

Supplementary Table 1. Number of samples sampled in semi-intensive (SI), semi-intensive lagoon coupled (SIC) and extensive (E) ponds. For macrophytes and insects, each replicate corresponded to a pool of several individuals from the same pond. N equal zero means that the species was not found in the pond.

		SI	SIC	E
Fish	<i>Cyprinus carpio</i>	6	10	8
	<i>Rutilus rutilus</i>	7	7	8
	<i>Scardinius erythrophthalmus</i>	8	8	8
	Juvenile fish	6	11	9
	<i>Perca fluviatilis</i>	6	6	6
Commercial feed		3		0
SOM		6	6	6
Macrophytes	All	5	4	2
	<i>Juncus</i> spp. root	2	2	2
	<i>Myriophyllum</i> spp.	2	0	0
	<i>Nymphaea</i> spp.	1	0	0
	<i>Lemnaceae</i> spp.	0	1	0
	Macroalgae spp.	0	1	0
Macrobenthic invertebrates				
Insects	All	4	6	3
	<i>Ranatra</i> spp.	1	0	0
	Naucoridae	1	1	0
	Coenagrionidae	1	2	1
	Corixidae	1	1	0
	Aeschnidae	0	2	0
	Culicidae	0	0	1
	Dytiscidae	0	0	1
Crayfish	<i>Procambarus clarkia</i>	3	3	6
SPOM (< 200 μ m)		4	4	4
Large zooplankton (> 200 μ m)		3	3	3

Supplementary Table 2. Percentage of total fatty acid, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values (‰) of commercial pellets (SI, mean \pm SD, n = 3). Only fatty acids superior to 0.10% of total FA are presented.

Commercial feed pellets	
12:0	<i>tr</i>
14:0	4.45 \pm 0.62
15:0	0.14 \pm 0.12
15:0 iso	<i>tr</i>
15:0 ante	<i>tr</i>
16:0	17.01 \pm 1.13
16:0 iso	<i>tr</i>
17:0	0.33 \pm 0.03
17:0 iso	0.13 \pm 0.10
18:0	3.29 \pm 0.21
20:0	0.38 \pm 0.01
21:0	<i>tr</i>
22:0	0.23 \pm 0.07
24:0	0.11 \pm 0.05
SFA	26.63 \pm 1.26
14:1n-5	<i>tr</i>
16:1n-9	5.21 \pm 0.29
17:1n-7	<i>tr</i>
18:1n-7	3.41 \pm 0.21
18:1n-9	16.18 \pm 0.98
20:1n-9	1.92 \pm 0.26
22:1n-9	1.80 \pm 0.15
24:1n-9	0.46 \pm 0.12
MUFA	26.63 \pm 2.11
16:2n-4	0.62 \pm 0.10
16:3n-4	<i>tr</i>
16:4n-1	3.50 \pm 0.27
16:4n-3	<i>tr</i>
18:2n-6	15.04 \pm 1.98
18:3n-3	2.64 \pm 0.87
18:3n-6	0.14 \pm 0.00
18:4n-3	1.73 \pm 0.35
20:2n-6	0.20 \pm 0.10
20:3n-3	0.11 \pm 0.11
20:3n-6	0.12 \pm 0.06
20:4n-3	0.61 \pm 0.36
20:4n-6	0.72 \pm 11
20:5n-3	10.35 \pm 0.30
21:5n-3	0.43 \pm 0.20

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively.

22:2n-6	<i>tr</i>
22:4n-6	<i>tr</i>
22:5n-3	1.29 ± 0.00
22:6n-3	6.70 ± 0.61
PUFA	44.34 ± 1.04
$\delta^{13}\text{C}$	-25.05 ± 0.04
$\delta^{15}\text{N}$	3.97 ± 0.05

Supplementary Table 3. Percentage of total fatty acid, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values (‰) of macrophytes sampled in semi-intensive (SI, mean ± SD, n = 5), semi-intensive lagoon coupled (SIC, mean ± SD, n = 4) and extensive ponds (E, mean ± SD, n = 2). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	0.23 ± 0.15	0.15 ± 0.13	0.07 ± 0.11
14:0	1.45 ± 0.86	1.20 ± 0.66	0.53 ± 0.12
15:0	0.38 ± 0.35	0.50 ± 0.41	0.57 ± 0.02
15:0 iso	0.45 ± 0.53	0.50 ± 0.52	0.62 ± 0.15
15:0 ante	0.12 ± 0.17	0.16 ± 0.13	0.11 ± 0.16
16:0	19.56 ± 1.97	20.74 ± 2.28	21.51 ± 0.47
16:0 iso	<i>tr</i>	<i>tr</i>	n.d.
17:0	0.29 ± 0.25	0.38 ± 0.26	0.59 ± 0.21
17:0 iso	1.10 ± 0.88	0.79 ± 0.84	<i>tr</i>
18:0	1.72 ± 0.80	1.83 ± 1.01	3.50 ± 0.40
20:0	0.58 ± 0.51	0.53 ± 0.31	0.91 ± 0.06
21:0	0.14 ± 0.09	0.11 ± 0.09	0.30 ± 0.20
22:0	1.08 ± 0.45	1.17 ± 0.38	1.41 ± 0.43
24:0	2.19 ± 1.86	1.87 ± 1.80	3.63 ± 0.34
SFA	29.71 ± 4.03	30.79 ± 4.21	33.86 ± 1.55
14:1n-5	n.d.	0.25 ± 0.46	n.d.
16:1n-9	0.95 ± 0.88	1.25 ± 0.84	n.d.
18:1n-7	1.15 ± 0.95	1.23 ± 0.70	1.08 ± 0.07
18:1n-9	3.79 ± 1.38	5.12 ± 2.37	5.00 ± 0.75
20:1n-9	0.21 ± 0.12	0.14 ± 0.07	0.10 ± 0.15
22:1n-9	0.27 ± 0.13	0.35 ± 0.35	0.51 ± 0.22
24:1n-9	<i>tr</i>	<i>tr</i>	n.d.
MUFA	6.49 ± 2.36	8.40 ± 5.93	6.33 ± 1.18
16:2n-4	<i>tr</i>	<i>tr</i>	0.20 ± 0.02
16:4n-1	3.25 ± 3.82	1.50 ± 1.01	n.d.
16:4n-3	0.19 ± 0.26	3.52 ± 6.84	0.19 ± 0.09
18:2n-6	29.02 ± 13.03	27.08 ± 16.24	41.99 ± 0.92
18:3n-3	28.02 ± 13.3	23.18 ± 12.57	13.73 ± 0.09

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

18:3n-6	0.01 ± 0.03	1.12 ± 1.67	n.d.
18:4n-3	0.27 ± 0.45	1.10 ± 1.53	<i>tr</i>
20:2n-6	0.19 ± 0.11	0.41 ± 0.38	<i>tr</i>
20:3n-3	0.14 ± 0.12	0.15 ± 0.06	0.11 ± 0.15
20:3n-6	<i>tr</i>	<i>tr</i>	<i>tr</i>
20:4n-3	n.d.	0.10 ± 0.09	<i>tr</i>
20:4n-6	0.18 ± 0.18	0.55 ± 0.37	0.24 ± 0.05
20:5n-3	0.81 ± 0.77	1.15 ± 1.00	0.35 ± 0.18
21:5n-3	n.d.	0.18 ± 0.23	n.d.
22:5n-3	<i>tr</i>	0.61 ± 0.77	1.58 ± 0.06
22:6n-3	0.75 ± 0.76	0.53 ± 0.59	1.33 ± 0.64
PUFA	63.79 ± 5.55	60.71 ± 5.93	59.80 ± 0.037
δ ¹³ C	-24.2 ± 5.81	-27.11 ± 3.54	-28.26 ± 0.50
δ ¹⁵ N	3.19 ± 3.08 ^a	9.17 ± 1.59 ^b	8.81 ± 0.62 ^b

