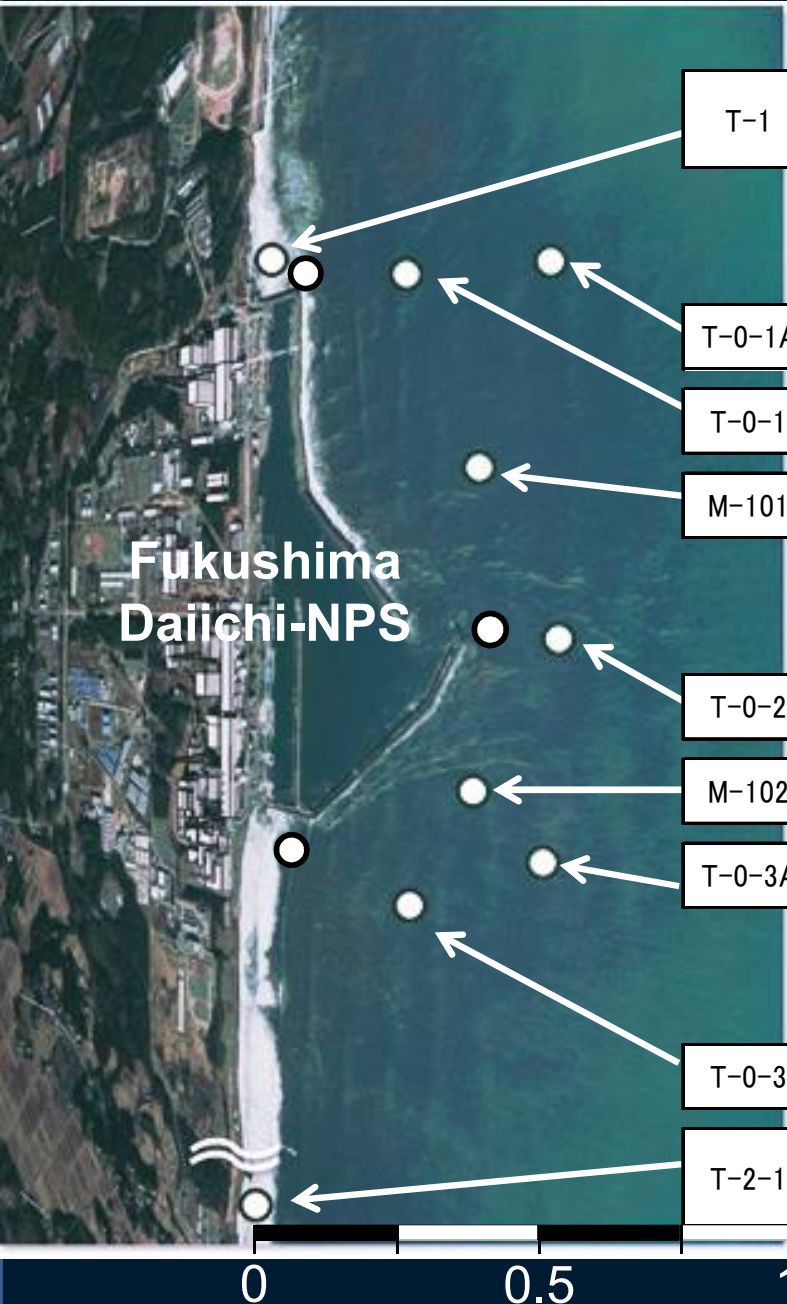


Sea Area Monitoring

December 22, 2015

Nuclear Regulation Authority (NRA), Japan

Sea area within 2km radius from the NPS (1)



Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240
Sea water radioactivity (Bq/L): ND: under detection limits; Numbers in parentheses: detection limits *1: Total β : including K-40 *2: Total β : excluding K-40									
T-1	2015/12/7	ND(0.68)	ND(0.78)	14 ^{*1}	ND(1.5)				
	2015/10/14	ND(0.69)	ND(0.65)	13 ^{*1}	ND(1.7)	0.087	ND(1.9)		
	2015/4/8	ND(0.55)	ND(0.64)					ND(5.5×10^{-6})	ND(6.1×10^{-6})
T-0-1A	2015/12/7	ND(0.80)	ND(0.69)	ND(16) ^{*1}	In progress				
	2015/11/30	ND(0.75)	ND(0.53)	ND(18) ^{*1}	ND(2.0)				
T-0-1	2015/12/7	ND(0.63)	ND(0.65)	ND(16) ^{*1}	In progress				
	2015/11/30	ND(0.51)	ND(0.71)	ND(18) ^{*1}	ND(2.0)				
M-101	2015/10/5	0.018	0.085		0.44	In progress			
	2015/9/2	0.14	0.60		1.9	0.76			
T-0-2	2015/12/7	ND(0.83)	ND(0.64)	ND(16) ^{*1}	In progress				
	2015/11/30	ND(0.64)	ND(0.69)	ND(18) ^{*1}	ND(2.0)				
M-102	2015/10/6	0.016	0.066		0.20	In progress			
	2015/9/3	0.0054	0.022		0.077	0.00098			
T-0-3A	2015/12/7	ND(0.83)	ND(0.69)	ND(16) ^{*1}	In progress				
	2015/11/30	ND(0.77)	ND(0.52)	ND(18) ^{*1}	ND(2.0)				
T-0-3	2015/12/7	ND(0.63)	ND(0.74)	ND(16) ^{*1}	In progress				
	2015/11/30	ND(0.77)	ND(0.89)	ND(18) ^{*1}	ND(2.0)				
T-2-1	2015/12/7	ND(0.63)	ND(0.67)	10 ^{*1}	ND(1.5)				
	2015/10/14	ND(0.88)	ND(0.78)	11 ^{*1}	ND(1.7)	ND(0.0093)	ND(1.9)		
	2015/4/8	ND(0.66)	ND(0.60)	8.9 ^{*1}				ND(6.9×10^{-6})	(9.7 ± 2.4) $\times 10^{-6}$

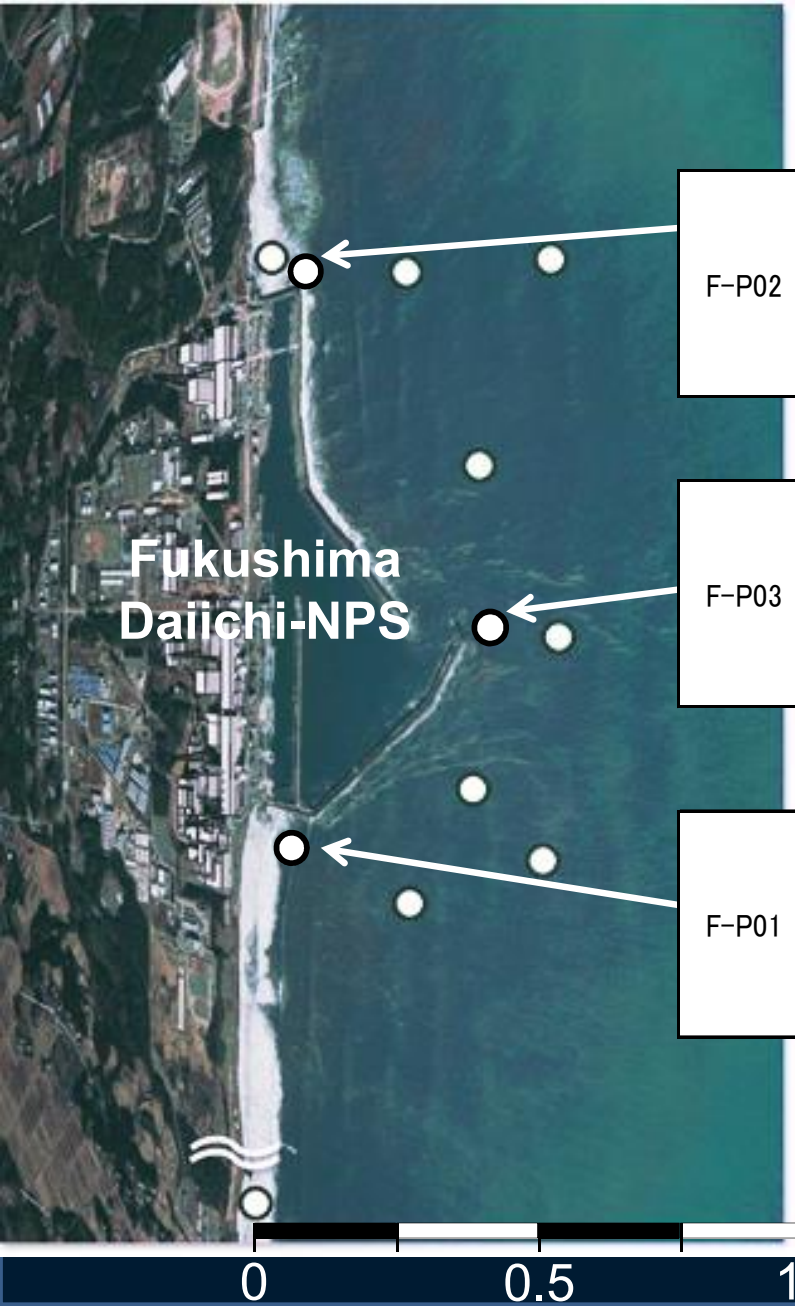
Sea area within 2km radius from the NPS (2)

