

Country	Organization	Event No.			Duration(Start)			Duration(End)			Continuous days	Location of occurrence		Monitoring date		Causative species(*1)	Maximum density (cells·inds./mL)	Environmental parameters (*3)			Size of bloom (km ²)
		Pref. code	Year	No.	Year	Month	day	Year	Month	day		Sub-area	Spot	Date	Time			Temp. (°C)	Salinity	DO (mg/L)	
		SE	2007	1	2007	7	24	2007	7	30	7	Tongyeong	Tongyeong Dosan			<i>Akashiwo sanguinea</i>	500	22.4-24.5	32.0-33.2		
		SE	2007	2	2007	8	6	2007	9	15	42	Namhae	Namhae Mizo			<i>Cochlodinium polykrikoides</i>	32,500	23.3-29.4	28.3-32.0		50
		SE	2007	3	2007	8	9	2007	9	12	35	Tongyeong	Tongyeong Sarang Suyou-do			<i>Cochlodinium polykrikoides</i>	23,000	24.0-27.6	30.2-34.0		70
		SE	2007	4	2007	8	11	2007	9	1	29	Tongyeong	Goseong Bay			<i>Cochlodinium polykrikoides</i>	4,000	26.0-29.5	30.3-32.3		3
		SE	2007	5	2007	8	16	2007	9	15	31	Gyeongbuk-Gangwon	Pohang-wooljin			<i>Cochlodinium polykrikoides</i>	6,500				
		SE	2007	5	2007	9	3	2007	9	9	6	Tongyeong	Jinju Bay			<i>Cochlodinium polykrikoides</i>	2,000	22.1-25.6	30.1-32.8		2
		SE	2007	6	2007	10	19	2007	10	29	10	Tongyeong	Upper Sarang-do			<i>Cochlodinium polykrikoides</i>	2,130	22.5-23.8	32.8-33.2		2
		SE	2008	1	2008	8	4	2008	9	23	50	Namhae	Tongyeong Donsan			<i>Cochlodinium polykrikoides</i>	5,600	21.0-26.9	30.5-32.9		40
		SE	2008	2	2008	8	8	2008	9	22	45	Tongyeong	Namhae Mizo			<i>Cochlodinium polykrikoides</i>	2,650	22.2-27.0	29.0-32.3		60
		SE	2008	3	2008	9	16	2008	9	25	40	Tongyeong	Tongyeong Sarang Suyou-do			<i>Cochlodinium polykrikoides</i>	2,500	24.0-27.0	30.1-33.2		60
		SE	2008	4	2008	8	29	2008	9	5	7	Tongyeong	Goseong Bay			<i>Cochlodinium polykrikoides</i>	4,000	24.9-27.0	30.0-32.8		3
		SE	2008	5	2008	9	11	2008	9	20	9	Tongyeong	Jinju Bay			<i>Cochlodinium polykrikoides</i>	5,000	26.5-27.0	30.9-33.2		2
		SE	2009	1	2009	10	28	2009	11	15	18	Namhae	Gyeongnam			<i>Cochlodinium polykrikoides</i>	1,660				
		SE	2009	2	2009	1	8	2009	1	22	15	Pohang hyeonsan river estuary	Gyeongbuk-Gangwon			<i>Cryptomonas spp.</i>	13,000				
		SE	2009	3	2009	3	12	2009	3	26	15	Jeonam-Gyeongnam	Masan Bay			<i>Mesodinium rubrum</i>	5,500				
		SE	2009	4	2009	5	1	2009	5	6	6	Busan	Sahagu Gamcheon Port			<i>Alexandrium tamarense</i>	1,000				
		SE	2009	5	2009	5	26	2009	6	10	16	Gyeonggi	Shihwa lake			<i>Prorocentrum triestinum</i> <i>Heterocapsa triquetra</i> <i>Prorocentrum minimum</i>	6,500 17,000 39,000				
		SE	2009	6	2009	6	8	2009	6	20	13	Jeonam	Mokpo port			<i>Heterosigma akashiwo</i>	5,000				
		SE	2009	7	2009	7	15	2009	7	22	8	Jeonbuk-Chungnam	Chunsu Bay			<i>Chattonella antiqua</i>					