Supplementary Table 4. Percentage of total fatty acid, δ¹³C and δ¹⁵N values (‰) of suspended particulate organic matter in semi-intensive (SI, mean ± SD, n = 4), semi-intensive lagoon coupled (SIC, mean ± SD, n = 4) and extensive ponds (E, mean ± SD, n = 4). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	0.72 ± 0.69	0.39 ± 0.38	0.29 ± 0.11
14:0	2.62 ± 0.63	1.71 ± 0.53	2.41 ± 0.80
15:0	0.47 ± 0.12	0.49 ± 0.27	0.48 ± 0.15
15:0 iso	0.62 ± 0.09	0.72 ± 0.15	0.74 ± 0.10
15:0 ante	0.26 ± 0.06	0.37 ± 0.13	0.27 ± 0.08
16:0	19.25 ± 1.68	19.54 ± 2.65	21.61 ± 1.35
16:0 iso	0.13 ± 0.04	<i>tr</i>	<i>tr</i>
17:0	0.35 ± 0.12	0.38 ± 0.15	0.24 ± 0.31
17:0 iso	0.90 ± 0.52	0.90 ± 0.42	0.99 ± 0.68
18:0	2.24 ± 0.59	2.35 ± 0.27	3.61 ± 1.66
20:0	0.35 ± 0.10	0.68 ± 0.32	0.49 ± 0.24
21:0	0.10 ± 0.03	0.20 ± 0.04	0.23 ± 0.11
22:0	0.68 ± 0.29	0.62 ± 0.33	0.60 ± 0.55
24:0	0.42 ± 0.24	0.62 ± 0.60	1.07 ± 0.45
SFA	23.10 ± 1.61	29.05 ± 1.74	33.08 ± 3.13
14:1n-5	<i>tr</i>	<i>tr</i>	0.11 ± 0.03
16:1n-9	6.61 ± 2.95	8.89 ± 0.82	8.86 ± 0.67
17:1n-7	<i>tr</i>	<i>tr</i>	<i>tr</i>
18:1n-7	1.90 ± 0.46	2.37 ± 0.23	2.31 ± 0.46
18:1n-9	20.93 ± 0.72	20.15 ± 0.77	19.69 ± 0.80
20:1n-9	0.31 ± 0.14	0.45 ± 0.20	0.24 ± 0.28

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

22:1n-9	0.45 ± 0.14	0.46 ± 0.35	0.15 ± 0.14
MUFA	30.33 ± 2.93	32.44 ± 1.71	31.37 ± 0.61
16:2n-4	0.56 ± 0.29	0.78 ± 0.53	0.49 ± 0.16
16:3n-4	0.44 ± 0.14	0.92 ± 0.40	0.55 ± 0.23
16:4n-1	0.52 ± 0.08	0.36 ± 0.20	1.13 ± 1.14
18:2n-6	10.03 ± 0.37	8.80 ± 1.30	8.20 ± 1.60
18:3n-3	19.88 ± 1.32	19.94 ± 1.98	14.94 ± 0.61
18:3n-6	0.12 ± 0.05	0.23 ± 0.05	0.41 ± 0.27
18:4n-3	0.92 ± 0.60	0.70 ± 0.12	0.65 ± 0.09
20:2n-6	<i>tr</i>	0.16 ± 0.14	0.23 ± 0.20
20:3n-3	0.11 ± 0.03	0.18 ± 0.08	<i>tr</i>
20:4n-3	0.34 ± 0.26	0.22 ± 0.15	1.54 ± 0.60
20:4n-6	0.59 ± 0.14	0.43 ± 0.09	0.30 ± 0.40
20:5n-3	5.54 ± 0.19	4.46 ± 1.32	5.46 ± 1.61
21:5n-3	<i>tr</i>	0.16 ± 0.05	<i>tr</i>
22:2n-6	0.10 ± 0.07	<i>tr</i>	0.13 ± 0.04
22:5n-3	0.17 ± 0.20	<i>tr</i>	0.34 ± 0.47
22:6n-3	0.29 ± 0.14	0.63 ± 0.24	0.16 ± 0.04
PUFA	40.57 ± 2.18	38.51 ± 3.04	35.20 ± 2.02
δ ¹³ C	-27.09 ± 1.87	-29.11 ± 1.37	-27.36 ± 0.29
δ ¹⁵ N	6.57 ± 0.29 ^a	5.95 ± 0.24 ^b	9.68 ± 0.18 ^c

Supplementary Table 5. Percentage of total fatty acid, δ¹³C and δ¹⁵N values (‰) of sediment organic matter in semi-intensive (SI, mean ± SD, n = 6), semi-intensive lagoon coupled (SIC, mean ± SD, n = 6) and extensive ponds (E, mean ± SD, n = 6). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	1.52 ± 0.19 ^{a,b}	1.36 ± 0.19 ^a	1.71 ± 0.18 ^b
14:0	4.77 ± 1.24	5.03 ± 0.51	5.68 ± 0.57
15:0	1.28 ± 0.20 ^a	1.58 ± 0.06 ^b	1.55 ± 0.14 ^b
15:0 iso	3.09 ± 0.49	3.53 ± 0.24	3.23 ± 0.41
15:0 ante	3.13 ± 0.44	3.67 ± 0.16	3.37 ± 0.37
16:0	18.33 ± 0.86 ^a	17.24 ± 0.74 ^b	22.12 ± 3.90 ^c
16:0 iso	1.25 ± 0.17 ^a	1.54 ± 0.09 ^a	1.03 ± 0.18 ^b
17:0	1.15 ± 0.12 ^a	1.30 ± 0.13 ^{a,b}	1.41 ± 0.10 ^b
17:0 iso	1.67 ± 0.57	1.29 ± 0.46	1.50 ± 0.19
18:0	5.32 ± 1.19 ^{a,b}	5.98 ± 0.76 ^a	4.12 ± 0.34 ^b
20:0	4.53 ± 1.09 ^a	5.95 ± 0.76 ^b	4.12 ± 0.34 ^c
21:0	0.30 ± 0.19	0.35 ± 0.25	0.46 ± 0.08
22:0	5.39 ± 0.55 ^a	7.78 ± 0.69 ^b	6.56 ± 1.14 ^a
24:0	9.34 ± 1.70	10.97 ± 1.08	8.88 ± 1.37
SFA	62.20 ± 3.66	67.57 ± 2.52	63.57 ± 5.38

