SUPPLEMENTARY MATERIAL

Contaminants of Emerging Concern in the Basque coast (N Spain): occurrence and risk assessment for a better monitoring and management decisions

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Table S1. Description of the sampling stations in the Ibaizabal, Oka and Oiartzun estuaries (Nerbioi interior, Oka interior and Oiartzun transitional water bodies) and in the Mompas-Pasaia coastal water body.

Water body	Station code	UTMX ETRS89	UTMY ETRS89	Description	Sample type
Nerbioi interior (Ibaizabal estuary)	GALINDO	500067	4794579	Galindo -WWTP (Consorcio de Aguas Bilbao Bizkaia)	Wastewater
	E-N15	502111	4793583	Barakaldo (Rontegi bridge)	Receiving water
	E-N17	500185	4795862	Leioa (Lamiako)	Receiving water
Oka	GERNIKA	526407	4796855	Gernika -WWTP (Consorcio de Aguas de Busturialdea)	Wastewater
	E-OK5	527059	4798683	Close to Gernika -WWTP discharge point	Receiving water
Oiartzun	E-OI15	586667	4797168	Pasaia – San Pedro (Herrera basin)	Receiving water
Mompas-Pasaia	ULIA	584628	4798540	Ulia station of the Loiola WWTP (Mancomunidad de Aguas del Añarbe)	Wastewater
	L-UR20	584725	4798981	Mompas-Pasaia litoral	Receiving water

Table S2. GC-EI-MS/MS experimental conditions used for analysis of EHMC and BTH.

	Precursor ion	Product ion	CE (V)
HCB-C13*	292	257	25
EHMC_1	290	178	10
EHMC_2	290	161	10
GAMMA-HCH-D6*	224	187	10
BTH_1	220	205	20
BTH_2	220	177	20
Naphthalene-D8**	136	108	25

Column: HP5-MS 5% phenyl methyl siloxane (30m x 250µm x 0.25µm, from Agilent).
Injection volume: 2 µL (splitless mode).
Gradient temperature: initial T = 50°C, hold for 5min, increase to 200°C at 40°C/min, hold for 1 min, increase to 300 °C at 50 °C/min, hold for 5 min.
MS source T: 250 °C; Dwell time: 100 ms.
*Used as surrogate standards: HCB-C13, hexachlorobenzene–C13; GAMMA-HCH-D6, gamma-hexachlorocyclohexane-D6.
**Used for quality control.

Table S3. Number of samples (n), and minimum (min.), maximum (max.) and mean temperature (TEMP), salinity (SAL), concentration of dissolved oxygen (DO), oxygen saturation (%O2), pH, and concentration of suspended solids (SS) in receiving waters.

		TEMP **ºC**	**SAL**	**DO** **mg·L^{-1}**	**%O2** **%**	**pH**	**SS** **mg·L^{-1}**
E-N15	n	7	8	7	7	7	8
	Min.	8.1	0.47	4.90	64.9	7.86	4.33
	Max.	22.4	30.43	12.64	107.3	8.33	32.22
	Mean	14.8	11.79	9.07	92.1	8.09	13.74
E-N17	n	8	8	8	8	8	8
	Min.	8.4	0.09	5.61	74.6	7.82	4.88
	Max.	22.3	31.09	12.19	106.9	8.08	28.74
	Mean	14.8	14.18	8.87	92.6	7.96	14.60
E-OK5	n	8	8	8	8	8	8
	Min.	10.8	0.17	4.52	54.4	7.65	9.28
	Max.	24.1	13.54	12.00	111.6	9.70	60.57
	Mean	15.6	3.91	8.26	82.7	8.54	24.29
E-OI15	n	8	8	8	8	8	8
	Min.	12.1	27.13	4.73	59.0	7.77	3.68
	Max.	23.7	34.29	9.62	119.1	8.15	24.72
	Mean	16.3	32.04	7.01	87.0	8.01	8.04
L-UR20	n	8	8	8	8	8	8
	Min.	12.0	33.86	7.10	98.6	8.08	1.60
	Max.	23.0	35.12	8.95	107.6	8.27	9.96
	Mean	16.1	34.60	8.20	102.3	8.20	5.51

Table S4. Mean (and range) concentrations ($ng \cdot L^{-1}$) of Watch List substances determined in the Basque coast, by sampling station.

	Wastewater			Receiving water				
	Galindo	**Gernika**	**Ulia**	**E-N15**	**E-N17**	**E-OK5**	**E-OI15**	**L-UR20**
Diclofenac	103.5 (78-139)	51.3 (<3.3-134.1)	43.3 (<3.3-94.2)	5.7 (3.4-7.4)	18.1 (<3.3-40.4)	15.7 (6.1-26.2)	29.3 (<3.3-103)	5.1 (<3.3-15.3)
E2	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-1.15)
EE2	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)	<1 (<0.116-<1)
E1	<0.116 (<0.116)	<0.116 (<0.116)	<0.116 (<0.116)	<0.116 (<0.116)	<0.116 (<0.116-0.242)	<0.116 (<0.116)	<0.116 (<0.116)	<0.116 (<0.116)
BTH	223 (<180-620)	350 (<180-650)	818 (<180-3000)	225 (<180-630)	<180 (<180)	660 (<180-2370)	708 (<180-2160)	<180 (<180)
EHMC	<270 (<270-330)	<270 (<270)	<270 (<270-350)	<270 (<270)	306 (<270-820)	<270 (<270-330)	<270 (<270)	481 (<270-1520)
Erythromycin	25.61 (6-50)	25.89 (<0.08-62.2)	15.14 (<0.08-42)	<5 (0.2-<5)	<5 (0.3-5.4)	<5 (0.2-15.9)	5.20 (0.71-32.7)	<5 (<0.08-<5)
Clarithromycin	174.3 (58.7-535)	98.0 (<2.5-475)	33.7 (<2.5-59)	<2.5 (0.33-6.5)	29.2 (1.1-176)	15.9 (2.4-53.3)	24.1 (0.24-166)	<2.5 (<0.1-7.1)
Azithromycin	375.6 (198-549)	206.3 (19.4-470.2)	177.9 (34.3-672)	19.3 (0.8-66.2)	41.3 (0.9-190)	30.5 (1.5-68.7)	88.7 (1.7-649)	<15 (0.5-39)
Ciprofloxacin	382.13 (58.5-802)	57.59 (<1.67-187)	6.64 (<1.67-24.4)	16.13 (<1.67-62)	27.14 (<1.67-104)	63.82 (<1.67-236)	36.38 (<1.67-143)	54.17 (<1.67-165)
Methiocarb	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)	<16.5 (<2-<16.5)
Imidacloprid	47.1 (6.4-172)	13.3 (<0.17-65)	24.3 (0.55-58)	2.0 (<0.17-5.6)	5.7 (0.2-18.2)	9.4 (<0.17-46.9)	4.6 (<0.17-33)	0.3 (<0.17-1.7)
Thiacloprid	<0.17 (<0.17)	<0.17 (<0.17-0.6)	0.50 (<0.17-2)	<0.17 (<0.17)	0.37 (<0.17-2.4)	0.30 (<0.17-1.8)	<0.17 (<0.17-0.67)	0.25 (<0.17-1.4)
Thiamethoxam	1.193 (<0.116-5.4)	0.268 (<0.116-0.8)	1.042 (<0.116-5.2)	<0.116 (<0.116-0.15)	<0.116 (<0.116-0.45)	0.277 (<0.116-1.6)	0.322 (<0.116-1.3)	0.140 (<0.116-0.71)
Clothianidin	<5 (<0.17-<5)	<5 (<0.17-<5)	<5 (<0.17-<5)	<5 (<0.17-<5)	<5 (<0.17-<5)	<5 (<0.17-<5)	<5 (<0.17-<5)	<5 (<0.17-<5)
Acetamiprid	47.79 (<0.1-314)	5.76 (<0.1-29.1)	2.20 (<0.1-5.3)	1.35 (<0.05-9.1)	0.30 (<0.05-0.8)	0.80 (<0.1-1.9)	0.31 (<0.05-2.2)	<0.1 (<0.05-0.4)
Oxadiazon	0.21 (<0.17-0.60)	0.26 (<0.17-0.79)	0.24 (<0.17-0.41)	<0.17 (<0.17-0.22)	<0.17 (<0.17)	0.98 (<0.17-3.10)	0.22 (<0.17-0.51)	0.28 (<0.17-0.87)
Triallate	1.34 (<0.17-4.7)	1.39 (<0.17-5.3)	4.20 (<0.17-16.3)	0.20 (<0.17-0.4)	<0.17 (<0.17-0.4)	5.27 (<0.17-11.1)	0.99 (<0.17-2.8)	0.87 (<0.17-3)
Metaflumizone	<3.3 (<3.3)	<3.3 (<3.3)	<3.3 (<3.3)	<3.3 (<3.3)	<3.3 (<3.3)	<3.3 (<3.3)	<3.3 (<3.3)	<3.3 (<3.3)

Table S5. Concentrations ($ng \cdot L^{-1}$) of Watch List substances reported in estuarine and coastal water samples from different regions.