		SE	2009	8	2009	8	4	2009	8	8	5	Jeonam-Gyeongnam	Jinhae Bay			<i>Ceratium furca</i>	7,200				
		SE	2009	9	2009	8	7	2009	8	11	5	Jeonbuk-Chungnam	Gunsan Port			<i>Chattonella marina</i> <i>Mesodinium rubrum</i>	10 2,300				
		SE	2009	10	2009	8	10	2009	8	29	20	Jeonam	Deungnyang Bay			<i>Gonyaulax polygramma</i>	1,750				
		SE	2009	11	2009	8	11	2009	8	25	15	Jeonam	Jindo-Gun Jeopdo			<i>Gonyaulax polygramma</i>	1,000				
		SE	2009	12	2009	8	11	2009	8	26	16	Gyeongnam	Namhae-Tongyoung coast			<i>Gonyaulax polygramma</i>	920				
		SE	2009	13	2009	8	16	2009	8	30	15	Jeonam	Yeosu Geumodo-Goheung Narodo coast			<i>Gonyaulax polygramma</i>	2,000				
		SE	2009	14	2009	8	23	2009	9	5	14	Gyeongnam	Geoje eastern coast-Busan coast-Ulsan coast			<i>Gonyaulax polygramma</i>	10,000				

SE	2009	15	2009	8	24	2009	8	31	8	Gyeongnam	Chilchendo-Jindong Bay-Haengam Bay			<i>Scrippsiella trochoidea</i>	15,000				
SE	2009	16	2009	8	25	2009	9	1	8	Gyeongbuk	Gyeongju-Puhang coast			<i>Gonyaulax polygramma</i>	14,000				
SE	2009	17	2009	9	6	2009	9	10	5	Gyeongbuk	Pohang-Yeongdeok coast			<i>Noctiluca scintillans</i>	5,000				
SE	2009	18	2009	10	28	2009	11	1	4	Jeonam	Yeosu Dolsando coast			<i>Cochlodinium polykrikoides</i>					
SE	2009	19	2009	10	30	2009	11	15	16	Jeonam	Dolsando-Namhae-Gosung-Tongyeong coast			<i>Cochlodinium polykrikoides</i>					
SE	2009	20	2009	10	31	2009	11	5	7	Gyeongnam				<i>Gonyaulax polygramma</i>					
SE	2010	1	2010	4	12	2010	4	26	15	Gyeongnam	ChangwonMasan Bay-Jindong Bay			<i>Alexandrium tamarense</i>	3,800				
SE	2010	2	2010	6	8	2010	6	22	15	Gyeongnam	Changwon Jinhae Sokcheon Port			<i>Prorocentrum minimum</i>	50,000				
SE	2010	3	2010	6	9	2010	6	15	7	Gyeongbuk	Uleungdo coast			<i>Noctiluca scintillans</i>	500				
SE	2010	4	2010	6	30	2010	7	26	27	Gyeongnam	Namhae Gangjin Bay-Hadong Jinju Bay			<i>Heterosigma akashiwo</i>	5,400				
SE	2010	5	2010	7	19	2010	7	26	8	Jeonnam	Yeosu Gamak Bay			<i>Prorocentrum minimum</i>	2,500				
SE	2010	6	2010	7	27	2010	8	2	7	Chungnam	Chunsu Bay			<i>Skeletonema costatum</i>	5,480				
SE	2010	7	2010	8	6	2010	8	20	15	Chungnam	Seocheon-Gunsan coast			<i>Chattonella antiqua</i>	1,476				
SE	2010	8	2010	8	18	2010	8	25	8	Jeonnam	Goheung Narodo-Goyang coast			<i>Ceratium furca</i>	300				
SE	2010	9	2010	8	23	2010	8	30	8	Jeonbuk	Gunsan coast			<i>Skeletonema costatum</i>	8,000				
SE	2010	10	2010	9	10	2010	9	15	6	Gyeongnam	Pohang Yeongil Bay			<i>Noctiluca scintillans</i>	1,100				
SE	2010	11	2010	9	13	2010	9	16	4	Gyeongnam	Yongyoung Sanyang Obido coast			<i>Gymnodinium sp.</i>	240				