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

14:1n-5	0.10 ± 0.02	<i>tr</i>	0.17 ± 0.03
16:1n-9	7.18 ± 1.40	7.85 ± 0.77	7.17 ± 1.15
17:1n-7	0.88 ± 0.21 ^a	1.07 ± 0.20 ^{a,b}	1.62 ± 0.81 ^b
18:1n-7	3.12 ± 0.47	3.30 ± 0.36	2.79 ± 0.56
18:1n-9	9.22 ± 1.78	6.12 ± 0.80	8.57 ± 3.46
20:1n-9	0.46 ± 0.10	0.50 ± 0.09	0.53 ± 0.09
22:1n-9	1.23 ± 1.05	1.53 ± 0.41	0.56 ± 0.08
24:1n-9	0.42 ± 0.04	0.47 ± 0.04	0.35 ± 0.08
MUFA	22.60 ± 2.34	20.51 ± 2.42	22.63 ± 5.17
16:2n-4	1.12 ± 0.19 ^a	1.53 ± 0.41 ^b	0.56 ± 0.08 ^c
16:3n-4	0.38 ± 0.04 ^a	0.47 ± 0.04 ^b	0.35 ± 0.08 ^a
16:4n-1	1.83 ± 0.29	2.07 ± 0.29	1.98 ± 0.30
18:2n-6	6.46 ± 2.12 ^a	2.78 ± 0.24 ^b	4.47 ± 0.87 ^a
18:3n-3	0.41 ± 0.09	0.46 ± 0.04	0.48 ± 0.07
18:3n-6	0.27 ± 0.04 ^a	0.18 ± 0.03 ^b	0.23 ± 0.05 ^{a,b}
18:4n-3	0.19 ± 0.07 ^a	0.15 ± 0.03 ^a	1.27 ± 0.77 ^b
20:2n-6	0.17 ± 0.05	0.17 ± 0.02	0.19 ± 0.04
20:3n-3	0.64 ± 0.14	0.77 ± 0.08	0.71 ± 0.07
20:3n-6	0.18 ± 0.10	0.25 ± 0.07	0.22 ± 0.05
20:4n-3	<i>tr</i>	n.d.	0.20 ± 0.12
20:4n-6	0.56 ± 0.09 ^a	0.70 ± 0.09 ^b	0.55 ± 0.06 ^{a,b}
20:5n-3	1.47 ± 0.36 ^a	0.84 ± 0.16 ^b	1.14 ± 0.34 ^{a,b}
21:5n-3	0.65 ± 0.24	0.76 ± 0.14	0.58 ± 0.07
22:2n-6	0.20 ± 0.17	0.25 ± 0.06	0.22 ± 0.03
22:5n-3	<i>tr</i>	0.25 ± 0.17	0.20 ± 0.03
22:6n-3	0.51 ± 0.26	0.28 ± 0.17	0.45 ± 0.22
PUFA	15.21 ± 1.91 ^a	11.92 ± 0.37 ^b	13.80 ± 1.13 ^a
δ ¹³ C	-29.59 ± 0.21 ^a	-29.41 ± 0.34 ^a	-28.76 ± 0.38 ^b
δ ¹⁵ N	6.16 ± 0.23 ^a	6.41 ± 0.20 ^a	8.04 ± 0.39 ^b

Supplementary Table 6. Percentage of total fatty acid, δ¹³C and δ¹⁵N values (‰) of large zooplankton in semi-intensive (SI, mean ± SD, n = 2), semi-intensive lagoon coupled (SIC, mean ± SD, n = 2) and extensive ponds (E, mean ± SD, n = 2). Only fatty acids superior to 0.10% of total FA are presented. 0.04

	SI	SIC	E
12:0	0.51 ± 0.01	0.36 ± 0.16	0.29 ± 0.04
14:0	0.45 ± 0.36	0.57 ± 0.14	0.24 ± 0.13
15:0	0.65 ± 0.24	0.54 ± 0.02	0.43 ± 0.02
15:0 iso	1.24 ± 0.26	1.21 ± 0.04	1.26 ± 0.23
15:0 ante	0.62 ± 0.32	0.65 ± 0.09	0.62 ± 0.02

16:0	19.19 ± 0.56	19.86 ± 0.62	20.05 ± 0.10
16:0 iso	1.92 ± 0.69	1.50 ± 0.10	1.46 ± 0.01
17:0	0.55 ± 0.13	0.50 ± 0.10	0.41 ± 0.06
17:0 iso	1.44 ± 0.47	1.58 ± 0.03	2.01 ± 0.77
18:0	12.70 ± 1.45	12.53 ± 1.56	9.93 ± 1.34
20:0	1.79 ± 0.04	3.42 ± 2.20	6.72 ± 1.11
21:0	0.20 ± 0.09	0.13 ± 0.07	0.25 ± 0.19
22:0	0.66 ± 0.19	0.49 ± 0.06	0.33 ± 0.05
24:0	0.57 ± 0.28	0.28 ± 0.02	0.23 ± 0.05
SFA	42.49 ± 0.36	43.63 ± 1.21	44.22 ± 0.24
16:1n-9	0.17 ± 0.08	0.22 ± 0.02	0.16 ± 0.05
17:1n-7	0.40 ± 0.06	0.31 ± 0.23	0.16 ± 0.03
18:1n-7	2.07 ± 0.12	2.07 ± 0.07	2.13 ± 0.21
18:1n-9	12.01 ± 1.56	10.62 ± 0.82	10.07 ± 0.82
20:1n-9	0.28 ± 0.06	0.36 ± 0.02	0.28 ± 0.01
22:1n-9	0.70 ± 0.05	0.69 ± 0.15	0.49 ± 0.00
24:1ω9	0.46 ± 0.18	0.30 ± 0.36	0.10 ± 0.15
MUFA	16.09 ± 1.83	14.58 ± 1.53	13.39 ± 0.84
16:3n-4	0.72 ± 0.09	0.86 ± 0.09	0.51 ± 0.71
16:4n-1	3.11 ± 0.47	1.57 ± 1.81	0.24 ± 0.11
16:4ω3	0.76 ± 0.09	0.67 ± 0.18	0.45 ± 0.10
18:2n-6	4.94 ± 0.72	5.25 ± 0.93	6.40 ± 1.02
18:3n-3	4.44 ± 0.14	5.89 ± 1.32	7.01 ± 0.57
18:3n-6	0.12 ± 0.04	0.15 ± 0.02	0.16 ± 0.07
18:4n-3	0.76 ± 0.10	1.60 ± 1.15	2.49 ± 0.04
20:2n-6	0.22 ± 0.00	0.22 ± 0.22	0.48 ± 0.20
20:3n-3	0.37 ± 0.06	0.25 ± 0.06	0.33 ± 0.07
20:3ω6	<i>tr</i>	<i>tr</i>	0.15 ± 0.07
20:4n-3	0.25 ± 0.04	0.30 ± 0.05	0.36 ± 0.10
20:4n-6	7.10 ± 0.83	6.79 ± 1.00	6.98 ± 1.38
20:5n-3	13.72 ± 0.75	12.25 ± 1.57	10.37 ± 1.59
21:5n-3	<i>tr</i>	0.11 ± 0.16	<i>tr</i>
22:2n-6	<i>tr</i>	0.17 ± 0.06	n.d.
22:5n-3	0.31 ± 0.12	0.23 ± 0.08	0.14 ± 0.14
22:6n-3	4.42 ± 0.33	5.46 ± 1.20	6.22 ± 1.14
PUFA	41.42 ± 2.19	41.79 ± 0.32	42.39 ± 0.60
δ ¹³ C	-26.58 ± 0.30	-27.12 ± 0.60	-26.01 ± 0.78
δ ¹⁵ N	9.02 ± 0.05 ^a	9.18 ± 0.67 ^a	10.80 ± 0.70 ^b