Substance	Range	Mean	Location	Reference
Diclofenac	<1.4 - 16.3		Saronic Gulf (Greece)	Alygizakis et al., 2016
	<1 - 9.2		Honfleur/Authie estuaries (France)	Amiard et al., 2009
		7.6 - 14	Garonne River Estuary (France)	Aminot et al., 2016
	<1.5 - 11.6		Singapore (Indian Ocean)	Bayen et al., 2013
	nd - 2.5		Gulf of Cadiz (Spain)	Biel- Maeso et al., 2018
	nd - 31.9		Cadiz Bay (Spain)	
	<0.02		Open sea waters of the Western Mediterranean Sea	Brumovský et al., 2017
	7.17		Qinzhou Bay, China	Cui et al., 2019
	<2.5 - 53.6		Danshui Estuary, Bali (Taiwan)	Fang et al., 2012
	1.2 - 486.5		Rostock coastline, Baltic Sea (Germany)	Fisch et al., 2017
	4 - 31		Arade Estuary (Portugal)	Gonzalez-Rey et al., 2015
	4		Gola de Ter beach, Girona (Spain)	Gros et al., 2012
	<0.33 - 84.5	13.2	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	250.8	51.44	Humber Estuary (United Kingdom)	Letsinger et al., 2019
		35.35	Cromarty Estuary (United Kingdom)	
		34.06	Thames Estuary (United Kingdom)	
		30.6	North Portuguese coast	Lolić et al., 2015
	<22 - 550		Marine surface waters (Ireland)	McEneff et al., 2014
	1 - 22		Estuary of Plentzia (Spain)	Mijangos et al., 2018
	2 - 35		Estuary of Urdaibai (Spain)	
	1 - 650		Bilbao estuary (Spain)	
	<0,12		North Scotland (United Kingdom)	Nebot et al., 2007
	<7.4 - 19.4		Santos Bay (Brasil)	Pereira et al., 2016
	1.6 - 51.8	14.84	Tejo Estuary (Portugal)	Reis-Santos et al., 2018
	0.819 - 11		Jiulong Estuary (China)	Sun et al., 2016
	<8 - 195		United Kingdom estuaries (Belfast Lough, Tyne, Tees, Mersey, Thames)	Thomas and Hilton, 2004
	~1500		Cortiou rocky inlet, Marseilles (France)	Togola and Budzinski, 2008
	6.2		Elbe estuary (Germany)	Weigel et al, 2002
	nd		Marine waters (North Sea)	
17β-estradiol (E2)	<LOD - 75.8	21.1	Jiulong Estuary (China)	Ashfaq et al., 2019
	<0.15 - 1.36	0.2	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	3.1 - 21.4		Medway Estuary (Kent, UK)	Hibberd et al., 2009
	<6.09		Puget Sound, Washington (USA)	Meador et al., 2016
	<0.25		Scheldt Estuary (Belgium-The	Noppe et al., 2007

Substance	Range	Mean	Location	Reference
			Netherlands)	
	<7		Duoro Estuary (Portugal)	Ribeiro et al., 2009
	nd		Yangtze River Estuary and East China Sea (China)	Shi et al., 2014
	<1 - 8.7		Manko tidal flat (East China Sea)	Tashiro et al., 2003
	nd		Rio de la Plata Estuary (Argentina)	Valdés et al., 2015
	<0.1 - 3.7		South China Sea (China)	Zhang et al., 2014
17α-ethinylestradiol (EE2)	5.6 - 63.8		Honfleur/Authie estuaries (France)	Amiard et al., 2009
	<LOD - 9.22	0.523	Jiulong Estuary (China)	Ashfaq et al., 2019
	<0.025 - 0.18		Litlle River Estuary (Australia)	Ferguson et al., 2013
	<0.34 - 2.88	0.5	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	<0.27 - 1.5		Medway Estuary (Kent, UK)	Hibberd et al., 2009
	<6.05		Puget Sound, Washington (USA)	Meador et al., 2016
	<0.25		Scheldt estuary (Belgium-The Netherlands)	Noppe et al., 2007
	<18 - 101.9		Duoro Estuary (Portugal)	Ribeiro et al., 2009
	nd - 0.11		Yangtze River Estuari and East China Sea (China)	Shi et al., 2014
	nd		Rio de la Plata Estuary (Argentina)	Valdés et al., 2015
	<0.3 - 3.99		South China Sea (China)	Zhang et al., 2014
Estrone (E1)	<0.8 - 11		Singapore (Indian Ocean)	Bayen et al., 2013
	<0.08 - 6.9	1.8	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	<0.2 - 2.3		Chesapeake Bay (USA)	He et al. 2019
	0.6 - 14.3		Medway Estuary (Kent, UK)	Hibberd et al., 2009
	<4.33		Puget Sound, Washington (USA)	Meador et al., 2016
	<0.25 - 10		Scheldt estuary (Belgium-The Netherlands)	Noope et al., 2007
	<15 - 112.9		Duoro Estuary (Portugal)	Ribeiro et al., 2009
	nd - 1.43		Yangtze River Estuary and East China Sea (China)	Shi et al., 2014
	2.2 - 53		Manko tidal flat (East China Sea)	Tashiro et al., 2003
	nd		Rio de la Plata Estuary (Argentina)	Valdés et al., 2015
	<0.05 - 11.38		South China Sea (China)	Zhang et al., 2014
2,6-Ditert-butyl-4-methylphenol (BTH)	<9.73 - 28.7	19.2	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
2- Ethylhexyl 4-methoxycinnamate (EHMC)	<1.6 - 756.4		Water samples in beaches, Gran Canaria (Spain)	Sánchez Rodríguez et al. 2015
	nd		Rostock coastline, Baltic Sea (Germany)	Fisch et al., 2017
	<0.16		Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	nd - 115		Chesapeake Bay (USA)	He et al. 2019

Substance	Range	Mean	Location	Reference
	2.11 - 70.5	16.8	Water samples in beaches (South Korea)	Kim et al., 2017
	nd - 143		Okinawa Island (Japan)	Tashiro and Kameda, 2013
	25 - 66		Arctic Ocean and Chukchi Sea	Tsui et al., 2014b
	<0.41 - 79		Chaozhou (China)	
	89 - 4043		Hong Kong (China)	
	91 - 138		Los Angeles (USA)	
	89 - 150		New York (USA)	
	52 - 78		Shantou (China)	
	46 - 95		Tokyo Bay (Japan)	
	3.84 - 55.6	21.5	South China Sea coastal region (China)	Tsui et al., 2019
Erythromycin	<LOD - 0.3		Gulf of Cadiz (Spain)	Biel- Maeso et al., 2018
	nd - 2.3		Cadiz Bay (Spain)	
	<0.05 - 16.6		Hailing Island (China)	Chen et al. 2015
	nd - 1.7	0.5	Yellow Sea (China)	Du et al. 2017
	nd		Gola de Ter beach, Girona (Spain)	Gros et al., 2012
	9.5 - 486		Victoria Harbour and Hong Kong coast (China)	Gulkowska et al., 2007
	<0.18 - 3.21	0.7	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	<0.259 - 1.02		Coastal and fish farm areas, South Sea (Korea)	Kim et al., 2017
	nd - 57.07		East China Sea (China)	Li et al., 2020
	<3.18 - 122		Pearl River Estuary (China)	Liang et al., 2013
	<2.49 - 3.3		Puget Sound, Washington (USA)	Meador et al., 2016
	4.7 - 1900		Victoria Harbour and Hong Kong coast (China)	Minh et al., 2009
	<0.3 - 78.4		Mar Menor (Spain)	Moreno-González et a., 2015
	<0,07		North Scotland (United Kingdom)	Nebot et al., 2007
	nd		Tejo Estuary (Portugal)	Reis-Santos et al., 2018
	nd		United Kingdom estuaries (Tyne, Tees, Mersey, Thames)	Thomas and Hilton, 2004
	<2 - 5.2		Victoria Harbour (China)	Xu et al., 2007a
	<0.17 - 45.4		Yangzte Estuary (China)	Yan et al., 2013
	0.9 - 8.5	2.6	Laizhou Bay (China)	Zhang et al., 2012
	0.13 - 6.7	0.69	Bohai Sea and the Yellow Sea (China)	Zhang et al., 2013a
	<0.23 - 25.2		Yellow Sea (China)	Zhang et al., 2013b
	1.1 - 50.9		Beibu Gukf (China)	Zheng et al., 2012
	<LOQ - 150		Bohai Sea (China)	Zou et al. 2011
Clarithromycin	<1 - 1.5		Saronic Gulf (Greece)	Alygizakis et al., 2016
	0.2 - 9.4		Cadiz Bay (Spain)	Biel- Maeso et al., 2018
	nd		Gulf of Cadiz (Spain)	
	<0.08		Hailing Island (China)	Chen et al. 2015
	nd - 0.89	3	Yellow Sea (China)	Du et al. 2017
	17		Gola de Ter beach, Girona (Spain)	Gros et al., 2012

Substance	Range	Mean	Location	Reference
	<0.06 - 13.5	4.3	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	nd - 9.7		Chesapeake Bay (USA)	He et al. 2019
	nd - 6.38		East China Sea (China)	Li et al., 2020
	<1.62		Puget Sound, Washington (USA)	Meador et al., 2016
	<2 - 9.6		Mar Menor (Spain)	Moreno-González et a., 2015
	nd - 0.82	0.19	Laizhou Bay (China)	Zhang et al., 2012
	nd - 0.51	0.07	Bohai Sea and the Yellow Sea (China)	Zhang et al., 2013a
	nd - 2.6		Yellow Sea (China)	Zhang et al., 2013b
	nd - 0.72		Beibu Gulf (China)	Zheng et al., 2012
Azithromycin	nd - 17.8		Cadiz Bay (Spain)	Biel- Maeso et al., 2018
	nd - 1.2		Gulf of Cadiz (Spain)	
	nd - 138.9	4.8	Yellow Sea (China)	Du et al. 2017
	<0.6		Gola de Ter beach, Girona (Spain)	Gros et al., 2012
	<0.24 - 22.6	7.6	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	nd - 2.7		Chesapeake Bay (USA)	He et al. 2019
	nd - 1.52		East China Sea (China)	Li et al., 2020
	<2.04 - 2.2		Puget Sound, Washington (USA)	Meador et al., 2016
	<11.2 - 163.8		Mar Menor (Spain)	Moreno-González et a., 2015
	<LOQ		Tejo Estuary (Portugal)	Reis-Santos et al., 2018
	nd - 1.2	0.14	Laizhou Bay (China)	Zhang et al., 2012
	nd - 0.39	0.06	Bohai Sea and the Yellow Sea (China)	Zhang et al., 2013a
	nd - 2.5		Yellow Sea (China)	Zhang et al., 2013b
	nd - 0.64		Beibu Gukf (China)	Zheng et al., 2012
Ciprofloxacin	nd - 211.7		Cadiz Bay (Spain)	Biel- Maeso et al., 2018
	nd		Gulf of Cadiz (Spain)	
	<0.04		Open sea waters of the Western Mediterranean Sea	Brumovský et al., 2017
	<1.05 - 186		Hailing Island (China)	Chen et al. 2015
	nd		Yellow Sea (China)	Du et al. 2017
	nd		Gola de Ter beach, Girona (Spain)	Gros et al., 2012
	<0.082 - 1.52		Coastal and fish farm areas, South Sea (Korea)	Kim et al., 2017
	243 - 1230		Coastline of Bohai Sea, China Sea, Yellow Sea (China)	Lu et al., 2018
	<6.49 - 7.3		Puget Sound, Washington (USA)	Meador et al., 2016
	nd - 17		Estuary of Urdaibai (Spain)	Mijangos et al., 2018
	nd - 540		Bilbao estuary (Spain)	
	nd		Estuary of Plentzia (Spain)	
	1.56 - 7.14	3.91	Tejo Estuary (Portugal)	Reis-Santos et al., 2018
	<0.41 - 2.27		Yangzte Estuary (China)	Yan et al., 2013
	<3.3 - 66.1	30.8	Laizhou Bay (China)	Zhang et al., 2012
	<LOQ - 390		Bohai Sea (China)	Zou et al. 2011
Methiocarb	nd		Arade Estuary (Portugal)	Gonzalez-Rey et al., 2015
	<0.23 - 1.49	0.3	Superficial waters (sites 11-14),	Gusmaroli et al., 2019

Substance	Range	Mean	Location	Reference
			Ebro Delta (Spain)	
Imidacloprid	1 - 8		Arade Estuary (Portugal)	Gonzalez-Rey et al., 2015
	<0.17 - 182	24.1	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	0.3 - 10		Belgian part of the North Sea	Vanryckeghem, et al. 2019
Thiacloprid	<0.06 - 3.54	1.0	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	0.34 - 65		Belgian part of the North Sea	Vanryckeghem, et al. 2019
Thiamethoxam	nd		Arade Estuary (Portugal)	Gonzalez-Rey et al., 2015
	<0.18 - 1.62	0.5	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	<1 - 54		Belgian part of the North Sea	Vanryckeghem, et al. 2019
Clothianidin	<0.16 - 9.89	2.3	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
	0.17 - 3.1		Belgian part of the North Sea	Vanryckeghem, et al. 2019
Acetamiprid	<0.35 - 57.8	5.1	Superficial waters (sites 11-14), Ebro Delta (Spain)	Gusmaroli et al., 2019
Oxadiazon	15.4 - 592	222.5		
Triallate	<0.12 - 1.85	0.4		

Table S6. Concentrations ($ng \cdot L^{-1}$) of Watch List substances reported in WWTP effluents from different regions.