SE	2010	12	2010	9	15	2010	9	20	6	Gyeongnam	Tongyeong Sanyang Obido coast			<i>Cochlodinium polykrikoides</i>	150				
SE	2011	1	2011	5	26	2011	6	9	15	Gyeongnam	Geoje Irun			<i>Scrippsiella trochoidea</i>	800				
SE	2011	2	2011	5	28	2011	6	12	16	Gyeongnam	Jinhae Yongwon-western Gadeokdo			<i>Heterocapsa sp.</i>	2,300				
SE	2011	3	2011	9	7	2011	9	11	5	Busan	Gijang Daeyeon Port			<i>Prorocentrum micans</i>	2,000				
SE	2011	4	2011	9	22	2011	10	13	22	Jeonam	Yeosu new Port-Dolsando			<i>Mesodinium rubrum</i>	7,500				
SE	2011	5	2011	10	6	2011	10	11	6	Gyeongnam	Geoje Gohyeon Bay			<i>Akashiwo sanguinea</i>	2,200				
SE	2011	6	2011	11	4	2011	11	23	20	Gyeongnam	Goseong Donghae-Geoje Gohyeon Bay-Jangmok Bay			<i>Akashiwo sanguinea</i>	2,000				
SE	2011	7	2011	11	8	2011	11	23	16	Gyeongnam	Tongyoung Port-Hasan coast-Geoje Bay			<i>Akashiwo sanguinea</i>	3,000				
SE	2011	8	2011	11	21	2011	11	23	3	Jeju	Wimi Port			<i>Mesodinium rubrum</i>	9,320				
SE	2012	1	2012	5	31	2012	6	14	16	Gyeongbuk	Pohang Hyeonsan River estuary			<i>Prorocentrum dentatum</i>	4,000				
SE	2012	2	2012	6	1	2012	6	20	20	Gyeongnam	Changwon Haengam Bay-Masan Bay			<i>Heterosigma akashiwo</i>	45,000				
SE	2012	3	2012	7	21	2012	7	26	6	Gyeongnam	Geoje Gajodo coast			<i>Ceratium furca</i>	980				
SE	2012	4	2012	7	27	2012	8	23	28	Gyeongnam	Tongyoung coast			<i>Cochlodinium polykrikoides</i>	580				
SE	2012	5	2012	7	27	2012	8	25	30	Jeonam	Yeosu-Goheung coast			<i>Cochlodinium polykrikoides</i>	400				
SE	2012	6	2012	7	29	2012	8	26	29	Gyeongnam	Namhae coast			<i>Cochlodinium polykrikoides</i>	480				

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SE	2012	7	2012	8	29	2012	9	4	7	Gyeongbuk	Pohang Honghae-Homigot			<i>Ceratum furca</i>	6,000				
SE	2012	8	2012	8	10	2012	8	27	18	Jeonam	Jangheung-Wando coast-Deungnyang Bay			<i>Cochlodinium polykrikoides</i>	900				
SE	2012	9	2012	9	3	2012	9	17	15	Gyeongnam	Geoje Dadaepo-Hakdong coast			<i>Mesodinium rubrum</i>	2,200				
SE	2012	10	2012	9	10	2012	9	18	9	Chungnam	Taeon-Boryeong-Seocheon-Jeonbuk Cunsan coast			<i>Cochlodinium polykrikoides</i>	1,587				
SE	2012	11	2012	10	2	2012	10	20	19	Gyeongnam	Namhae coast			<i>Cochlodinium polykrikoides</i>	1,500				
SE	2012	12	2012	10	4	2012	10	20	17	Gyeongnam	Tongyoung coast			<i>Cochlodinium polykrikoides</i>	5,360				
SE	2012	13	2012	10	5	2012	10	21	17	Jeonam	Yeosu-Goheung coast			<i>Cochlodinium polykrikoides</i>	6,570				
SE	2012	14	2012	10	5	2012	10	19	15	Jeju	Jocheon-sinheung			<i>Mesodinium rubrum</i>	16,202				