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

Supplementary Table 7. Percentage of total fatty acid, δ¹³C and δ¹⁵N values (‰) of aquatic insects in semi-intensive (SI, mean ± SD, n = 4), semi-intensive lagoon coupled (SIC, mean ± SD, n = 6) and extensive ponds (E, mean ± SD, n = 3). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	0.16 ± 0.13	0.24 ± 0.13	0.17 ± 0.14
14:0	1.72 ± 0.73	1.53 ± 0.38	1.25 ± 0.57
15:0	0.72 ± 0.21	0.58 ± 0.27	0.59 ± 0.09
15:0 iso	0.59 ± 0.35	0.43 ± 0.21	1.16 ± 1.37
15:0 ante	0.12 ± 0.07	0.11 ± 0.06	0.13 ± 0.08
16:0	17.56 ± 2.98	18.99 ± 2.76	17.83 ± 3.15
16:0 iso	0.20 ± 0.09	0.14 ± 0.06	0.14 ± 0.07
17:0	1.46 ± 0.85	1.30 ± 0.77	1.56 ± 1.00
17:0 iso	0.45 ± 0.25	0.53 ± 0.21	0.67 ± 0.26
18:0	5.93 ± 2.11	7.04 ± 1.70	7.26 ± 3.89
20:0	0.57 ± 0.52	0.74 ± 0.44	1.09 ± 0.53
21:0	<i>tr</i>	0.64 ± 1.45	<i>tr</i>
22:0	0.57 ± 0.28	0.55 ± 0.40	0.69 ± 0.33
24:0	0.17 ± 0.20	0.17 ± 0.17	0.23 ± 0.24
SFA	30.28 ± 3.40	32.99 ± 1.50	32.80 ± 0.33
14:1n-5	<i>tr</i>	<i>tr</i>	0.12 ± 0.12
16:1n-9	6.02 ± 2.14	6.82 ± 3.43	6.36 ± 5.99
17:1n-7	0.20 ± 0.41	0.33 ± 0.53	n.d.
18:1n-7	4.09 ± 2.57	5.47 ± 2.72	3.93 ± 0.98
18:1n-9	17.57 ± 5.48	16.35 ± 5.60	19.28 ± 5.64
20:1n-9	0.19 ± 0.07	0.21 ± 0.07	0.42 ± 0.17
22:1n-9	<i>tr</i>	<i>tr</i>	0.20 ± 0.13
24:1n-9	<i>tr</i>	<i>tr</i>	<i>tr</i>
MUFA	28.22 ± 6.04	29.34 ± 8.90	30.16 ± 10.51
16:2n-4	0.51 ± 0.36	0.36 ± 0.45	0.11 ± 0.04
16:4n-1	n.d.	<i>tr</i>	0.34 ± 0.42
16:4n-3	<i>tr</i>	0.16 ± 0.16	0.20 ± 0.30
18:2n-6	12.90 ± 7.43	8.81 ± 2.12	10.75 ± 4.44
18:3n-3	7.50 ± 1.83	10.94 ± 8.06	8.86 ± 0.90
18:3ω6	0.65 ± 0.20	0.67 ± 0.22	0.55 ± 0.23
18:4n-3	0.84 ± 0.22	1.04 ± 0.38	1.36 ± 0.61
20:2n-6	0.28 ± 0.26	0.34 ± 0.23	0.24 ± 0.12
20:3n-3	0.27 ± 0.32	0.37 ± 0.21	0.24 ± 0.32
20:3n-6	0.37 ± 0.26	0.27 ± 0.16	0.34 ± 0.35
20:4n-3	0.42 ± 0.35	0.37 ± 0.30	0.49 ± 0.34
20:4n-6	5.37 ± 0.71	5.49 ± 2.37	2.78 ± 1.65
20:5n-3	11.15 ± 2.82	8.01 ± 5.28	9.33 ± 4.60
21:5n-3	<i>tr</i>	<i>tr</i>	<i>tr</i>
22:2ω6	<i>tr</i>	n.d.	n.d.
22:4ω6	<i>tr</i>	<i>tr</i>	<i>tr</i>
22:5n-3	0.21 ± 0.06	0.15 ± 0.09	0.14 ± 0.14

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

22:6n-3	0.79 ± 0.81	0.50 ± 0.71	1.06 ± 1.06
PUFA	41.50 ± 6.34	37.66 ± 9.93	37.05 ± 10.19
δ ¹³ C	-25.71 ± 3.97	-28.60 ± 3.82	-26.53 ± 3.44
δ ¹⁵ N	9.64 ± 4.02	10.34 ± 0.55	9.90 ± 4.93

Supplementary Table 8. Percentage of total fatty acid, δ¹³C and δ¹⁵N values (‰) of crayfish (*Procambarus clarkii*) in semi-intensive (SI, mean ± SD, n = 3), semi-intensive lagoon coupled (SIC, mean ± SD, n = 3) and extensive ponds (E, mean ± SD, n = 6). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	<i>tr</i>	<i>tr</i>	<i>tr</i>
14:0	0.43 ± 0.08	0.34 ± 0.08	0.30 ± 0.13
15:0	0.63 ± 0.09 ^{ab}	0.49 ± 0.01 ^a	0.84 ± 0.18 ^b
15:0 iso	0.17 ± 0.02	0.10 ± 0.02	0.18 ± 0.06
15:0 ante	<i>tr</i>	<i>tr</i>	<i>tr</i>
16:0	13.46 ± 0.27 ^{ab}	14.60 ± 0.11 ^a	13.78 ± 0.54 ^b
16:0 iso	<i>tr</i>	<i>tr</i>	0.15 ± 0.05
17:0	0.89 ± 0.11 ^a	0.86 ± 0.08 ^a	1.37 ± 0.17 ^b
17:0 iso	0.43 ± 0.17	0.39 ± 0.02	0.59 ± 0.12
18:0	7.54 ± 0.18	7.58 ± 0.22	7.79 ± 0.50
20:0	1.01 ± 0.07	0.77 ± 0.01	0.96 ± 0.16
21:0	0.26 ± 0.01	0.21 ± 0.01	0.32 ± 0.06
22:0	0.72 ± 0.06	0.58 ± 0.04	0.91 ± 0.29
24:0	0.46 ± 0.32 ^a	0.22 ± 0.02 ^a	0.09 ± 0.02 ^b
SFA	26.13 ± 0.28 ^a	26.27 ± 0.12 ^a	27.32 ± 0.64 ^b
16:1n-9	2.50 ± 0.42 ^a	1.94 ± 0.60 ^{a,b}	1.54 ± 0.33 ^b
18:1n-7	3.59 ± 0.10	3.83 ± 0.28	3.43 ± 0.51
18:1n-9	18.41 ± 0.42	19.05 ± 0.67	16.85 ± 2.13
20:1n-9	1.42 ± 0.16	1.70 ± 0.11	1.16 ± 0.36
22:1n-9	<i>tr</i>	<i>tr</i>	<i>tr</i>
24:1n-9	0.10 ± 0.00	0.13 ± 0.05	<i>tr</i>
MUFA	26.05 ± 0.51 ^a	26.73 ± 1.45 ^a	23.01 ± 1.73 ^b
16:2n-4	<i>tr</i>	n.d.	n.d.
16:3n-4	n.d.	n.d.	0.21 ± 0.04
16:4n-1	n.d.	n.d.	<i>tr</i>
18:2n-6	6.99 ± 0.24	5.90 ± 0.58	6.68 ± 1.65
18:3n-3	2.71 ± 0.51 ^a	1.72 ± 0.37 ^a	4.31 ± 0.93 ^b
18:3n-6	<i>tr</i>	<i>tr</i>	0.11 ± 0.03
18:4n-3	0.18 ± 0.04	0.19 ± 0.03	0.27 ± 0.14
20:2n-6	1.03 ± 0.05	0.97 ± 0.09	1.28 ± 0.26
20:3n-3	0.57 ± 0.06	0.46 ± 0.07	0.60 ± 0.18