Substance	Range	Mean	Location	Reference
Diclofenac		927	Psittalia WWTP (Greece)	Alygizakis et al., 2016
	5.68 - 31.6	26	Xiamen WWTP (China)	Ashfaq et al., 2017
	<20 - 2349	599	Sewage treatment works in UK	Ashton et al., 2004
	172 - 277		Jerez de la Frontera WWTP (Spain)	Biel- Maeso et al., 2018
	761 - 987	874	Psittalia WWTP (Greece)	Dasenaki & Thomaidis, 2015
	100 - 131		Bali WWTP (Taiwan)	Fang et al., 2012
	15087		Wastewater discharge in Hope Bay (Antartica Peninsula Region)	González-Alonso et al., 2017
	184 - 376		WWTP in Girona (Spain)	Gros et al., 2012
	200 - 614	440	WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	8.8 - 127	40	WWTPs in South Korea	Kim et al., 2007
			Stony Brook WWTP, New York (USA)	Lara-Martin et al., 2014
	<62 - 748	194	WWTPs in Ontario (Canada)	Lishman et al., 2006
	310 - 2630		WWTPs in Ireland	McEneff et al., 2014
	8 - 683		Gorliz WWTP (Spain)	Mijangos et al., 2018
	127 - 1911		Galindo WWTP (Spain)	
	10 - 1932		Gernika WWTP (Spain)	
	97.35		WWTP in North Scotland (United Kingdom)	Nebot et al., 2007
		58-599	WTTPs in UK	Petrie et al., 2015
	6 - 431	220	Alcalá de Henares WWTP (Spain)	Rosal et al., 2010
	210.7 - 486.4		WWTPs in Hérault watershed (France)	Togola and Budzinski, 2008
17β-estradiol (E2)	0.6 - 5.8		WWTPs in China	Ben et al., 2018
	<0.46		WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	0.3 - 2.5		Tokio and Ibaraki WWTPs (Japan)	Isobe et al., 2003
	<1		WWTPs in South Korea	Kim et al., 2007
	<5		South Queensland (Australia) and Canterbury (New Zealand WWTPs	Leusch et al., 2006
	<6.09		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016
		0.4 - 1.3	WTTPs in UK	Petrie et al., 2015
	122 - 631	307.7	WWTPs in Pampas region (Argentina)	Valdés et al., 2015
	nd - 8.4	1.7	Gaobeidian WWTP, Beijing (China)	Zhou et al., 2012
17α-ethinylestradiol (EE2)	nd		WWTPs in China	Ben et al., 2018
	0.27 - 0.35		Western WWTP, Melborune (Australia)	Ferguson et al., 2013
	<2.28		WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	<0.2		Tokio and Ibaraki WWTPs (Japan)	Isobe et al., 2003
	<1 - 1.3		WWTPs in South Korea	Kim et al., 2007
	<6.05		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016

Substance	Range	Mean	Location	Reference
		0.2 - 0.47	WTTPs in UK	Petrie et al., 2015
	65 - 187	110.7	WWTPs in Pampas region (Argentina)	Valdés et al., 2015
	nd - 5.1	2	Gaobeidian WWTP, Beijing (China)	Zhou et al., 2012
Estrone (E1)	0.1 - 15.3		WWTPs in China	Ben et al., 2018
	8.8 - 10.1	9	WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	2.5 - 34		Tokio and Ibaraki WWTPs (Japan)	Isobe et al., 2003
	<1 - 36	14	WWTPs in South Korea	Kim et al., 2007
	17.1 - 71		Eysines WWTP (near Bordeaux, France)	Labadie and Budzinski, 2005
	<1 - 27		South Queensland (Australia) and Canterbury (New Zealand WWTPs	Leusch et al., 2006
	4.5 - 58		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016
		4.3 - 12	WTTPs in UK	Petrie et al., 2015
	nd		WWTPs in Pampas region (Argentina)	Valdés et al., 2015
	0.2 - 74.2	12.7	Gaobeidian WWTP, Beijing (China)	Zhou et al., 2012
2,6-Ditert-butyl-4-methylphenol (BTH)	610		Källby WWTP (Sweden)	Bendz et al., 2005
	22 - 258	132	WWTPs in Germany	Fries and Püttman, 2004
	<12.3		WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	245 - 290	262	WWTPs in China	Liu et al., 2015
	<268 - 520		WWTPs in Canada	Lu et al., 2019
	<10 - 440		WWTPs, county of Jönköping (Sweden)	Remberger et al., 2004
	<200 - 251		WWTP in Santiago de Compostela (Spain)	Rodil et al., 2010
	<1 - 1480		WWTPs in Albany area, New York (USA)	Wang and Kannan, 2018
2- Ethylhexyl 4-methoxycinnamate (EHMC)	143 - 168	151	WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	2 - 13	6	WWTPs in South Korea	Kim et al., 2017
	<0.85 - 505.2		WWTPs in Hong Kong (China)	Tsui et al., 2014a
Erythromycin	<10 - 1842	109	Sewage treatment works in UK	Ashton et al., 2004
	0.1 - 473.6		WWTPs in China	Ben et al., 2018
	33 - 36		Jerez de la Frontera WWTP (Spain)	Biel- Maeso et al., 2018
	<155		Psittalia WWTP (Greece)	Dasenaki & Thomaidis, 2015
	14 - 17		WWTP in Girona (Spain)	Gros et al., 2012
	29.7 - 53.7	42	WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	<1 - 294	130	WWTPs in South Korea	Kim et al., 2007
	87 - 138		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016
	246 - 4330		WWTPs in Victoria Harbour (China)	Minh et al., 2009
	186		WWTP in North Scotland (UK)	Nebot et al., 2007
		109-1385	WTTPs in UK	Petrie et al., 2015
	<99 - 760	331	Alcalá de Henares WWTP (Spain)	Rosal et al., 2010
		62-2054	WWTPs in Pearl River Delta (China)	Xu et al., 2007b

Substance	Range	Mean	Location	Reference
Clarithromycin	1.3 - 214.6		WWTPs in China	Ben et al., 2018
	4 - 5		Jerez de la Frontera WWTP (Spain)	Biel- Maeso et al., 2018
	900 - 1476	1153	Psittalia WWTP (Greece)	Dasenaki & Thomaidis, 2015
	138		Wastewater discharge in Hope Bay (Antartica Peninsula Region)	González-Alonso et al., 2017
	19 - 192		WWTP in Girona (Spain)	Gros et al., 2012
	24 - 478	138	WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
			Stony Brook WWTP, New York (USA)	Lara-Martin et al., 2014
	52 - 181		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016
Azithromycin	1.4 - 795.1		WWTPs in China	Ben et al., 2018
	nd		Jerez de la Frontera WWTP (Spain)	Biel- Maeso et al., 2018
	123 - 245	171	Psittalia WWTP (Greece)	Dasenaki & Thomaidis, 2015
	31 - 170		WWTP in Girona (Spain)	Gros et al., 2012
	367 - 3474	1714	WWTP in Ebro Delta region (Spain)	Gusmaroli et al., 2019
	261 - 629		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016
Ciprofloxacin	6.78 - 11.5	8.71	Xiamen WWTP China)	Ashfaq et al., 2017
	0.6 - 116		WWTPs in China	Ben et al., 2018
	553 - 564		Jerez de la Frontera WWTP (Spain)	Biel- Maeso et al., 2018
	523 - 1437	1116	Psittalia WWTP (Greece)	Dasenaki & Thomaidis, 2015
	104 - 245		WWTP in Girona (Spain)	Gros et al., 2012
			Stony Brook WWTP, New York (USA)	Lara-Martin et al., 2014
	158 - 192		Bremerton West and Tacoma Central WWTPs, Washington (USA)	Meador et al., 2016
	58 - 3194		Gorliz WWTP	Mijangos et al., 2018
	155 - 3803		Galindo WWTP	
	nd - 4719		Gernika WWTP	
	<10 - 5692	2378	Alcalá de Henares WWTP (Spain)	Rosal et al., 2010
Methiocarb	<0.55		WWTPs in Ebro Delta region (Spain)	Gusmaroli et al., 2019
Imidacloprid	17 - 221	92		
Thiacloprid	<0.61			
Thiamethoxam	<0.70			
Clothianidin	<0.77 - 25.4			
Acetamiprid	<0.59			
Oxadiazon	<0.17 - 8.7			
Triallate	<0.28			

Table S7. Mean concentration ($ng \cdot L^{-1}$) of selected Watch List substances in wastewater samples collected from May 2017 to March 2019, and estimated total ($m^3 \cdot year^{-1}$) and normalized by the population equivalents ($mg \cdot kg^{-1} \cdot p.e.^{-1}$) mass loads.