SE	2012	15	2012	10	6	2012	10	10	5	Busan	Haeundae Mipo Port			<i>Noctiluca scintillans</i>	500				
SE	2012	16								Gyeongnam	Geoje Gohyeon Bay, Jangmok Bay, Deokpo Bay			<i>Mesodinium rubrum</i>	2,200				
SE	2012	17	2012	10	26	2012	11	12	18	Gyeongbuk	Gyeongju-Pohang Homigot coast			<i>Mesodinium rubrum</i>	8,000				
SE	2013	1	2013	5	24	2013	5	31	8	Gyeongbuk	Pohang Yeongil Bay			<i>Noctiluca scintillans</i>	10,000				
SE	2013	2	2013	6	3	2013	6	17	15	Gyeongnam	Changwon Jinhae Bay-Haeugam Bay-Masan Bay			<i>Heterosigma akashiwo</i>	35,000				
SE	2013	3	2013	6	10	2013	6	16	7	Incheon	South Port-Eurwangri coast			<i>Heterosigma akashiwo</i>	6,480				
SE	2013	4	2013	6	28	2013	7	3	7	Jeonam	Yeosu Bodolbada			<i>Prorocentrum dentatum</i>	20,500				
SE	2013	5	2013	7	14	2013	9	4	53	Jeonam	Yeosu-Goheung coast			<i>Cochlodinium polykrikoides</i>	850				
SE	2013	6	2013	7	18	2013	8	23	37	Gyeongnam	Tongyoung coast			<i>Cochlodinium polykrikoides</i>	2,308				
SE	2013	7	2013	7	18	2013	8	26	40	Gyeongnam	Namhae coast			<i>Cochlodinium polykrikoides</i>	2,308				
SE	2013	8	2013	7	19	2013	8	23	36	Gyeongnam	Geoje coast			<i>Cochlodinium polykrikoides</i>	1,200				
SE	2013	9	2013	7	22	2013	8	21	31	Gyeongnam	Gosung-Sacheon coast			<i>Cochlodinium polykrikoides</i>	8,500				
SE	2013	10	2013	7	27	2013	8	27	32	Gyeongbuk	Gyeongju-Pohang coast			<i>Cochlodinium polykrikoides</i>	2,000				
SE	2013	11	2013	7	28	2013	8	27	31	Busan	Busan-Ulsan coast			<i>Cochlodinium polykrikoides</i>	3,000				
SE	2013	12	2013	8	7	2013	8	27	21	Gyeongbuk	Yeongdeok coast			<i>Cochlodinium polykrikoides</i>	10,000				
SE	2013	13	2013	8	11	2013	8	23	13	Gyeongbuk	Ulljin-Samcheok coast			<i>Cochlodinium polykrikoides</i>	10,000				
SE	2013	14	2013	8	19	2013	8	23	5	Gyeongbuk	Donghae-Gangwon Gangneung coast			<i>Cochlodinium polykrikoides</i>	950				
SE	2014	1	2014	7	31	2014	10	10	73	Gyeongnam	Gosung coast			<i>Cochlodinium polykrikoides</i>	850				
SE	2014	2	2014	8	4	2014	10	8	66	Gyeongnam	Tongyoung coast			<i>Cochlodinium polykrikoides</i>	920				
SE	2014	3	2014	8	5	2014	9	30	57	Gyeongnam	Geoje coast			<i>Cochlodinium polykrikoides</i>	150				
SE	2014	4	2014	8	13	2014	10	11	60	Gyeongnam	Namhae coast			<i>Cochlodinium polykrikoides</i>	450				
SE	2014	5	2014	8	25	2014	9	14	21	Jeonam	Yeosu-Goheung coast			<i>Cochlodinium polykrikoides</i>	1,150				
SE	2014	6	2014	8	28	2014	10	2	36	Jeonam	Deungyang Bay-Wando coast			<i>Cochlodinium polykrikoides</i>	300				
SE	2014	7	2014	9	7	2014	9	21	15	Busan	Busan-Ulsan coast			<i>Cochlodinium polykrikoides</i>	240				