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

20:3n-6	0.10 ± 0.06 ^a	0.14 ± 0.02 ^{a,b}	0.25 ± 0.08 ^b
20:4n-3	0.26 ± 0.02	0.31 ± 0.06	nd
20:4n-6	4.82 ± 0.60 ^a	3.86 ± 0.68 ^a	8.89 ± 2.17 ^b
20:5n-3	20.09 ± 0.63 ^a	21.23 ± 0.93 ^a	17.99 ± 0.62 ^b
21:5n-3	0.14 ± 0.00	0.21 ± 0.12	<i>tr</i>
22:5n-3	0.29 ± 0.39	0.57 ± 0.01	0.84 ± 0.20
22:6n-3	10.34 ± 0.41 ^a	11.24 ± 0.40 ^a	7.76 ± 2.0 ^b
PUFA	47.82 ± 0.25	47.00 ± 1.33	49.68 ± 1.97
δ ¹³ C	-26.03 ± 0.28	-26.86 ± 0.65	-25.62 ± 1.11
δ ¹⁵ N	10.13 ± 0.41 ^a	8.35 ± 0.36 ^b	12.44 ± 0.49 ^c

Supplementary Table 9. Percentage of total fatty acid, δ¹³C and δ¹⁵N values (‰) of carps (*Cyprinus carpio*) reared in semi-intensive (SI, mean ± SD, n = 6), semi-intensive lagoon coupled (SIC, mean ± SD, n = 10) and extensive ponds (E, mean ± SD, n = 8). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	<i>tr</i>	<i>tr</i>	<i>tr</i>
14:0	2.76 ± 0.47 ^a	2.58 ± 0.30 ^a	1.11 ± 0.59 ^b
15:0	0.43 ± 0.05 ^a	0.37 ± 0.05 ^a	0.85 ± 0.31 ^b
15:0 iso	<i>tr</i>	<i>tr</i>	0.21 ± 0.11
15:0 ante	<i>tr</i>	<i>tr</i>	0.15 ± 0.13
16:0	19.04 ± 0.65	19.06 ± 0.57	18.78 ± 1.93
16:0 iso	<i>tr</i>	<i>tr</i>	0.23 ± 0.09
17:0	0.37 ± 0.05 ^a	0.32 ± 0.05 ^a	1.28 ± 0.42 ^b
17:0 iso	0.38 ± 0.07 ^a	0.26 ± 0.20 ^a	2.31 ± 1.12 ^b
18:0	4.53 ± 0.48 ^a	4.53 ± 0.30 ^a	8.22 ± 0.62 ^b
20:0	0.25 ± 0.03 ^a	0.22 ± 0.02 ^a	0.20 ± 0.03 ^b
22:0	<i>tr</i>	<i>tr</i>	0.18 ± 0.04
24:0	<i>tr</i>	0.23 ± 0.19	0.21 ± 0.15
26:0	<i>n.d.</i>	<i>n.d.</i>	<i>tr</i>
28:0	<i>tr</i>	<i>n.d.</i>	0.35 ± 0.24
SFA	28.12 ± 0.87 ^a	27.88 ± 0.63 ^a	34.18 ± 1.69 ^b
14:1n-5	<i>tr</i>	<i>tr</i>	<i>tr</i>
16:1n-9	6.16 ± 0.86 ^a	6.21 ± 0.59 ^a	3.23 ± 1.50 ^b
17:1n-7	<i>tr</i>	<i>n.d.</i>	<i>n.d.</i>
18:1n-7	3.75 ± 0.17	3.91 ± 0.15	3.68 ± 0.69
18:1n-9	18.32 ± 1.45 ^a	20.69 ± 1.50 ^b	11.39 ± 5.76 ^c
20:1n-9	2.24 ± 0.21 ^a	2.47 ± 0.21 ^b	0.66 ± 0.49 ^c
22:1n-9	0.43 ± 0.28 ^a	0.14 ± 0.02 ^b	0.18 ± 0.05 ^c

24:1n-9	0.40 ± 0.11 ^a	0.23 ± 0.11 ^b	0.47 ± 0.11 ^a
MUFA	31.39 ± 1.38 ^a	33.69 ± 2.32 ^b	19.65 ± 7.65 ^c
16:2n-4	0.53 ± 0.19	0.38 ± 0.04	<i>tr</i>
16:3n-4	0.45 ± 0.20	0.29 ± 0.03	<i>tr</i>
16:4n-1	0.46 ± 0.10	0.42 ± 0.06	<i>tr</i>
16:4n-3	<i>tr</i>	<i>tr</i>	<i>tr</i>
18:2n-6	11.87 ± 1.19 ^a	11.03 ± 1.15 ^a	3.44 ± 0.94 ^b
18:3n-3	2.11 ± 0.41	1.78 ± 0.16	2.45 ± 1.17
18:3n-6	0.14 ± 0.02 ^a	0.12 ± 0.02 ^b	0.11 ± 0.02 ^b
18:4n-3	0.81 ± 0.13 ^a	0.74 ± 0.07 ^a	0.45 ± 0.35 ^b
20:2n-6	0.49 ± 0.09 ^{a,c}	0.49 ± 0.07 ^a	0.76 ± 0.29 ^c
20:3n-3	0.20 ± 0.03 ^a	0.17 ± 0.02 ^a	0.49 ± 0.17 ^b
20:3n-6	0.40 ± 0.08	0.43 ± 0.04	0.66 ± 0.21
20:4n-3	0.71 ± 0.07	0.72 ± 0.04	0.64 ± 0.25
20:4n-6	2.13 ± 0.50 ^a	1.89 ± 0.32 ^a	9.25 ± 2.92 ^b
20:5n-3	8.00 ± 0.71	7.32 ± 0.38	7.98 ± 1.97
21:5n-3	0.34 ± 0.04 ^a	0.20 ± 0.10 ^{a,c}	0.18 ± 0.06 ^c
22:2n-6	<i>n.d.</i>	0.19 ± 0.16	<i>n.d.</i>
22:4n-6	0.14 ± 0.05	1.22 ± 0.92	0.84 ± 0.47
22:5n-3	2.10 ± 0.27 ^a	0.79 ± 0.80 ^b	3.16 ± 0.81 ^c
22:6n-3	9.58 ± 0.87 ^a	10.26 ± 1.68 ^a	15.54 ± 3.68 ^b
PUFA	40.49 ± 1.17 ^{a,c}	38.44 ± 2.19 ^b	46.17 ± 6.89 ^c
δ ¹³ C	-24.42 ± 0.48 ^a	-24.52 ± 0.25 ^a	-25.50 ± 0.68 ^b
δ ¹⁵ N	8.16 ± 0.48 ^a	8.82 ± 0.56 ^a	15.22 ± 1.04 ^b