	WWTP	Diclofenac	Clarithromycin	Azithromycin	Ciprofloxacin	Imidacloprid
Mean ($ng \cdot L^{-1}$)	Galindo	103.5	150.4	371.7	258.3	50.5
	Gernika	51.3	82.5	185.9	58.6	14.3
	Loiola (Ulia)	43.3	34.3	190	4.5	28.7
Total mass load ($kg \cdot year^{-1}$)	Galindo	8.65	12.56	31.05	21.58	4.22
	Gernika	0.11	0.18	0.40	0.13	0.03
	Loiola (Ulia)	1.73	1.37	7.60	0.18	1.15
Normalised mass load ($mg \cdot year^{-1} \cdot p.e.^{-1}$)	Galindo	7.14	10.37	25.63	17.81	3.48
	Gernika	6.00	9.65	21.74	6.85	1.67
	Loiola (Ulia)	3.13	2.48	13.74	0.33	2.08

Notes:

Annual flow rate in 2019 (provided by the WWTPs):

(i) 83.54 $Hm^3 \cdot year^{-1}$ in Galindo;

(ii) 2.17 $Hm^3 \cdot year^{-1}$ in Gernika (raw water flow that will remain once the WWTP is out of service and connected to the new WWTP); and

(iii) 39.99 ($Hm^3 \cdot year^{-1}$) in Loiola (Ulia).

Population equivalent served by the WWTPs:

(i) 1,211,500 p.e. in Galindo;

(ii) 18,600 p.e. in Gernika; and

(iii) 553,000 p.e.in Loiola (Ulia).

Total mass load was calculated using Eq (1):

$$Total\ mass\ load\ (kg \cdot year^{-1}) = \frac{Concentration\ (ng \cdot L^{-1})\ x\ Flow\ rate\ (Hm^3 \cdot year^{-1})}{10^3} \quad (1)$$

Normalised mass load was calculated using Eq (2):

$$Normalised\ mass\ load\ (mg \cdot year^{-1} \cdot p.e.^{-1}) = \frac{Mass\ load\ (mg \cdot year^{-1})}{Population\ equivalents\ (p.e.)} \times 10^6 \quad (2)$$

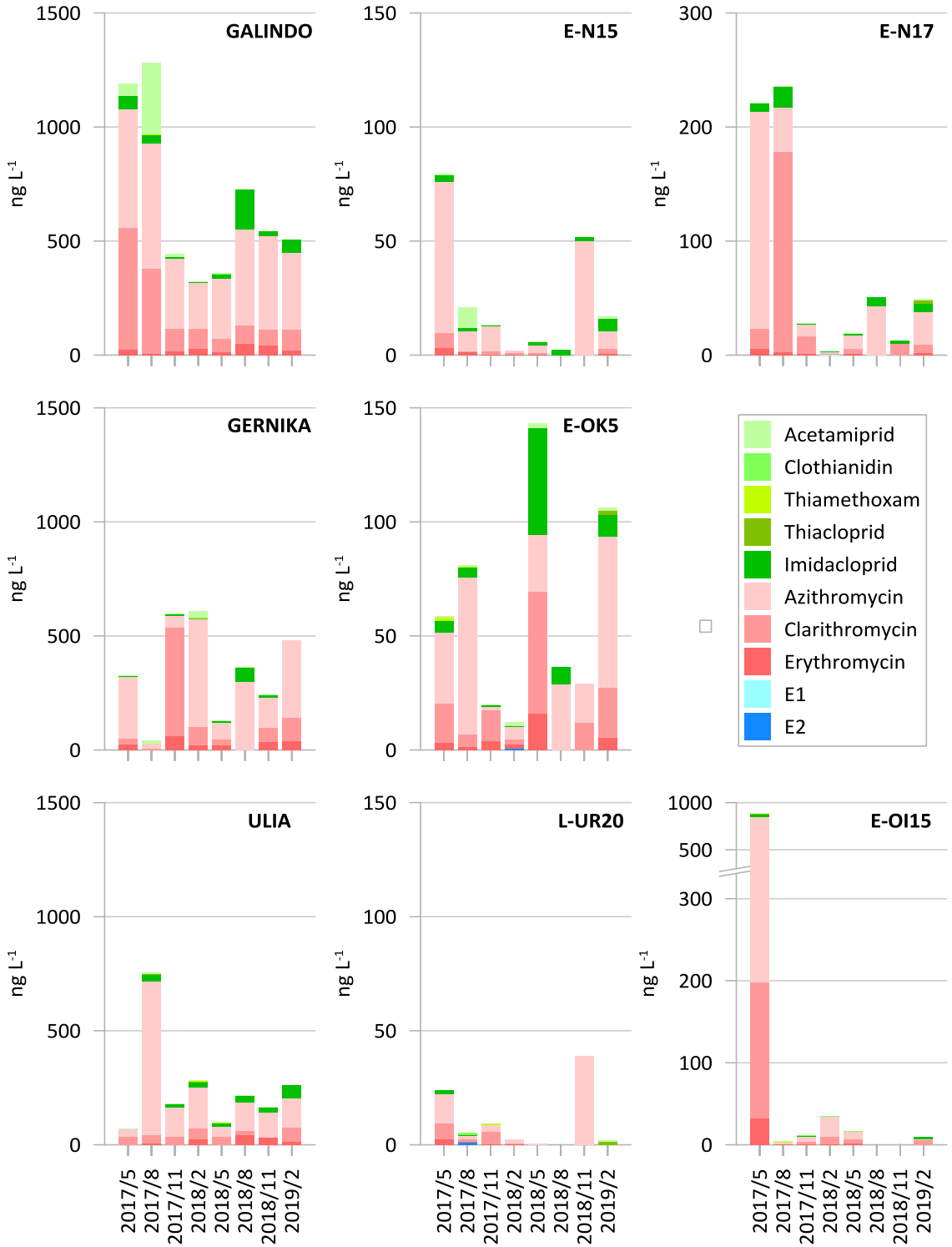

Figure S1. Concentration of the substances included in both Watch Lists, in the Basque coast, from May 2017 to March 2019. EE2 and methiocarb are not represented since their concentrations were in all cases < MQL.

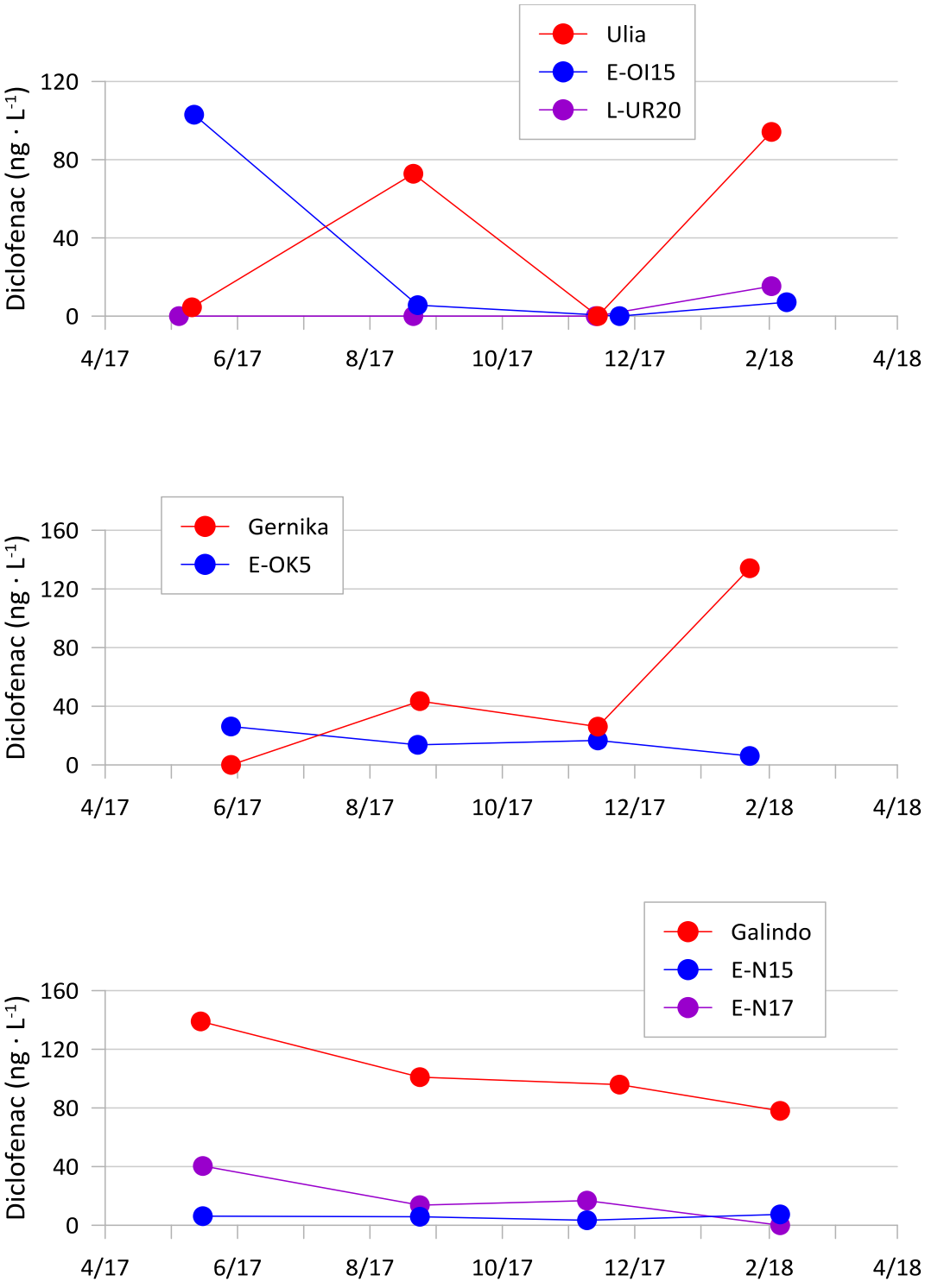

Figure S2. Temporal variability of the concentration of diclofenac in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

