Table S1. Mean and SD values of $\delta^{15}N$ and trophic position of dolphin species of published studies in Atlantic and Mediterranean waters. $\delta^{15}N_{dolphin}$ and $\delta^{15}N_{base}$ are the $\delta^{15}N$ values for dolphin species and the reference baseline, respectively. TP_{base} is the trophic position of the baseline. TP_{bulk} and TP_{lit} are the trophic position estimates using equation (1) (see Methods) and the values provided in the reference study, respectively. n: number of individuals analysed. DDE: common dolphin (*Delphinus delphis*), GGR: Risso's dolphin (*Grampus griseus*), SCO: striped dolphin (*Stenella coeruleoalba*), SFR: Atlantic spotted dolphin (*Stenella frontalis*), TTR: bottlenose dolphin (*Tursiops truncatus*). The first reference on each row indicates the primary article with dolphin data. Second and subsequent references indicate the sources for baseline data.

	$\delta^{15}N_{dolphin}$		$\delta^{15}N_{base}$		TP_{base}	TP_{bulk}		TP_{lit}		n	zone	dates	References
species	mean	SD	mean	SD		mean	SD	mean	SD				
DDE	10.50	0.40	9.18	0.66	3.07	3.47	0.25	---	---	2	SW Mediterranean [1, a]	1992-1994	Borrell and Aguilar 2005, Corrales et al. 2015
	10.30	0.30	5.20	1.00	2.00	3.55	0.33	---	---	10	Bay of Biscay (NE Atlantic) [1, a]	1993	Das et al. 2000, Méndez-Fernández et al. 2012
	12.20	0.40	3.51	1.00	2.00	4.63	0.34	---	---	8	English Channel (NE Atlantic) [1, str]	1998-2001	Das et al. 2003, Basedow et al. 2016
	12.40	1.00	3.51	1.00	2.00	4.69	0.44	---	---	14	Ireland (NE Atlantic) [1 str]	1989-1993	Das et al. 2003, Basedow et al. 2016
	11.70	0.60	5.20	1.00	2.00	3.97	0.36	4.70	0.50	114	Bay of Biscay (NE Atlantic) [1, str]	2004-2008	Méndez-Fernández et al. 2012
	12.30	0.40	7.61	0.67	2.00	3.42	0.25	---	---	2	S Brazil (SW Atlantic) [1, str]	1994-2009	Bisi et al. 2013, Kehrig et al. 2013
	13.10	0.80	4.50	1.20	2.00	4.61	0.44	4.20	0.81	5	Galicia (NE Atlantic) [1, str]	1998	Bode et al. 2003
GGR	10.50	1.00	3.50	0.10	2.00	4.12	0.31	4.10	---	1	Ligurian Sea (NW Mediterranean) [2, str]	1992	Capelli et al. 2008
	11.85	0.07	3.50	0.10	2.00	4.53	0.09	4.45	0.07	2	Ligurian Sea (NW Mediterranean) [3, str]	1992-2004	Capelli et al. 2008
	11.30	0.00	7.61	0.67	2.00	3.12	0.22	---	---	1	S Brazil (SW Atlantic) [1, str]	1994-2009	Bisi et al. 2013, Kehrig et al. 2013
SCO	8.90	1.00	3.50	0.10	2.00	3.64	0.31	3.60	---	1	Ligurian Sea (NW Mediterranean) [3, str]	1990	Capelli et al. 2008
	9.20	0.42	3.50	0.10	2.00	3.73	0.15	3.70	0.14	2	Ligurian Sea (NW Mediterranean) [2, str]	1991-2001	Capelli et al. 2008
	10.40	0.75	5.20	1.00	2.00	3.58	0.39	---	---	23	Bay of Biscay (NE Atlantic) [1, str]	1993	Das et al. 2000, Méndez-Fernández et al. 2012
	10.10	1.80	3.51	1.00	2.00	4.00	0.63	---	---	3	English Channel (NE Atlantic) [1, str]	1998-2001	Das et al. 2003, Basedow et al. 2016
	11.00	0.60	3.51	1.00	2.00	4.27	0.36	---	---	3	Ireland (NE Atlantic) [1 str]	1989-1993	Das et al. 2003, Basedow et al. 2016
	10.80	0.70	5.20	1.00	2.00	3.70	0.38	4.30	0.33	21	Bay of Biscay (NE Atlantic) [1, str]	2004-2008	Méndez-Fernández et al. 2012
	10.59	0.46	9.18	0.66	3.07	3.50	0.26	3.50	0.14	7	Gibraltar Strait (SW Mediterranean) [1, str]	2012-2013	Varela et al. 2018, Corrales et al. 2015
SFR	13.50	1.00	7.61	0.67	2.00	3.78	0.37	---	---	13	S Brazil (SW Atlantic) [1, str]	1994-2009	Bisi et al. 2013, Kehrig et al. 2013

