at Lynetten's landfill, of which 846 tonnes came from Avedøre Treatment plant.

M = Measurement
C = Calculation
- = Parameter not relevant

EXAMPLES OF MEASUREMENTS: Online flow measurements, reading of meters, inventory and weighing

EXAMPLES OF CALCULATIONS: Flow-proportional day sampling, mix tests of random samples, calculated on the basis of operational hours, weighing and dry matter determination, AMS-continuous measurements.