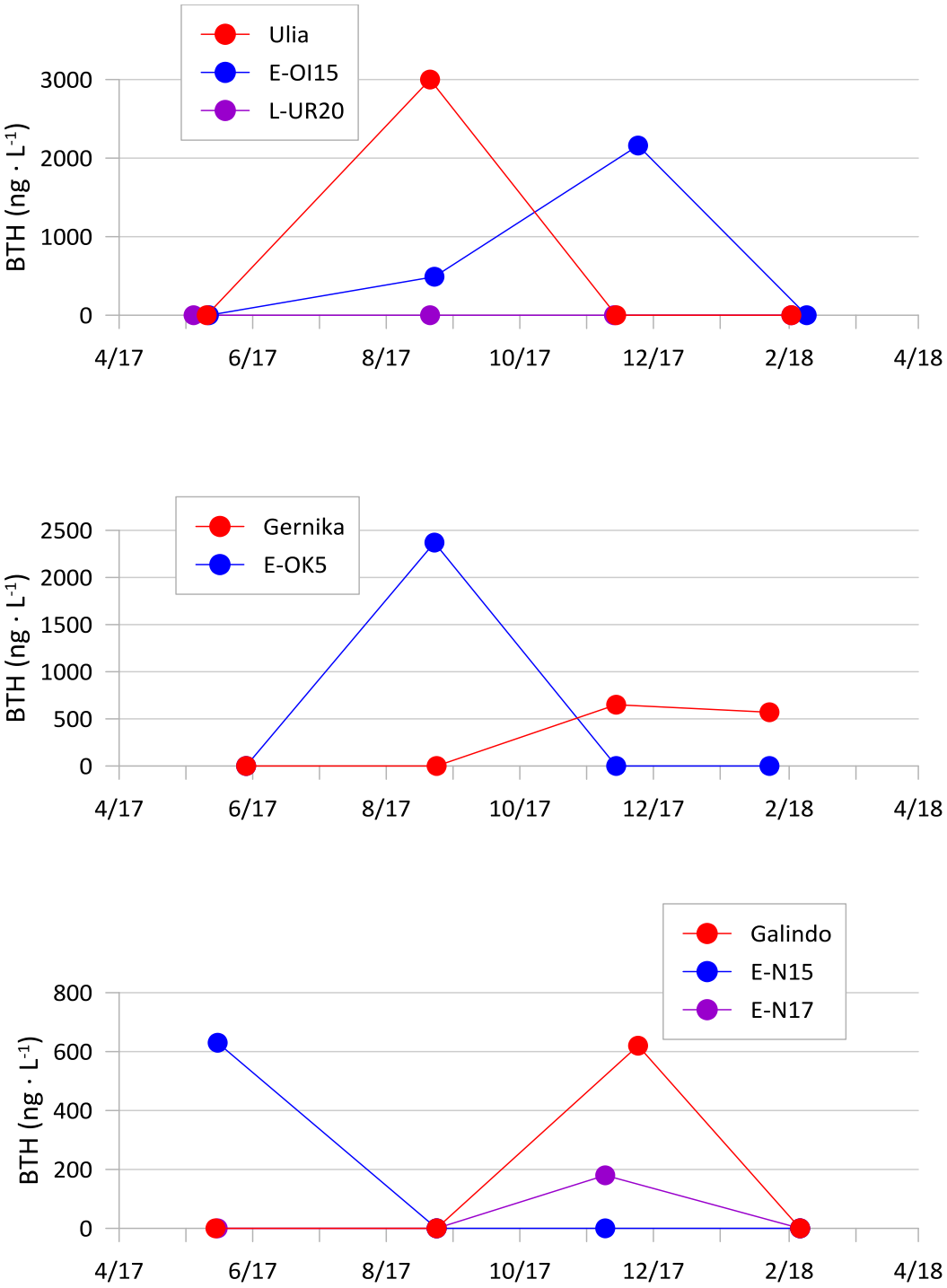

Figure S3. Temporal variability of the concentration of BTH in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

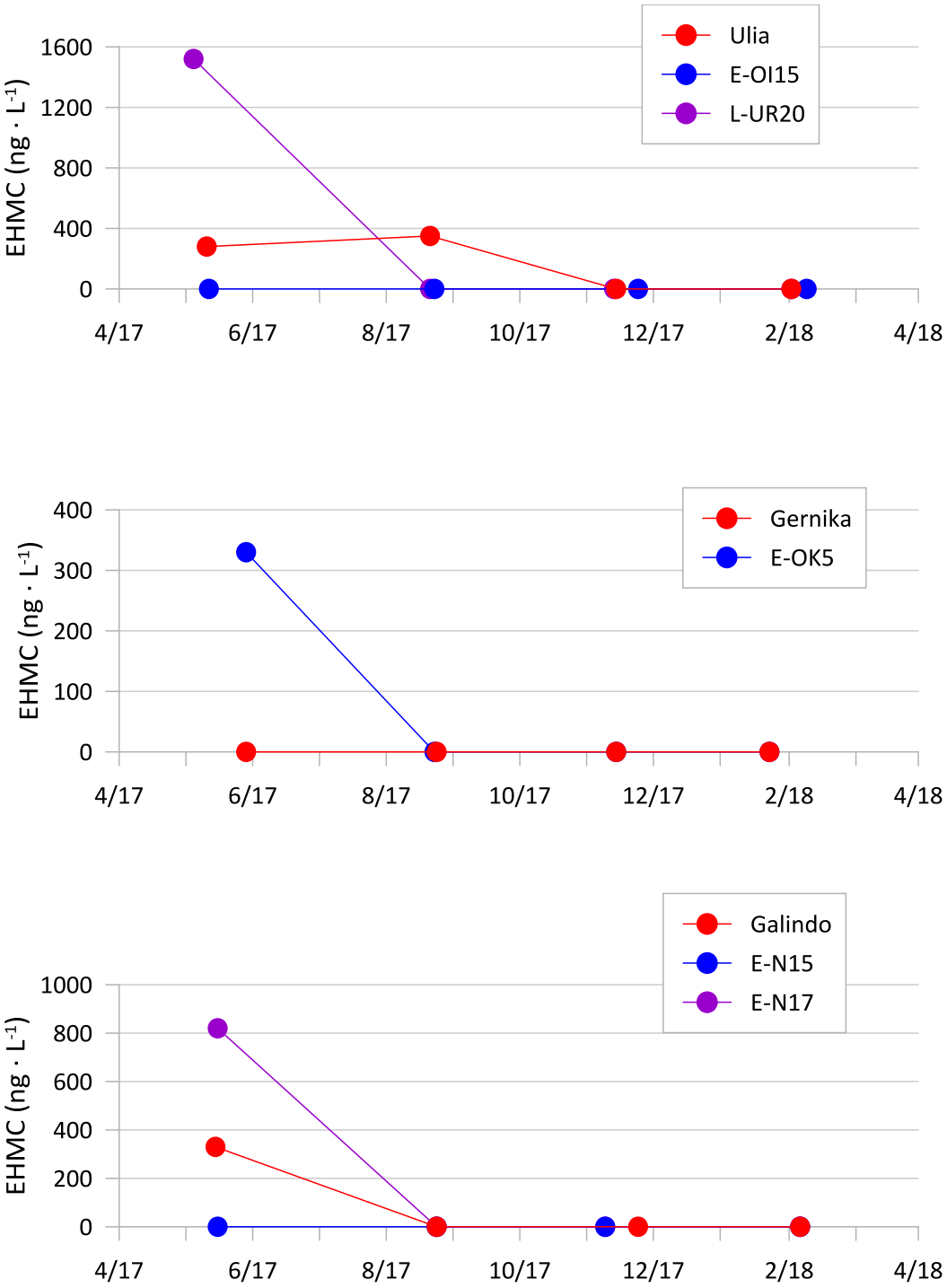

Figure S4. Temporal variability of the concentration of EHMC in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

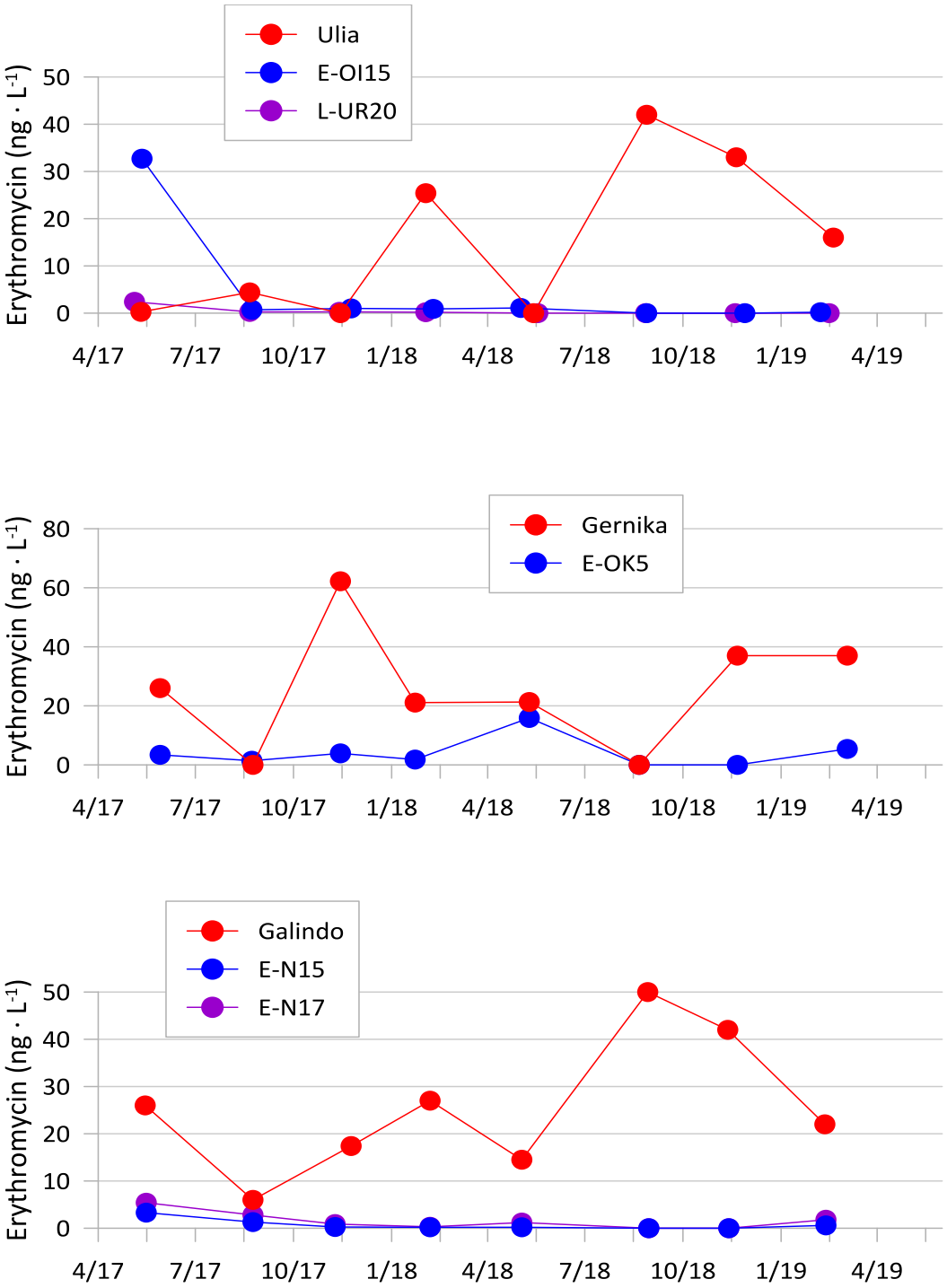

Figure S5. Temporal variability of the concentration of erythromycin in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