SE	2014	8	2014	9	10	2014	10	23	44	Gyeongbuk	Gyeongju-Pohang- Yeongdeok-Uljin coast		<i>Cochlodinium polykrikoides</i>	3,500					
SE	2015	1	2015	8	2	2015	9	10	40	Gyeongnam	Tongyoung, Namhae		<i>Cochlodinium polykrikoides</i>	21					
SE	2015	2	2015	8	5	2015	9	20	47	Jeonam	Yeosu, Wando		<i>Cochlodinium polykrikoides</i>	18					
SE	2015	3	2015	8	5	2015	9	2	29	Busan	Busan		<i>Cochlodinium polykrikoides</i>	9					
SE	2016	1	2016	8	16	2016	8	29	14	Jeonam	Yeosu		<i>Cochlodinium polykrikoides</i>	2					
SE	2016	1	2016	4	25	2016	4	25	1	Busan	Busan		<i>Noctiluca</i> sp.	30	19.4~20.4				
SE	2016	2	2016	5	18	2016	5	18	1	Gyeongbuk	Pohang		<i>Noctiluca</i> sp.	50	16.2~18.5				
SE	2016	3	2016	5	18	2016	5	18	1	Gyeongbuk	Pohang		<i>Heterosigma akashiwo</i>	3,000	16.2~18.5				
SE	2016	4	2016	5	20	2016	5	20	1	Busan	Busan, Gyeoje		<i>Heterosigma akashiwo</i>	10,000	17.8~21.0				0.01
SE	2016	5	2016	5	20	2016	5	20	1	Busan	Busan, Gyeoje		<i>Noctiluca</i> sp.	400	17.8~21.0				
SE	2016	6	2016	5	30	2016	5	30	1	Busan	Busan		<i>Mesodinium rubrum</i>	3,000	18.4~23.6				
SE	2016	7	2016	6	20	2016	6	20	1	Jeongnam	Yeosu		<i>Alexandrium</i> spp.	147	24.7				
SE	2016	8	2016	6	20	2016	6	20	1	Jeongnam	Yeosu		<i>Ceratium</i> spp.	162	24.7				
SE	2016	9	2016	6	27	2016	6	27	1	Gyeongnam	Toyong		<i>Prorocentrum dentatum</i>	3,000	19.2				0.0003
SE	2016	10	2016	7	25	2016	7	25	1	Busan	Busan		<i>Ceratium furca</i>	500	23.1				
SE	2016	11	2016	8	13	2016	8	24	12	Jeongnam	Wando		<i>Karenia mikimotoi</i>	1,360	23.5~30.9				
SE	2016	12	2016	8	15	2016	8	24	10	Jeongnam	Yeosu		<i>Cochlodinium polykrikoides</i>	2,200	24.8~29.6				
SE	2016	13	2016	8	15	2016	8	25	11	Jeongnam	Koheung, Deukryang		<i>Karenia mikimotoi</i>	850	24.5~31.4				
SE	2016	14	2016	11	16	2016	11	16	1	Gyeongnam	Toyong, Masan, Gyeoje		<i>Akashiwo sanguinea</i>	200	15.0~17.3				
SE	2016	15	2016	11	23	2016	11	23	1	Gyeongnam	Masan		<i>Akashiwo sanguinea</i>	100	15.4~16.5				
SE	2016	16	2016	12	22	2016	12	22	1	Gyeongnam	Toyong		<i>Akashiwo sanguinea</i>	1,500	13.8~14.1				
SE	2017	1	2017	4	3	2017	4	3	1	Busan	Busan		<i>Scrippsiella trochoidea</i>	18,000					
SE	2017	2	2017	5	4	2017	5	4	1	Ulsan	Ulsan		<i>Noctiluca</i> sp.	2,500					
SE	2017	3	2017	5	25	2017	5	25	1	Busan	Busan		<i>Heterosigma akashiwo</i>	30,000	16.0~17.0				
SE	2017	4	2017	6	27	2017	6	27	1	Busan	Busan		<i>Pyarmimonas</i> spp.		22.0~23.0				0.02
SE	2017	5	2017	6	28	2017	6	28	1	Busan	Busan		<i>Ceratium furca</i>	200	22.9				
SE	2017	6	2017	7	12	2017	7	12	1	Jeongnam	Koheung		<i>Chattonella marina</i>	350	25.0~26.9				
SE	2017	7	2017	8	9	2017	8	12	4	Gyeongnam	Namhae		<i>Alexandrium</i> spp.	11,500	27.1~28.5				