TTR	16.30	0.27	7.61	0.67	2.00	4.63	0.23	4.59	0.09	10	S Brazil (SW Atlantic) [1, str]	2001-2013	Baptista et al. 2016, Kehrig et al. 2013
	14.90	1.70	7.61	0.67	2.00	4.21	0.56	---	---	7	S Brazil (SW Atlantic) [1, str]	1994-2009	Bisi et al. 2013, Kehrig et al. 2013
	13.50	1.00	3.50	0.10	2.00	5.03	0.31	4.94	---	1	Ligurian Sea (NW Mediterranean) [4, str]	1999	Capelli et al. 2008
	12.60	1.00	3.50	0.10	2.00	4.76	0.31	4.70	---	1	Ligurian Sea (NW Mediterranean) [2, str]	2002	Capelli et al. 2008
	16.80	0.80	5.60	1.70	2.00	5.39	0.57	---	---	5	Galicia (NE Atlantic) [4, str]	1998-2007	Fernández et al. 2011, Bode et al. 2007
	13.90	0.90	5.60	1.70	2.00	4.52	0.59	---	---	26	S Galicia (NE Atlantic) [2+3, str]	1998-2007	Fernández et al. 2011, Bode et al. 2007
	13.00	0.70	5.60	1.70	2.00	4.24	0.56	---	---	10	N Galicia (NE Atlantic) [2+3, str]	1998-2007	Fernández et al. 2011, Bode et al. 2007
	12.60	0.90	5.20	1.00	2.00	4.24	0.42	5.10	0.37	9	Bay of Biscay (NE Atlantic) [1, str]	2004-2008	Méndez-Fernández et al. 2012

[1] age unspecified
[2] subadult
[3] adult
[4] calf
[a] accidental catch
[str] stranded

Table S2. Results of Mann-Kendall tests on the time series of TP_{bulk}, $\delta^{15}N$ and $\delta^{13}C$ for DDE, SCO, SFR and TTR from the Canary Islands. The results for the tests of average $\delta^{15}N$ of source ($\delta^{15}N_{src}$) or trophic amino acids ($\delta^{15}N_{trp}$) in DDE are also indicated. Z: Mann-Kendall Z statistic, P: significance. Species names abbreviated as in Supplementary Table S1.

	TPbulk		$\delta^{15}N$		$\delta^{13}C$		$\delta^{15}N_{src}$		$\delta^{15}N_{trp}$	
Species	Z	P	Z	P	Z	P	Z	P	Z	P
DDE	2.220	**0.026**	1.995	**0.046**	1.2044	0.228	1.050	0.294	2.449	**0.014**
SCO	0.072	0.383	-1.062	0.288	-0.099	0.921	-	-	-	-
SFR	-1.513	0.130	-0.175	0.861	-1.154	0.248	-	-	-	-
TTR	-2.674	**0.007**	-2.674	**0.007**	-2.336	**0.020**	-	-	-	-