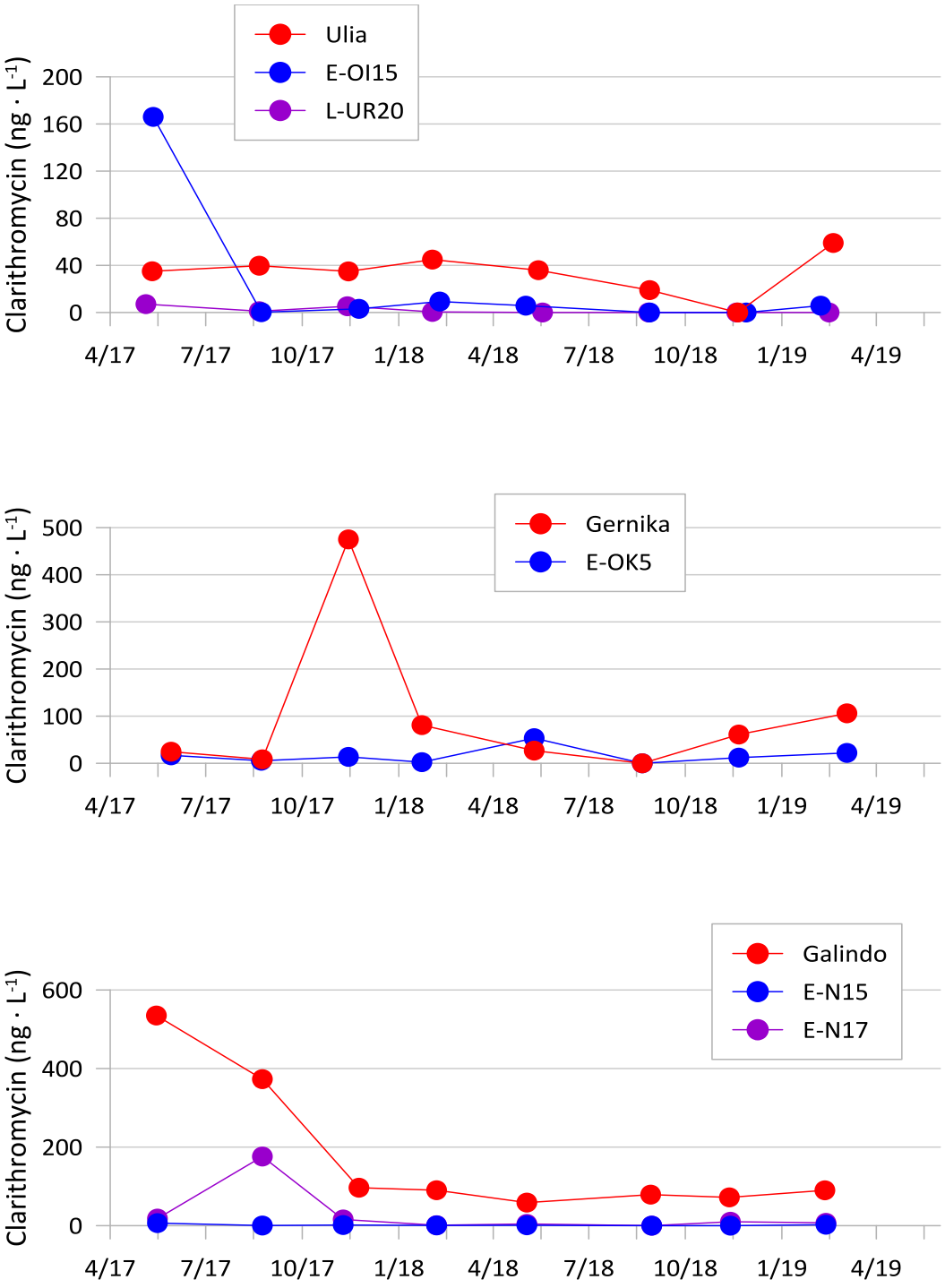

Figure S6. Temporal variability of the concentration of clarithromycin in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

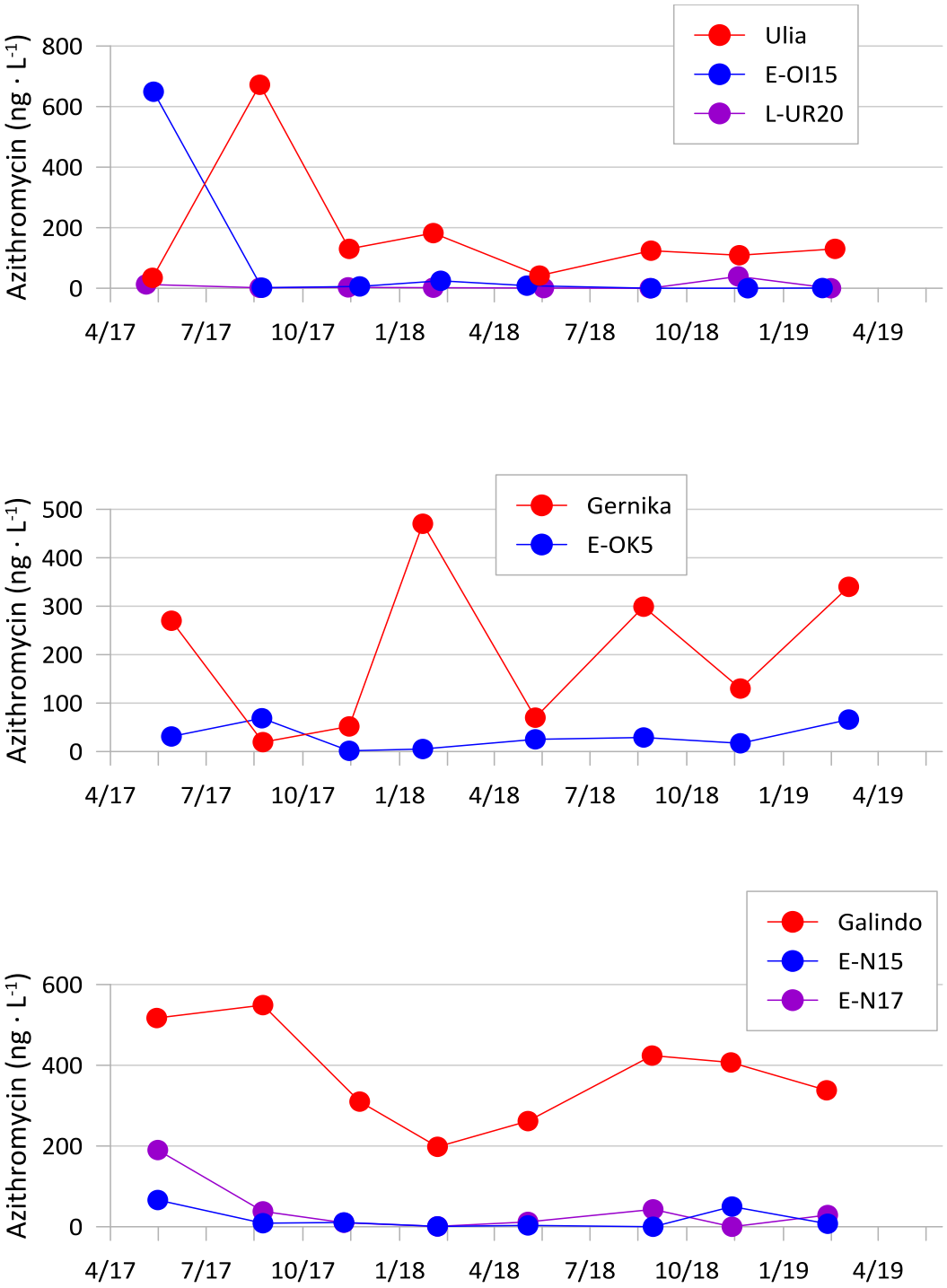

Figure S7. Temporal variability of the concentration of azithromycin in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

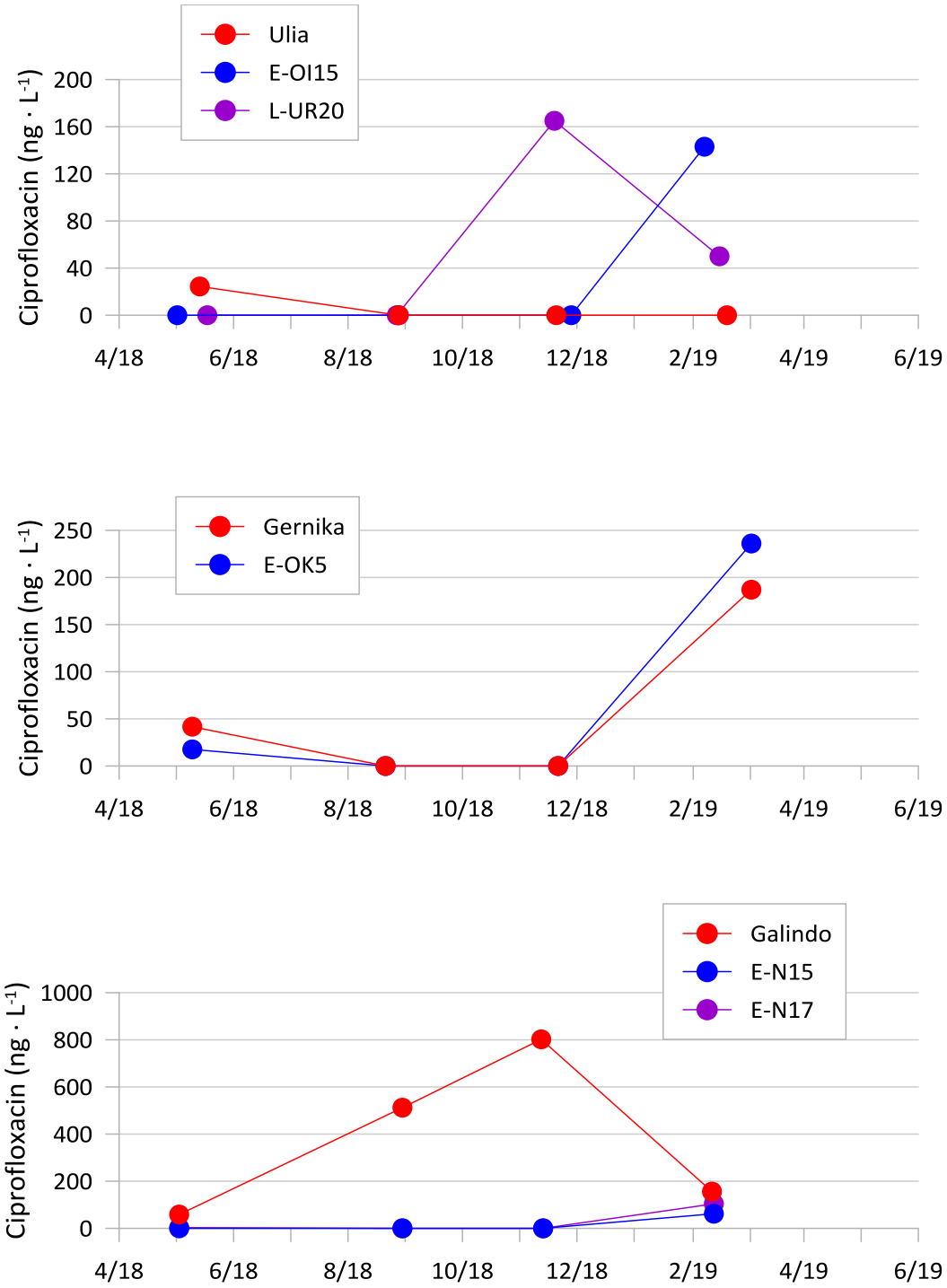

Figure S8. Temporal variability of the concentration of ciprofloxacin in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