SE	2017	8	2017	8	12	2017	8	12	1	Gyeongnam	Gyeoje		<i>Alexandrium</i> spp.	5,000.0					
SE	2017	9	2017	8	7	2017	8	14	8	Gyeongnam	Toyong		<i>Alexandrium</i> spp.	15,000.0	26.1~32.0				
SE	2017	10	2017	8	10	2017	8	14	5	Jeongnam	Yeosu		<i>Alexandrium</i> spp.	2,500.0	24.9~29.0				
SE	2017	11	2017	8	28	2017	8	28	1	Jeongnam	Wando		<i>Mesodinium rubrum</i>	180.0	26.1				
SE	2018	1	2018	4	3	2018	4	3	1	Busan	Busan		<i>Teleaulax</i> sp.	46,600.0					
SE	2018	2	2018	5	10	2018	5	10	1	Gyeongnam	Masan		<i>Akashiwo sanguinea</i>	50.0	16.9				
SE	2018	3	2018	5	10	2018	5	10	1	Busan	Busan		<i>Akashiwo sanguinea</i>	60.0	15.9~16.3				
SE	2018	4	2018	5	29	2018	6	4	7	Busan	Busan		<i>Akashiwo sanguinea</i>	9,000.0	17.9~21.7	27.3~31.6			2
SE	2018	5	2018	7	18	2018	7	18	1	Jeju	Jeju		<i>Noctiluca</i> sp.		22.4	32.6			0.005
SE	2018	6	2018	7	24	2018	8	1	9	Jeongnam	Koheung		<i>Cochlodinium polykrikoides</i>	2,500.0	24.2~29.4	31.3~32.9			
SE	2018	7	2018	7	24	2018	8	7	15	Gyeongnam	Namhae		<i>Cochlodinium polykrikoides</i>	1,800.0	21.8~29.9	32.0~33.5			
SE	2018	8	2018	7	24	2018	8	8	16	Gyeongnam	Goseong		<i>Cochlodinium polykrikoides</i>	1,200.0	26.0~30.1	30.0~33.5			

SE	2018	9	2018	7	24	2018	8	9	17	Jeongnam	Yeosu			<i>Cochlodinium polykrikoides</i>	4,500.0	23.6-30.4	31.5-33.2		
SE	2018	10	2018	7	31	2018	8	7	8	Gyeongnam	Toyong			<i>Cochlodinium polykrikoides</i>	1,000.0	23.1-29.8	29.2-31.5		
SE	2018	11	2018	8	1	2018	8	7	7	Gyeongnam	Gyeoje			<i>Cochlodinium polykrikoides</i>	930.0	24.9-27.4	33.1-33.7		
SE	2018	12	2018	8	5	2018	8	6	2	Gyeongnam	Sacheon			<i>Cochlodinium polykrikoides</i>	600.0	.	33.1-33.3		
SE	2018	13	2018	9	17	2018	9	17	1	Jeongnam	Wando			<i>Gymnodinium</i> sp.	300.0				
SE	2018	14	2018	9	19	2018	9	19	1	Gyeongbuk	Uljin			<i>Noctiluca</i> sp.					
SE	2018	15	2018	9	15	2018	9	20	6	Jeongnam	Wando			<i>Mesodinium rubrum</i>	8,000.0	21.2-23.3	32.6-33.4		
SE	2018	16	2018	9	20	2018	9	20	1	Jeongnam	Yeosu			<i>Gymnodinium catenatum</i>	870.0	23.0	32.1		
SE	2018	17	2018	9	20	2018	9	20	1	Jeongnam	Shinan			<i>Noctiluca</i> sp.	1,532.0	21.8-22.8			
SE	2018	18	2018	9	22	2018	9	22	1	Jeongnam	Deukryang			<i>Mesodinium rubrum</i>	4,000.0	22.7-23.5	32.2-32.3		
SE	2018	19	2018	9	28	2018	9	28	1	Jeongnam	Wando			<i>Mesodinium rubrum</i>	3,500.0				
SE	2018	20	2018	10	19	2018	10	19	1	Gyeongnam	Gyeoje			<i>Mesodinium rubrum</i>	480.0	20.2	28.4		
SE	2018	21	2018	12	4	2018	12	4	1	Gyeongnam	Toyong			<i>Akashiwo sanguinea</i>	1,000.0	15.5	32.8		
SE	2019	1	2019	5	13	2019	5	13	1	Busan	Busan			<i>Noctiluca</i> sp.					