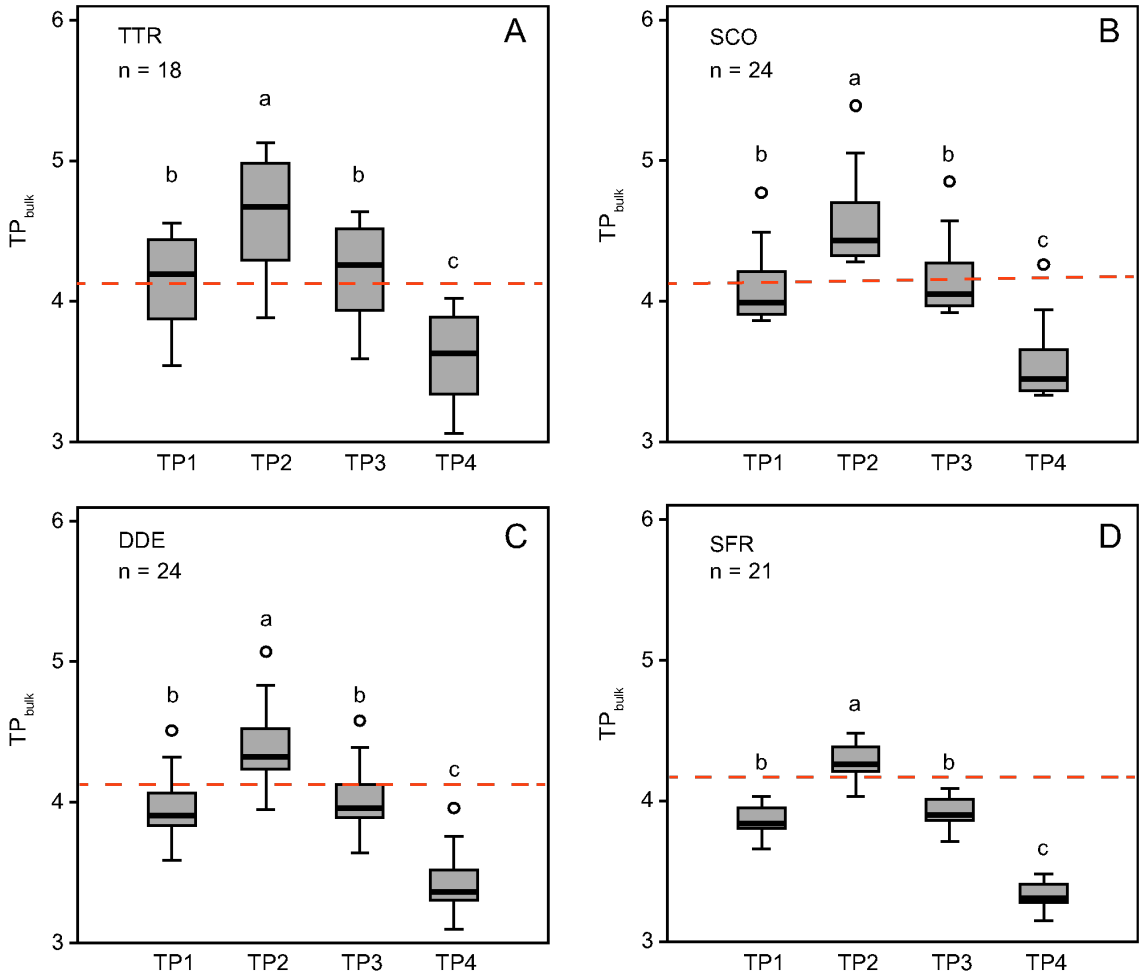

Figure S1. Comparison of TP estimates from $\delta^{15}N_{bulk}$ of bottlenose dolphin (TTR, A), striped dolphin (SCO, B), common dolphin (DDE, C) and Atlantic spotted dolphin (SFR, D) from the zooplankton baseline using different trophic enrichment factors (TEF_{bulk}) and models. Different letters indicate significant means (ANOVA, $F_{3,60}$ = 8.916, Bonferroni *post-hoc*, P<0.05). TP1: TEF_{bulk} = 3.4‰ (Post 2002), TP2: TEF_{bulk} = 2.73‰ (Borrell et al. 2012), TP3: TEF_{bulk} = 3.3‰ (McCutchan et al. 2003), and TP4: decreasing TEF_{bulk} as fuction of baseline $\delta^{15}N_{bulk}$ (Hussey et al. 2014). The red dashed line indicates the TP estimate based of stomach content analyses for each species (Pauly et al. 1998). Each box encompasses the 25 and 75% quartiles, the whiskers indicate 1.5 times the interquartile range, the horizontal line indicates the median, and circles indicate outliers (>1.5 times the interquartile range). n: number of data points.