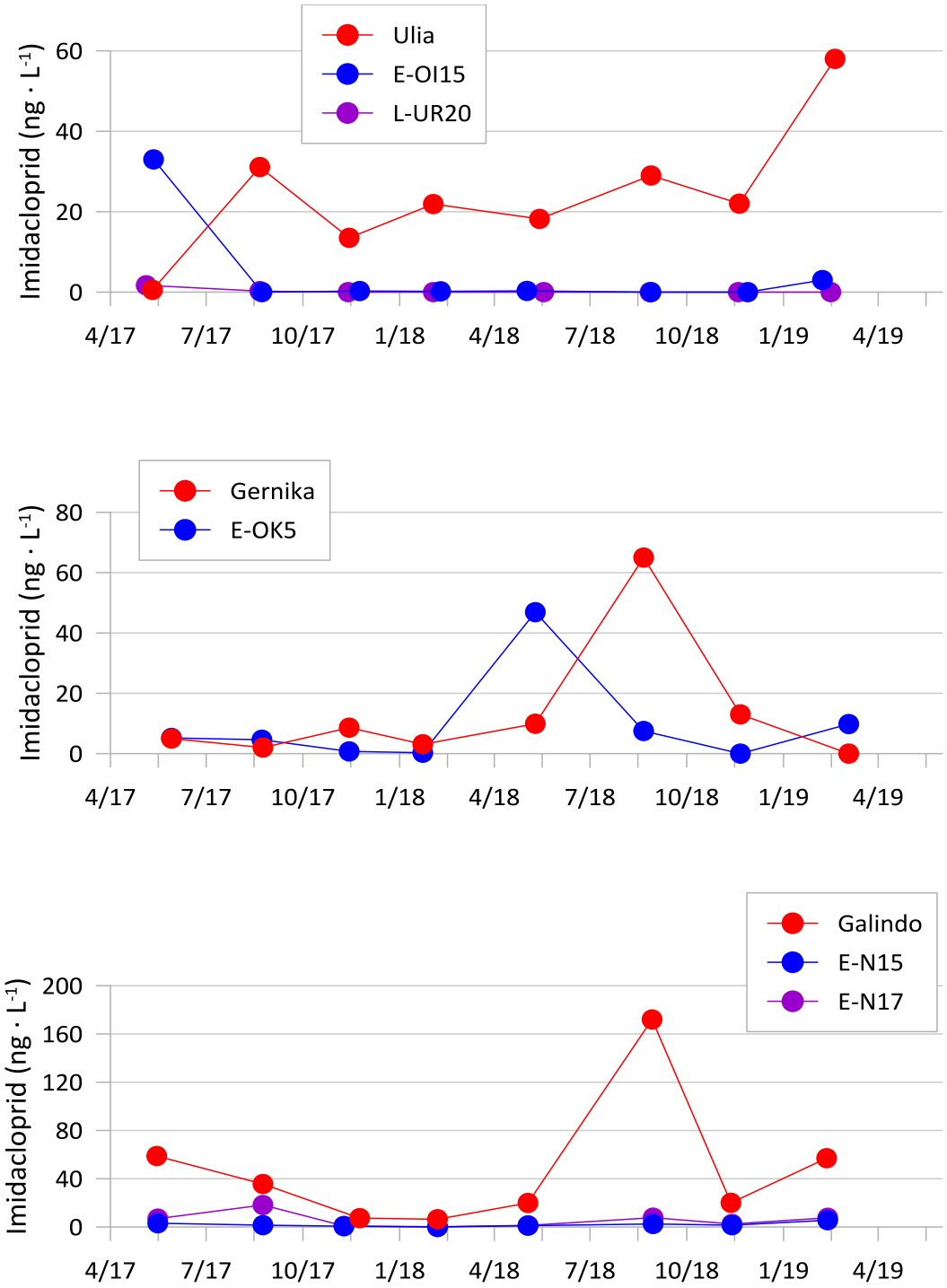

Figure S9. Temporal variability of the concentration of imidacloprid in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

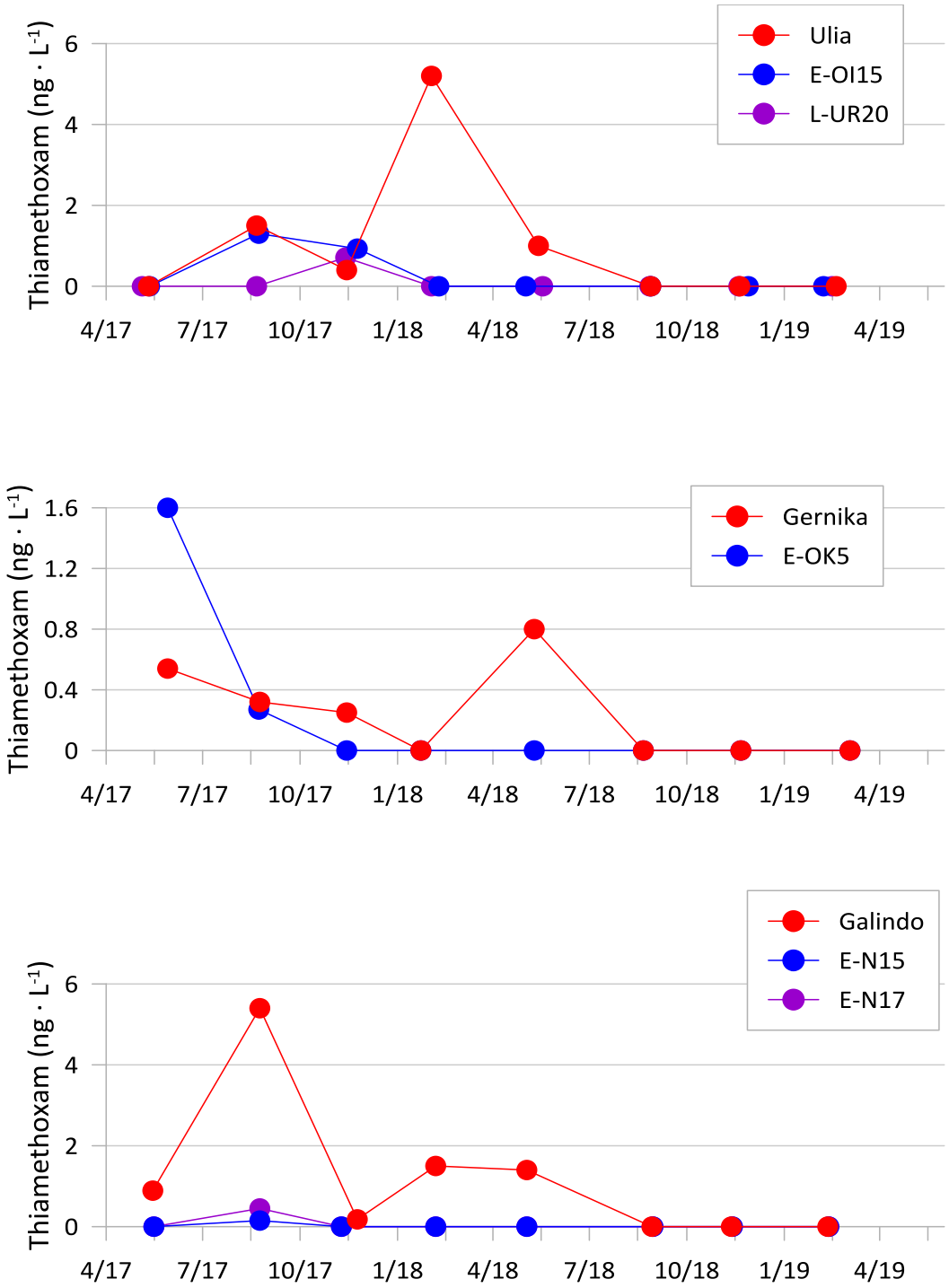

Figure S10. Temporal variability of the concentration of thiamethoxam in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