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

Supplementary Table 10: Percentage of total fatty acid, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values (‰) of roach (*Rutilus rutilus*) reared in semi-intensive (SI, mean \pm SD, n = 7), semi-intensive lagoon coupled (SIC, mean \pm SD, n = 7) and extensive ponds (E, mean \pm SD, n = 8). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	<i>tr</i>	<i>tr</i>	0.11 \pm 0.05
14:0	1.60 \pm 0.32	2.08 \pm 0.49	1.91 \pm 0.54
15:0	0.30 \pm 0.05 ^a	0.32 \pm 0.07 ^a	0.90 \pm 0.34 ^b
15:0 iso	0.11 \pm 0.04 ^a	0.16 \pm 0.05 ^a	0.39 \pm 0.11 ^b
15:0 ante	<i>tr</i>	<i>tr</i>	0.15 \pm 0.05
16:0	17.36 \pm 1.12	17.34 \pm 1.29	16.96 \pm 0.84
16:0 iso	<i>tr</i>	<i>tr</i>	0.22 \pm 0.09
17:0	0.27 \pm 0.10 ^a	0.23 \pm 0.04 ^a	0.61 \pm 0.22 ^b
17:0 iso	0.22 \pm 0.05 ^a	0.27 \pm 0.05 ^a	0.52 \pm 0.11 ^b
18:0	3.41 \pm 0.53	3.17 \pm 0.75	3.70 \pm 0.57
20:0	0.15 \pm 0.04 ^a	0.15 \pm 0.03 ^a	0.12 \pm 0.03 ^b
22:0	<i>n.d.</i>	<i>tr</i>	<i>tr</i>
24:0	<i>tr</i>	<i>n.d.</i>	<i>tr</i>
28:0	<i>tr</i>	<i>tr</i>	<i>n.d.</i>
SFA	23.61 \pm 1.45^a	23.91 \pm 1.46^a	26.02 \pm 1.61^b
14:1n-5	0.10 \pm 0.05 ^a	0.12 \pm 0.03 ^b	0.12 \pm 0.03 ^b
16:1n-9	8.32 \pm 2.13	9.22 \pm 1.62	7.87 \pm 1.52
17:1n-7	<i>tr</i>	<i>tr</i>	<i>n.d.</i>
18:1n-7	3.20 \pm 1.28 ^a	3.83 \pm 0.22 ^a	4.53 \pm 0.75 ^b
18:1n-9	20.09 \pm 3.40 ^a	24.79 \pm 2.98 ^b	12.97 \pm 4.00 ^c
20:1n-9	1.19 \pm 0.21 ^a	1.32 \pm 0.18 ^a	0.63 \pm 0.27 ^b
22:1n-9	<i>tr</i>	<i>tr</i>	0.12 \pm 0.02
24:1n-9	0.39 \pm 0.09	0.29 \pm 0.12	0.31 \pm 0.09
MUFA	33.47 \pm 6.24^a	39.73 \pm 4.73^a	25.64 \pm 4.54^b

16:2n-4	0.26 ± 0.06 ^a	0.27 ± 0.07 ^a	0.17 ± 0.04 ^b
16:3n-4	0.17 ± 0.03	0.20 ± 0.06	<i>tr</i>
16:4n-1	0.21 ± 0.04	0.25 ± 0.06	<i>tr</i>
16:4n-3	<i>tr</i>	0.18 ± 0.08	0.17 ± 0.15
18:2n-6	7.53 ± 1.23 ^a	7.25 ± 1.24 ^a	4.05 ± 1.27 ^b
18:3n-3	2.06 ± 0.62 ^a	2.46 ± 0.66 ^a	8.46 ± 4.06 ^b
18:3n-6	0.13 ± 0.05 ^a	0.19 ± 0.05 ^b	0.37 ± 0.19 ^c
18:4n-3	0.46 ± 0.18	0.65 ± 0.18	0.71 ± 0.31
20:2n-6	0.86 ± 0.15 ^a	0.60 ± 0.09 ^b	0.64 ± 0.15 ^{a,b}
20:3n-3	0.45 ± 0.07 ^a	0.38 ± 0.05 ^a	1.91 ± 0.49 ^b
20:3n-6	0.41 ± 0.03 ^a	0.38 ± 0.04 ^a	0.83 ± 0.21 ^b
20:4n-3	0.72 ± 0.11 ^a	0.79 ± 0.12 ^b	1.59 ± 0.27 ^b
20:4n-6	2.52 ± 0.79 ^a	1.96 ± 0.67 ^a	5.12 ± 1.66 ^b
20:5n-3	7.60 ± 1.06 ^a	6.63 ± 0.58 ^b	5.16 ± 1.66 ^c
21:5n-3	0.23 ± 0.04 ^a	0.24 ± 0.03 ^a	0.10 ± 0.02 ^b
22:2n-6	<i>tr</i>	<i>tr</i>	<i>tr</i>
22:4n-6	0.13 ± 0.04	<i>tr</i>	0.21 ± 0.09
22:5n-3	2.22 ± 0.58 ^a	1.73 ± 0.24 ^{a,b}	1.56 ± 0.32 ^b
22:6n-3	16.88 ± 5.03	12.10 ± 4.18	16.52 ± 5.95
PUFA	42.92 ± 5.24 ^a	39.73 ± 3.69 ^b	48.64 ± 4.11 ^c
δ ¹³ C	-25.60 ± 0.42 ^a	-25.10 ± 0.58 ^a	-26.61 ± 0.67 ^b
δ ¹⁵ N	10.87 ± 0.73 ^a	10.43 ± 0.61 ^a	14.27 ± 0.36 ^b

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

Supplementary Table 11: Percentage of total fatty acid, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values (‰) of rudd (*Scardinius erythrophthalmus*) in semi-intensive (SI, mean \pm SD, n = 8), SIC lagoon coupled (SIC, mean \pm SD, n = 8) and extensive ponds (E, mean \pm SD, n = 8). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	<i>tr</i>	<i>tr</i>	<i>tr</i>
14:0	1.81 \pm 0.48 ^a	1.55 \pm 0.38 ^a	0.76 \pm 0.33 ^b
15:0	0.30 \pm 0.05	0.29 \pm 0.07	0.34 \pm 0.07
15:0 iso	<i>tr</i>	<i>tr</i>	0.13 \pm 0.07
15:0 ante	<i>tr</i>	<i>tr</i>	<i>tr</i>
16:0	20.41 \pm 3.51	18.34 \pm 0.80	19.00 \pm 0.99
16:0 iso	<i>tr</i>	<i>tr</i>	<i>tr</i>
17:0	0.23 \pm 0.05 ^a	0.27 \pm 0.05 ^a	0.43 \pm 0.09 ^b
17:0 iso	0.18 \pm 0.03 ^a	0.30 \pm 0.08 ^b	0.29 \pm 0.08 ^b
18:0	4.10 \pm 1.16 ^a	4.08 \pm 0.46 ^a	6.29 \pm 0.87 ^b
20:0	0.15 \pm 0.02 ^a	0.15 \pm 0.03 ^a	0.11 \pm 0.03 ^b
22:0	<i>tr</i>	<i>tr</i>	0.13 \pm 0.01
24:0	<i>tr</i>	<i>n.d.</i>	0.13 \pm 0.05
26:0	<i>tr</i>	<i>n.d.</i>	<i>tr</i>
28:0	0.21 \pm 0.57	<i>tr</i>	0.32 \pm 0.08
SFA	27.63 \pm 5.08	25.29 \pm 0.77	28.08 \pm 1.36
14:1n-5	0.10 \pm 0.04	0.10 \pm 0.04	<i>n.d.</i>
16:1n-9	7.51 \pm 1.98 ^a	7.04 \pm 0.98 ^a	3.39 \pm 0.95 ^b
17:1n-7	<i>tr</i>	<i>tr</i>	<i>n.d.</i>
18:1n-7	3.42 \pm 0.39 ^a	3.56 \pm 0.26 ^a	2.39 \pm 0.22 ^b
18:1n-9	16.54 \pm 2.75 ^a	18.84 \pm 2.11 ^b	9.57 \pm 1.62 ^c
20:1n-9	1.04 \pm 0.21 ^a	1.14 \pm 0.21 ^a	0.29 \pm 0.13 ^b
22:1n-9	0.13 \pm 0.08	0.10 \pm 0.01	0.12 \pm 0.03
24:1n-9	0.36 \pm 0.14	0.33 \pm 0.12	0.37 \pm 0.16
MUFA	29.12 \pm 5.16 ^a	31.12 \pm 3.22 ^a	16.13 \pm 2.63 ^b