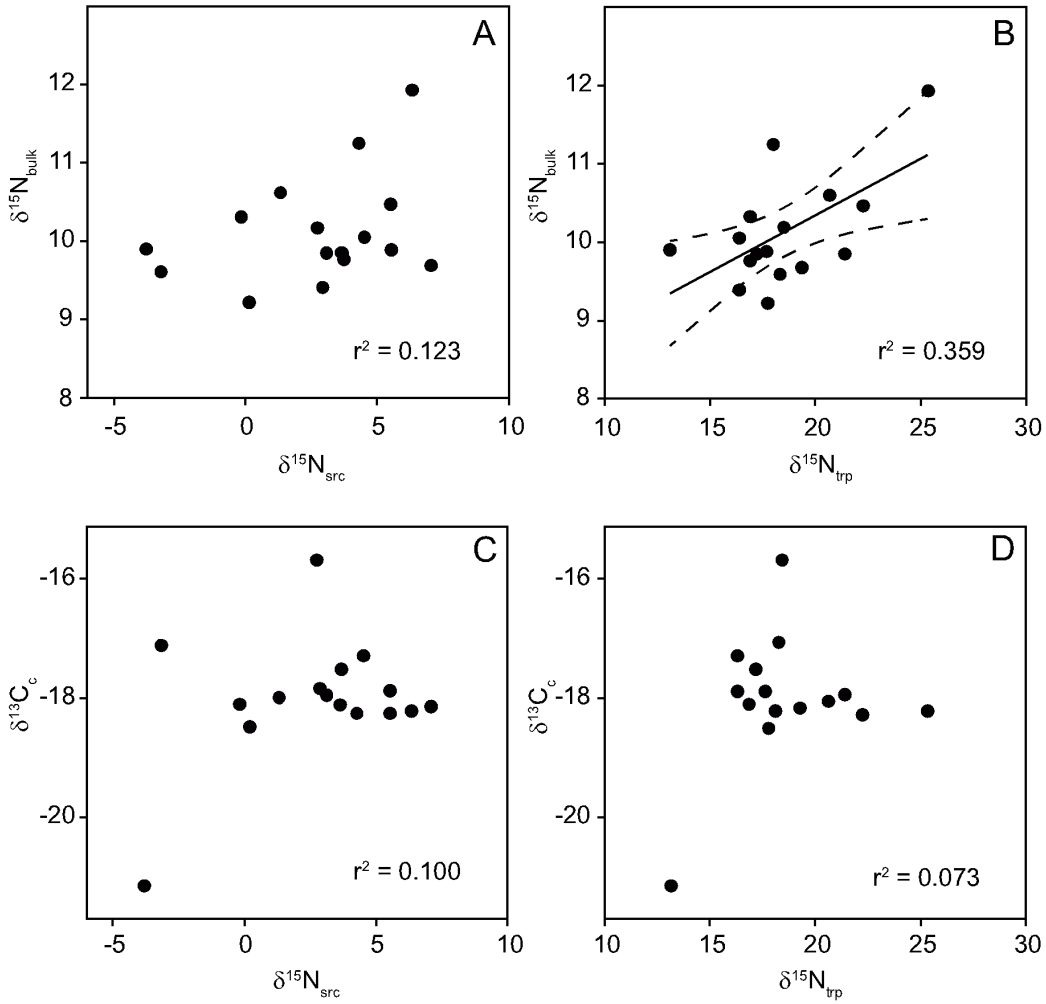

Figure S2. Variation of $\delta^{15}N_{bulk}$ or $\delta^{13}C_c$ with average $\delta^{15}N$ in source (A, C: $\delta^{15}N_{src}$) or trophic amino acids (B, D: $\delta^{15}N_{trp}$) in common dolphin from the Canary Islands. Significant regression line is indicated ($P<0.05$) along with 95% confidence limits (dashed lines). r^2: determination coefficient.

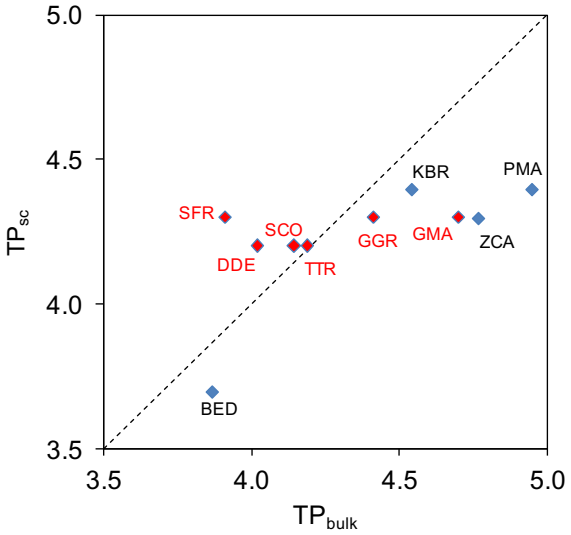

Figure S3. Comparison of TP estimates using stable isotopes in bulk muscle tissue (TP_{bulk}) vs. estimates based in stomach contents (TP_{Pauly}) from Pauly et al. (1998). The dashed line indicates the 1:1 relationship. PMA: sperm whale (*Physeter macrocephalus*), ZCA: Cuvier's beaked whale (*Ziphius cavirostris*), GMA: short-finned pilot whale (*Globicephala macrorhynchus*), KBR: pygmy sperm whale (*Kogia breviceps*), GGR: Risso's dolphin (*Grampus griseus*), TTR: bottlenose dolphin (*Tursiops truncatus*), SCO: striped dolphin (*Stenella coeruleoalba*), DDE: common dolphin (*Delphinus delphis*), SFR: Atlantic spotted dolphin (*Stenella frontalis*), BED: Bryde's whale (*Balaenoptera edeni*).

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