SE	2019	2	2019	5	17	2019	5	17	1	Ulsan	Ulsan			<i>Noctiluca</i> sp.	3,000.0	20.2			0.005
SE	2019	3	2019	8	17	2019	8	23	7	Jeongnam	Yeosu			<i>Mesodinium rubrum</i>	2,300.0	24.2-26.4	31.4-32.9		
SE	2019	4	2019	8	20	2019	9	18	30	Jeongnam	Yeosu			<i>Cochlodinium polykrikoides</i>	4,700.0	20.4-28.8	29.2-33.1		
SE	2019	5	2019	8	21	2019	8	21	1	Jeongnam	Yeosu			<i>Alexandrium</i> spp.	22.0	24.2-26.4	32.0-32.9		
SE	2019	6	2019	8	21	2019	9	21	32	Jeongnam	Koheung, Deukryang			<i>Cochlodinium polykrikoides</i>	6,000.0	21.4-26.8	28.6-33.1		
SE	2019	7	2019	8	23	2019	8	23	1	Jeongnam	Koheung			<i>Mesodinium rubrum</i>	8.0	24.8-26.5	31.7-32.1		
SE	2019	8	2019	8	26	2019	9	13	19	Jeongnam	Wando			<i>Cochlodinium polykrikoides</i>	700.0	21.0-25.6	24.5-32.9		
SE	2019	9	2019	8	30	2019	9	21	23	Gyeongnam	Namhae			<i>Cochlodinium polykrikoides</i>	12,000.0	22.2-25.8	29.8-33.1		
SE	2019	10	2019	9	14	2019	9	19	6	Gyeongnam	Sacheon			<i>Cochlodinium polykrikoides</i>	1,200.0	23.5-24.9	28.7-33.1		
SE	2019	11	2019	9	3	2019	9	20	18	Gyeongnam	Toyong			<i>Cochlodinium polykrikoides</i>	7,300.0	21.5-25.0	30.2-33.3		
SE	2019	12	2019	9	9	2019	9	20	12	Gyeongnam	Goseong			<i>Cochlodinium polykrikoides</i>	5,000.0	21.0-25.6	31.1-32.4		
SE	2019	13	2019	9	9	2019	9	20	12	Gyeongnam	Gyeoje			<i>Cochlodinium polykrikoides</i>	3,800.0	21.0-24.0	30.0-33.4		
SE	2019	14	2019	9	16	2019	9	20	5	Busan	Busan			<i>Cochlodinium polykrikoides</i>	450.0	23.5-24.0	26.0-29.6		
SE	2020	1	2020	1	30	2020	1	30	1	Gyeongnam	Toungyoung			<i>Akashiwo sanguinea</i>	450.0	10.2	34		
SE	2020	2	2020	4	28	2020	4	28	1	Gyeongnam	Hadong			<i>Heterosigma akashiwo</i>	1,500.0	15.1-16.3	4.0-11.0		
SE	2020	3	2020	5	28	2020	5	28	1	Gyeongnam	Namhae			<i>Heterosigma akashiwo</i>	2,000.0	19.0	31.7		
SE	2020	4	2020	6	9	2020	6	9	1	Jeongnam	Deukryang			<i>Prorocentrum dentatum</i>	5,000.0	23.4-24.6	32.8		
SE	2020	5	2020	6	11	2020	6	11	1	Jeongnam	Kwangyang			<i>Prorocentrum dentatum</i>	6,220.0	21.6			
SE	2020	6	2020	6	15	2020	6	15	1	Jeongnam	Wando			<i>Heterosigma akashiwo</i>	800.0	22.6	32.8		
SE	2020	7	2020	6	15	2020	6	15	1	Jeongnam	Yeosu			<i>Prorocentrum minimum</i>	9,800.0	17.4	33.2		
SE	2020	8	2020	6	16	2020	6	22	7	Jeongnam	Yeosu			<i>Prorocentrum dentatum</i>	9,000.0	23.3-26.0	32.4-33.1		
SE	2020	9	2020	6	22	2020	6	22	1	Jeongnam	Yeosu			<i>Heterosigma akashiwo</i>	55.0	23.3-26.0	32.4-33.1		
SE	2020	10	2020	6	22	2020	6	22	1	Jeongnam	Koheung			<i>Heterosigma akashiwo</i>	2,000.0	22.5	31.5		
SE	2020	11	2020	6	24	2020	6	24	1	Jeongnam	Koheung			<i>Prorocentrum dentatum</i>	2,000.0	24.1-24.6	31.1-31.7		
SE	2020	12	2020	6	30	2020	7	8	9	Busan	Busan			<i>Ceratium furca</i>	2,500.0	19.0-22.0	17.0-33.0		
SE	2020	13	2020	7	3	2020	8	13	41	Gyeongnam	Pohang			<i>Ceratium furca</i>	5,000.0	18.0-21.1	31.0-33.0		

