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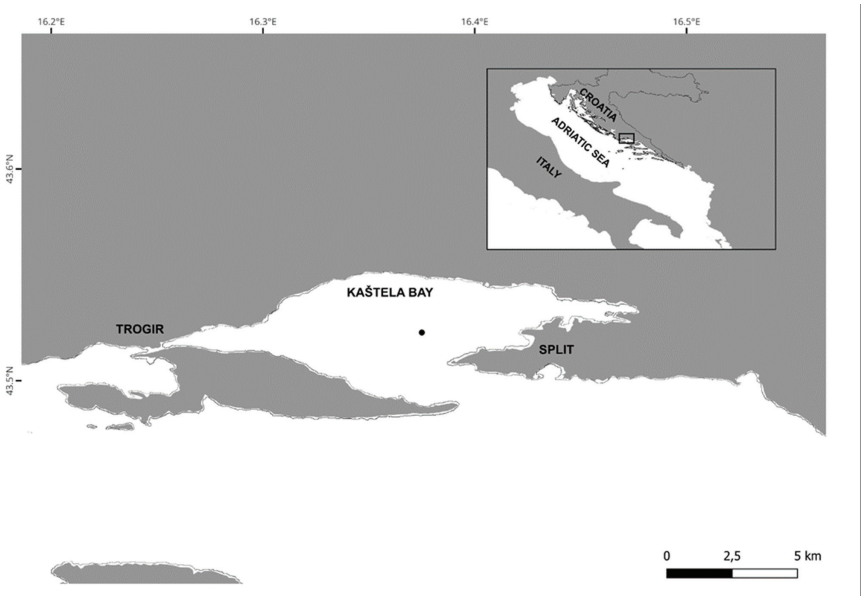

Fig. S1: Map of the investigated area.

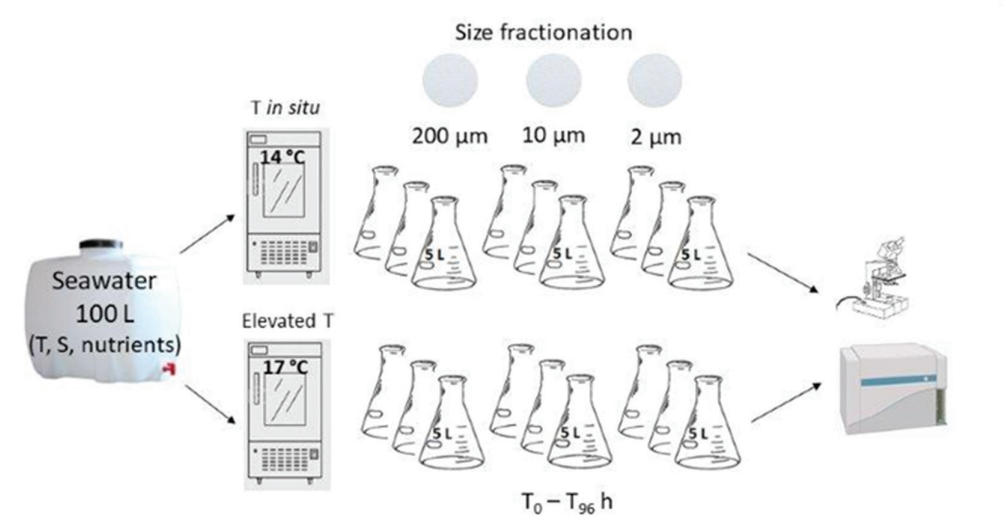

Fig. S2: Scheme of the experimental design.

Table S1. Concentrations of nutrients (average ± standard deviation) during the experiment at ambient (T_{amb}) and a 3°C increased temperature (T_{amb}+3).

Parameter	Time (hours)	T_{amb}		T_{amb}+3	
		< 2 mm fraction	< 200 mm fraction	< 2 mm fraction	< 200 mm fraction
NO_2^- (mmol L^{-1})	0	7.10 ±0.51	6.79 ±0.70	7.34 ±0.79	7.29 ±0.30
	24	7.02 ±0.58	7.03 ±0.68	7.19 ±0.51	7.62 ±0.46
	48	6.83 ±0.32	6.82 ±0.65	6.76 ±0.72	7.21 ±0.93
	72	6.26 ±0.26	6.74 ±0.62	6.71 ±0.42	7.84 ±0.41
	96	5.56 ±0.30	6.58 ±0.48	6.41 ±0.51	7.23 ±0.30
NO_3^- (mmol L^{-1})	0	13.59 ±1.09	16.47 ±0.65	14.10 ±0.98	15.19 ±0.61
	24	16.52 ±0.72	16.43 ±0.56	16.88 ±0.78	17.58 ±0.66
	48	13.41 ±0.81	14.07 ±0.64	13.80 ±1.06	16.76 ±0.88
	72	13.93 ±1.01	13.52 ±0.66	12.90 ±1.47	14.25 ±0.84
	96	10.72 ±0.89	11.52 ±0.52	13.54 ±0.62	13.75 ±0.41
NH_4^+ (mmol L^{-1})	0	2.56 ±0.31	2.22 ±0.19	1.96 ±0.31	1.70 ±0.31
	24	1.16 ±0.15	0.07 ±0.02	0.74 ±0.14	0.15 ±0.05
	48	1.25 ±0.09	0.13 ±0.01	1.34 ±0.15	0.50 ±0.20
	72	0.97 ±0.12	0.39 ±0.06	1.39 ±0.14	0.38 ±0.10
	96	0.85 ±0.09	0.16 ±0.02	0.64 ±0.11	0.49 ±0.09
HPO_4^{2-} (mmol L^{-1})	0	0.16 ±0.05	0.09 ±0.02	0.22 ±0.06	0.19 ±0.03
	24	0.41 ±0.04	0.06 ±0.02	0.25 ±0.09	0.28 ±0.10
	48	0.14 ±0.01	0.10 ±0.03	0.15 ±0.03	0.11 ±0.02
	72	0.16 ±0.08	0.03 ±0.00	0.15 ±0.04	0.14 ±0.06
	96	0.06 ±0.01	0.01 ±0.00	0.06 ±0.03	0.11 ±0.07

Table S2. Oligonucleotide probes and hybridization conditions used for CARD-FISH. FA (%): final concentration of formamide used in the hybridization buffer.

Probe	Sequence (5'……...…...3')	Target group	FA (%)	Reference
EUB338	GCTGCCTCCCGTAGGAGT	Most *Eubacteria*	55	Amann *et al.,* 1990
GAM42a	GCCTTCCCACATCGTTT	*Gammaproteobacteria*	55	Manz *et al.,* 1992
CF319a	TGGTCCGTGTCTCAGTAC	*Bacteroidetes*	55	Manz *et al.,* 1996
ROS537	CAACGCTAACCCCCTCC	*Roseobacter* clade	55	Eilers *et al.,* 2001
SAR11-441R	TACAGTCATTTTCTTCCCCGAC	*SAR11* clade	45	Morris *et al.,* 2002
Non338	ACTCCTACGGGAGGCGC	Control probe of EUB338	55	Wallner *et al*., 1993