16:2n-4	0.24 ± 0.09	0.21 ± 0.10	<i>tr</i>
16:3n-4	0.17 ± 0.07	0.17 ± 0.10	<i>tr</i>
16:4n-1	0.24 ± 0.09	0.23 ± .12	<i>tr</i>
16:4n-3	<i>tr</i>	<i>n.d.</i>	<i>n.d.</i>
18:2n-6	7.14 ± 1.64 ^a	6.13 ± 1.05 ^a	4.64 ± 0.53 ^b
18:3n-3	1.68 ± 0.56 ^a	1.81 ± 0.68 ^a	5.19 ± 1.96 ^b
18:3n-6	0.14 ± 0.04 ^a	0.14 ± 0.05 ^a	0.20 ± 0.02 ^b
18:4n-3	0.46 ± 0.17	0.46 ± 0.23	0.51 ± 0.31
20:2n-6	0.70 ± 0.19	0.77 ± 0.08	0.67 ± 0.13
20:3n-3	0.30 ± 0.07 ^a	0.32 ± 0.06 ^a	1.27 ± 0.34 ^b
20:3n-6	0.41 ± 0.04 ^a	0.45 ± 0.05 ^b	0.80 ± 0.14 ^b
20:4n-3	0.54 ± 0.10 ^a	0.53 ± 0.13 ^a	1.12 ± 0.44 ^b
20:4n-6	2.91 ± 0.76 ^a	3.75 ± 0.91 ^a	8.94 ± 2.52 ^b
20:5n-3	8.01 ± 1.55	6.90 ± 1.04	8.18 ± 1.88
21:5n-3	0.13 ± 0.13 ^{a,c}	0.22 ± 0.06 ^b	0.10 ± 0.04 ^c
22:2n-6	0.11 ± 0.11	<i>tr</i>	<i>tr</i>
22:4n-6	0.11 ± 0.02 ^a	0.21 ± 0.06 ^b	0.35 ± 0.17 ^b
22:5n-3	2.15 ± 0.21 ^a	2.12 ± 0.35 ^a	3.05 ± 0.43 ^b
22:6n-3	17.80 ± 4.58	19.16 ± 3.25	20.55 ± 3.35
PUFA	43.25 ± 5.37 ^a	43.59 ± 3.71 ^a	55.79 ± 2.33 ^b
δ ¹³ C	-24.69 ± 0.55	-24.88 ± 0.65	-25.22 ± 0.83
δ ¹⁵ N	10.21 ± 0.99 ^a	10.77 ± 0.81 ^a	14.82 ± 0.33 ^b

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

Supplementary Table 13: Percentage of total fatty acid, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values (‰) of juvenile fish in semi-intensive (SI, mean \pm SD, n = 6), semi-intensive lagoon coupled (SIC, mean \pm SD, n = 11) and extensive ponds (E, mean \pm SD, n = 9). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	<i>tr</i>	0.10 \pm 0.10	<i>tr</i>
14:0	1.38 \pm 0.30	1.88 \pm 0.84	1.45 \pm 0.33
15:0	0.60 \pm 0.09	0.77 \pm 0.29	0.73 \pm 0.10
15:0 iso	0.34 \pm 0.17 ^a	0.74 \pm 0.45 ^b	0.40 \pm 0.19 ^a
15:0 ante	0.10 \pm 0.05	0.27 \pm 0.19	<i>tr</i>
16:0	19.58 \pm 1.49 ^a	17.90 \pm 1.66 ^b	18.86 \pm 1.43 ^{a,b}
16:0 iso	0.17 \pm 0.08 ^a	0.29 \pm 0.16 ^b	0.15 \pm 0.03 ^a
17:0	1.01 \pm 0.27	0.93 \pm 0.37	0.85 \pm 0.19
17:0 iso	0.65 \pm 0.20 ^a	0.97 \pm 0.45 ^b	0.68 \pm 0.17 ^a
18:0	7.53 \pm 1.37 ^a	5.49 \pm 0.99 ^b	5.70 \pm 1.60 ^b
20:0	0.29 \pm 0.06 ^a	0.26 \pm 0.06 ^a	0.16 \pm 0.04 ^b
22:0	0.20 \pm 0.06 ^a	0.12 \pm 0.06 ^b	0.13 \pm 0.02 ^b
24:0	0.11 \pm 0.03	0.11 \pm 0.06	0.13 \pm 0.02
26:0	<i>n.d.</i>	<i>tr</i>	<i>tr</i>
28:0	<i>n.d.</i>	0.15 \pm 0.21	<i>tr</i>
SFA	32.02 \pm 2.54 ^a	30.00 \pm 2.01 ^b	29.53 \pm 2.99 ^b
14:1n-5	<i>tr</i>	<i>tr</i>	<i>tr</i>
16:1n-9	3.13 \pm 0.84	5.87 \pm 1.48	3.86 \pm 1.19
17:1n-7	<i>tr</i>	0.21 \pm 0.23	<i>n.d.</i>
18:1n-7	3.30 \pm 0.72 ^a	4.37 \pm 0.70 ^a	2.49 \pm 0.26 ^b
18:1n-9	9.19 \pm 1.11 ^a	12.14 \pm 1.28 ^b	9.91 \pm 0.99 ^a
20:1n-9	0.45 \pm 0.24 ^a	0.76 \pm 0.42 ^b	0.48 \pm 0.11 ^a
22:1n-9	0.26 \pm 0.05 ^a	0.14 \pm 0.04 ^b	0.15 \pm 0.05 ^b
24:1n-9	0.58 \pm 0.15	0.46 \pm 0.17	0.42 \pm 0.27
MUFA	16.94 \pm 2.13 ^a	24.05 \pm 1.72 ^b	17.38 \pm 2.04 ^{a,b}