SE	2020	14	2020	7	7	2020	7	7	1	Gyeongbuk	Kyeongju			<i>Ceratium furca</i>	500.0	18.0			
SE	2020	15	2020	7	10	2020	7	10	1	Gyeongnam	Masan			<i>Ceratium furca</i>	2,100.0	20.5-21.0	32.3-32.4		
SE	2020	16	2020	7	16	2020	7	16	1	Gyeongnam	Pohang			<i>Polykrikos hartmannii</i>	30.0	21.1	33.0		
SE	2020	17	2020	7	17	2020	7	17	1	Gyeongnam	Geoje			<i>Ceratium furca</i>	1,100.0	23.0	31.0		
SE	2020	18	2020	7	20	2020	7	30	10	Busan	Busan			<i>Ceratium furca</i>	1,100.0	20.0-22.5	15.0-33.5		
SE	2020	19	2020	7	23	2020	8	7	15	Gyeongnam	Toungyoung			<i>Ceratium furca</i>	2,140.0	19.8-26.6	23.5-32.1		
SE	2020	20	2020	7	27	2020	8	14	19	Gyeongnam	Namhae			<i>Ceratium furca</i>	1,600.0	22.6-26.6	23.5-30.0		
SE	2020	21	2020	7	29	2020	8	15	18	Jeongnam	Yeosu			<i>Ceratium furca</i>	2,140.0	22.1-27.4	26.9-31.6		
SE	2020	22	2020	8	6	2020	8	6	1	Gyeongnam	Namhae			<i>Noctiluca</i> sp.	309.0	25.6	27.7		
SE	2020	23	2020	8	7	2020	8	7	1	Jeongnam	Daekryang			<i>Ceratium furca</i>	300.0	26.3	28.6		
SE	2020	24	2020	8	13	2020	8	13	1	Jeongnam	Yeosu			<i>Prorocentrum dentatum</i>	2,500.0	27.5			
SE	2020	25	2020	8	31	2020	9	17	18	Jeongnam	Yeosu			<i>Cochlodinium polykrikoides</i>	56.0	23.1-27.8	25.9-32.7		
SE	2020	26	2020	9	5	2020	9	5	1	Jeongnam	Koheung			<i>Ceratium furca</i>	300.0	23.8	32.2		
SE	2020	27	2020	9	5	2020	9	5	1	Jeongnam	Daekryang			<i>Ceratium</i> spp.	2,000.0				
SE	2020	28	2020	10	6	2020	10	7	2	Gyeongnam	Namhae			<i>Cochlodinium polykrikoides</i>	50.0	22.3-22.4	30.7		
SE	2020	29	2020	10	10	2020	11	6	27	Gyeongnam	Goseong, Namhae, Touyoung			<i>Cochlodinium polykrikoides</i>	760.0	18.3-21.8	28.5-32.5		
SE	2020	30	2020	10	13	2020	10	24	12	Jeongnam	Yeosu			<i>Cochlodinium polykrikoides</i>	490.0	18.7-21.2	29.9-32.0		
SE	2021	1	2021	4	28	2021	4	28	1	Gyeongnam	Changwon			<i>Akashiwo sanguinea</i>	4,500.0	16.3	32.6		0.005
SE	2021	2	2021	5	18	2021	5	21	4	Busan	Busan			<i>Akashiwo sanguinea</i>	4,000.0	16.0	32.0		
SE	2021	3	2021	6	14	2021	6	14	1	Gyeongnam	Pohang			<i>Noctiluca</i> sp.	1,000.0	17.2-18.6	34.1-35.0		
SE	2021	4	2021	7	22	2021	7	24	3	Gyeongbuk	Uleung			<i>Noctiluca</i> sp.	1,500.0	27.4	34.0		
SE	2021	5	2021	8	9	2021	8	12	4	Jeongnam	Yeosu, Koheung			<i>Cochlodinium polykrikoides</i>	320.0	25.7-30.9	30.2-31.8		

*1 Scientific name is based on the Integrated Report on Harmful Algal Blooms (HABs) for the NOWPAP Region (NOWPAP CEARAC 2005).

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*2 In case of China, the range of environmental parameters means the value which observed in some monitoring points during HAB event.

*3 In case of Korea, the range of environmental parameters means the value which observed in some monitoring points.

*4 In case of Russia, the range of environmental parameters means the value which observed during HAB event.