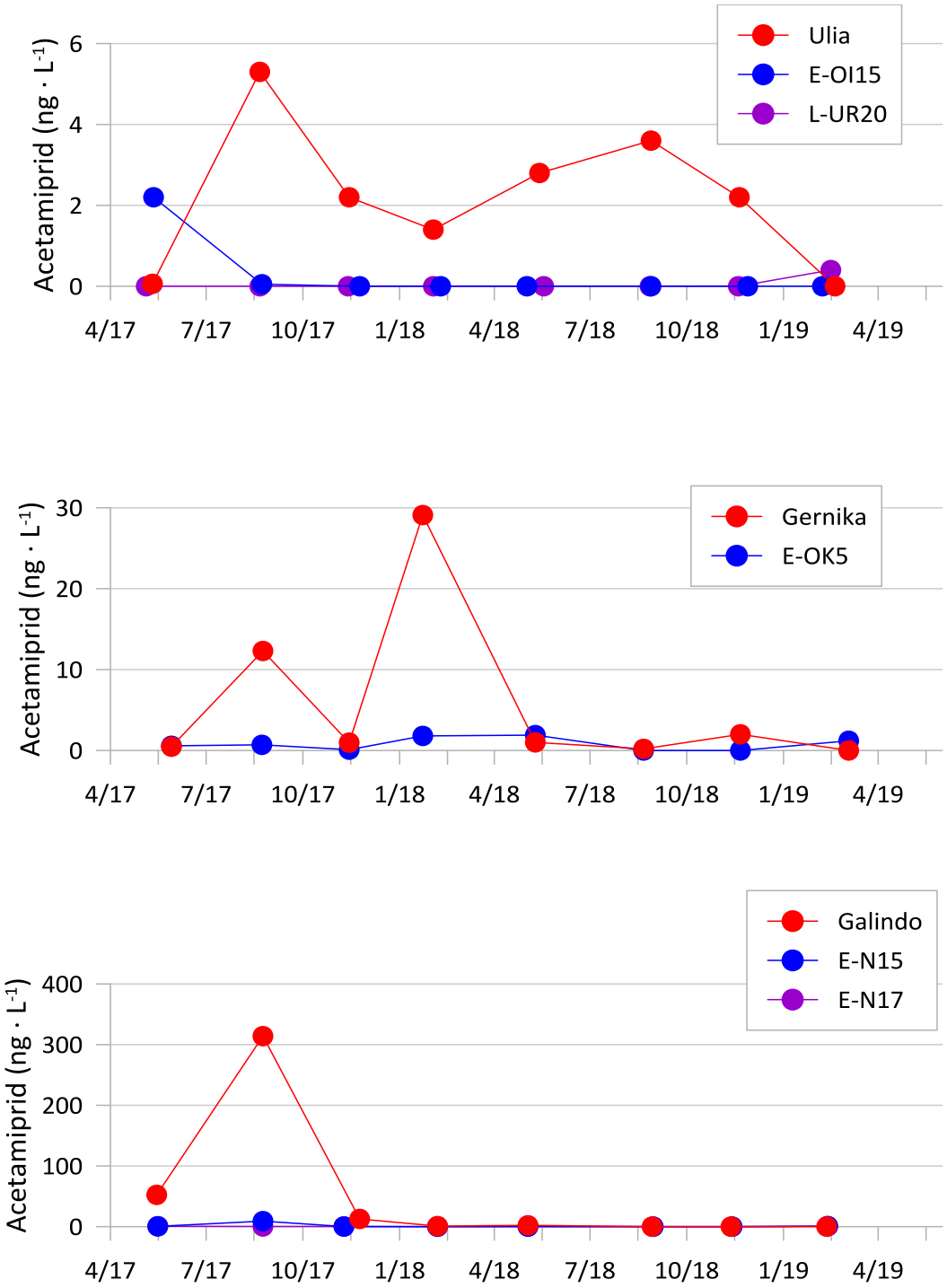

Figure S11. Temporal variability of the concentration of acetamiprid in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

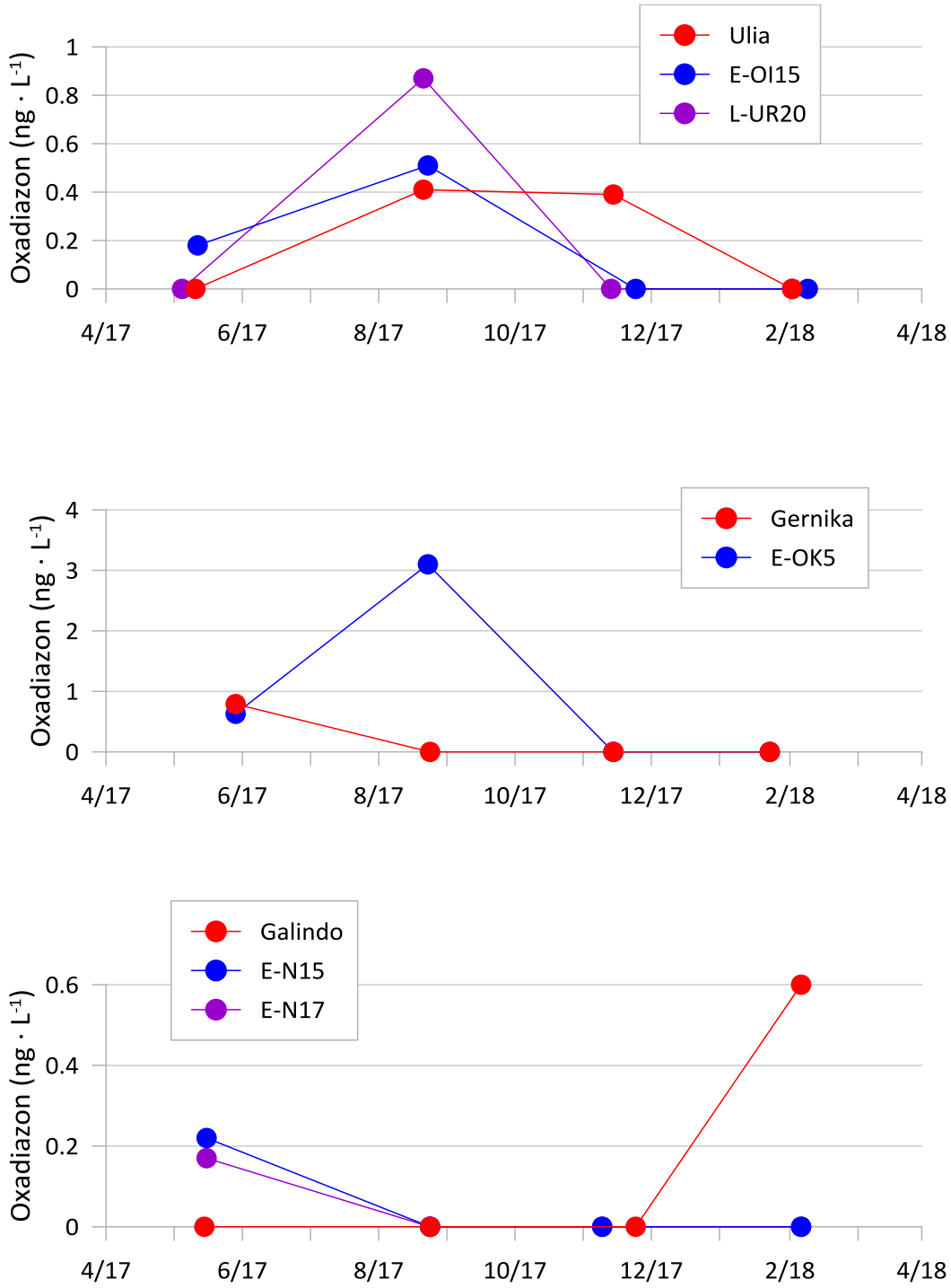

Figure S12. Temporal variability of the concentration of oxadiazon in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

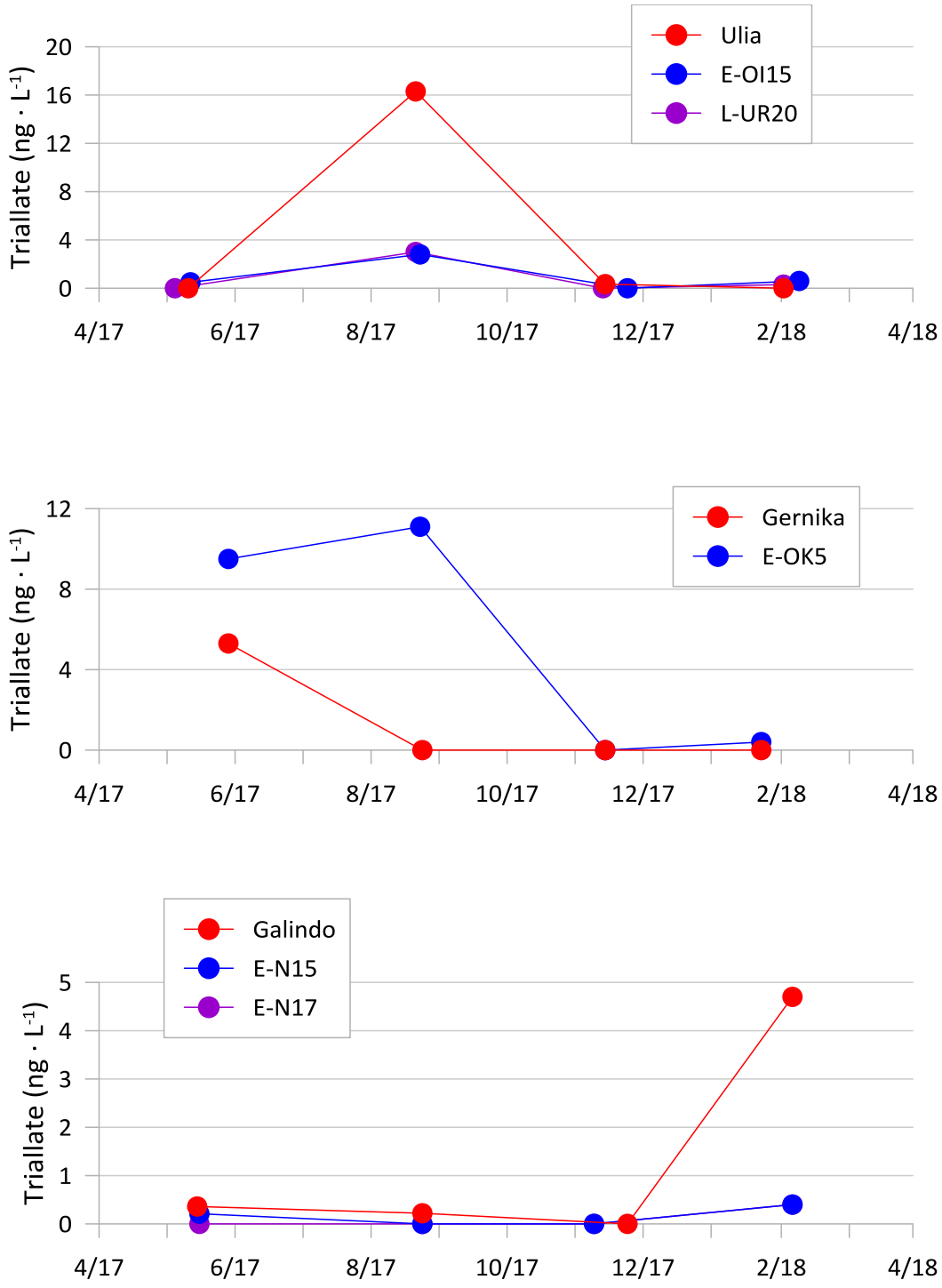

Figure S13. Temporal variability of the concentration of triallate in the Basque coast, from May 2017 to March 2019. Note: the values below the limit of quantification have been considered as zero.

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