16:2n-4	0.29 ± 0.21	0.37 ± 0.30	0.12 ± 0.04
16:3n-4	0.15 ± 0.14	0.27 ± 0.28	<i>tr</i>
16:4n-1	<i>tr</i>	0.16 ± 0.09	<i>tr</i>
16:4n-3	0.16 ± 0.09	0.13 ± 0.15	0.15 ± 0.03
18:2n-6	4.16 ± 0.81 ^a	5.83 ± 0.89 ^b	2.83 ± 0.52 ^c
18:3n-3	2.57 ± 1.10	3.46 ± 1.32	4.12 ± 1.33
18:3n-6	0.14 ± 0.06	0.20 ± 0.11	0.10 ± 0.03
18:4n-3	0.22 ± 0.05 ^a	0.51 ± 0.36 ^b	0.79 ± 0.35 ^b
20:2n-6	0.66 ± 0.14	0.65 ± 0.21	0.56 ± 0.08
20:3n-3	0.78 ± 0.34 ^a	0.60 ± 0.24 ^a	1.21 ± 0.41 ^c
20:3n-6	0.40 ± 0.18	0.46 ± 0.09	0.36 ± 0.02
20:4n-3	0.66 ± 0.19 ^a	0.86 ± 0.12 ^b	1.83 ± 0.77 ^c
20:4n-6	7.80 ± 2.13	4.93 ± 1.50	6.81 ± 0.89
20:5n-3	10.63 ± 2.17	8.88 ± 1.25	9.91 ± 2.51
21:5n-3	0.15 ± 0.10	0.20 ± 0.05	0.16 ± 0.02
22:2n-6	<i>tr</i>	0.10 ± 0.22	<i>tr</i>
22:4n-6	0.38 ± 0.15	0.25 ± 0.07	0.23 ± 0.10
22:5n-3	3.05 ± 0.29	2.62 ± 0.56	2.42 ± 0.19
22:6n-3	18.76 ± 2.55	15.49 ± 3.13	21.41 ± 2.75
PUFA	51.05 ± 2.22 ^{a,b}	45.95 ± 3.25 ^a	53.09 ± 1.82 ^b
δ ¹³ C	-26.22 ± 1.27	-24.21 ± 1.80	-26.06 ± 0.64
δ ¹⁵ N	12.87 ± 1.20 ^a	11.21 ± 0.65 ^b	16.52 ± 0.57 ^c

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).

Supplementary Table 14: Percentage of total fatty acid, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values (‰) of perch (*Perca fluviatilis*) in semi-intensive (SI, mean \pm SD, n = 6), semi-intensive lagoon coupled (SIC, mean \pm SD, n = 6) and extensive ponds (E, mean \pm SD, n = 6). Only fatty acids superior to 0.10% of total FA are presented.

	SI	SIC	E
12:0	<i>tr</i>	<i>n.d.</i>	<i>tr</i>
14:0	0.94 \pm 0.21	0.68 \pm 0.05	0.82 \pm 0.16
15:0	0.61 \pm 0.03	0.60 \pm 0.11	0.57 \pm 0.06
15:0 iso	0.21 \pm 0.02	0.21 \pm 0.06	0.17 \pm 0.04
15:0 ante	<i>tr</i>	<i>tr</i>	<i>tr</i>
16:0	20.19 \pm 0.48	19.17 \pm 0.99	19.98 \pm 0.24
16:0 iso	0.12 \pm 0.02	0.14 \pm 0.04	0.11 \pm 0.01
17:0	0.64 \pm 0.09	0.71 \pm 0.16	0.67 \pm 0.11
17:0 iso	0.38 \pm 0.03	0.48 \pm 0.11	0.36 \pm 0.06
18:0	5.28 \pm 0.21	5.63 \pm 0.27	5.38 \pm 0.52
20:0	0.15 \pm 0.02 ^{a,b}	0.14 \pm 0.02 ^a	0.18 \pm 0.02 ^b
21:0	<i>n.d.</i>	<i>tr</i>	<i>n.d.</i>
22:0	<i>tr</i>	<i>tr</i>	0.21 \pm 0.03
24:0	0.16 \pm 0.11	<i>tr</i>	0.20 \pm 0.03
26:0	<i>tr</i>	<i>tr</i>	<i>tr</i>
28:0	0.18 \pm 0.18	0.18 \pm 0.20	0.28 \pm 0.13
SFA	29.01 \pm 0.23	28.18 \pm 0.86	29.00 \pm 0.73
14:1n-5	<i>tr</i>	<i>n.d.</i>	<i>tr</i>
16:1n-9	2.67 \pm 0.59	2.42 \pm 0.27	3.18 \pm 1.16
18:1n-7	2.98 \pm 0.23	3.13 \pm 0.38	2.65 \pm 0.32
18:1n-9	6.93 \pm 0.39 ^a	7.02 \pm 0.67 ^a	9.12 \pm 1.90 ^b
20:1n-9	0.38 \pm 0.19 ^{a,b}	0.37 \pm 0.07 ^a	0.61 \pm 0.19 ^b
22:1n-9	0.12 \pm 0.00 ^a	0.10 \pm 0.02 ^b	0.15 \pm 0.02 ^c
24:1n-9	1.49 \pm 0.19	1.33 \pm 0.14	1.23 \pm 0.14
MUFA	14.58 \pm 0.82	14.36 \pm 1.07	16.95 \pm 3.30

16:2n-4	0.16 ± 0.08	<i>tr</i>	<i>tr</i>
16:3n-4	<i>tr</i>	<i>n.d.</i>	<i>tr</i>
16:4n-1	0.20 ± 0.11	<i>n.d.</i>	0.16 ± 0.09
18:2n-6	2.26 ± 0.31 ^a	3.62 ± 0.40 ^b	4.35 ± 0.71 ^b
18:3n-3	1.54 ± 0.25 ^a	1.53 ± 0.26 ^a	2.02 ± 0.16 ^b
18:3n-6	0.10 ± 0.01 ^a	0.11 ± 0.02 ^a	0.19 ± 0.02 ^b
18:4n-3	0.17 ± 0.03 ^a	0.19 ± 0.02 ^a	0.31 ± 0.04 ^b
20:2n-6	0.22 ± 0.04 ^a	0.34 ± 0.03 ^b	0.48 ± 0.06 ^c
20:3n-3	0.33 ± 0.07	0.30 ± 0.08	0.41 ± 0.06
20:3n-6	0.25 ± 0.05 ^a	0.38 ± 0.07 ^b	0.41 ± 0.02 ^b
20:4n-3	0.36 ± 0.09	0.45 ± 0.07	0.45 ± 0.11
20:4n-6	8.28 ± 1.83	8.86 ± 0.45	8.90 ± 0.93
20:5n-3	8.39 ± 0.93 ^a	6.64 ± 0.41 ^b	8.61 ± 0.98 ^a
21:5n-3	0.11 ± 0.03	0.10 ± 0.02	0.11 ± 0.01
22:4n-6	0.56 ± 0.14 ^a	0.68 ± 0.20 ^{a,b}	0.87 ± 0.09 ^b
22:5n-3	3.51 ± 0.15 ^a	3.22 ± 0.13 ^b	2.76 ± 0.20 ^c
22:6n-3	29.88 ± 1.57 ^a	30.95 ± 1.19 ^a	23.95 ± 2.65 ^b
PUFA	56.41 ± 0.64 ^a	57.46 ± 0.66 ^b	54.05 ± 2.62 ^a
δ ¹³ C	-26.81 ± 0.57 ^a	-26.71 ± 1.96 ^a	-24.86 ± 0.62 ^b
δ ¹⁵ N	15.67 ± 0.82 ^a	15.03 ± 0.27 ^a	16.33 ± 0.35 ^b

tr indicates that fatty acids were found in trace amounts (< 0.10% of total fatty acids). SFA, MUFA and PUFA are the sum of saturated, monounsaturated and polyunsaturated fatty acids, respectively. Letters indicate significant differences between the treatments for fatty acids and stable isotope values (KW, $p \leq 0.05$).