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240
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Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*1: Total β : including K-40 *2: Total β : excluding K-40



Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240
		2015/10/13	ND(0.080)	0.14	0.08 ^{*2}	ND(0.45)	0.054		In progress
F-P02	2015/9/14	0.21	1.0	0.03 ^{*2}	ND(0.41)	0.003		ND(7×10^{-6})	ND(7×10^{-6})
	2015/8/17	ND(0.088)	0.12	0.05 ^{*2}	ND(0.44)	0.10		ND(7×10^{-6})	ND(8×10^{-6})
	2015/7/21	0.19	0.67	0.31 ^{*2}	1.9	0.76		ND(7×10^{-6})	ND(1.0×10^{-5})
	2015/6/16	ND(0.065)	ND(0.053)	0.04 ^{*2}	ND(0.45)	0.046		ND(6×10^{-6})	ND(6×10^{-6})
	2015/5/18	ND(0.062)	ND(0.057)	0.03 ^{*2}	ND(0.44)	0.003		ND(6×10^{-6})	ND(6×10^{-6})
	2015/4/22	ND(0.070)	ND(0.057)	0.02 ^{*2}	ND(0.43)	0.002		ND(2.1×10^{-5})	ND(1.6×10^{-5})

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240
		2015/10/13	0.10	0.46	0.19 ^{*2}	2.1	0.27		In progress
F-P03	2015/9/14	ND(0.051)	0.087	0.03 ^{*2}	ND(0.40)	0.002		ND(7×10^{-6})	ND(7×10^{-6})
	2015/8/17	0.13	0.48	0.19 ^{*2}	1.1	0.46		ND(9×10^{-6})	ND(8×10^{-6})
	2015/7/21	0.22	0.83	0.37 ^{*2}	2.6	0.68		ND(8×10^{-6})	ND(1.0×10^{-5})
	2015/6/16	ND(0.066)	ND(0.050)	0.03 ^{*2}	ND(0.46)	0.008		ND(1.0×10^{-5})	ND(8×10^{-6})
	2015/5/18	ND(0.075)	ND(0.063)	0.03 ^{*2}	ND(0.45)	0.002		ND(6×10^{-6})	ND(6×10^{-6})
	2015/4/22	ND(0.062)	ND(0.051)	0.02 ^{*2}	ND(0.44)	0.002		ND(8×10^{-6})	ND(7×10^{-6})

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240
		2015/10/13	ND(0.080)	0.11	0.03 ^{*2}	0.53	0.008		In progress
F-P01	2015/9/14	ND(0.053)	0.15	0.05 ^{*2}	0.55	0.031		ND(6×10^{-6})	6×10^{-6}
	2015/8/17	ND(0.071)	0.12	0.04 ^{*2}	ND(0.42)	0.037		ND(7×10^{-6})	ND(7×10^{-6})
	2015/7/21	ND(0.054)	0.10	0.03 ^{*2}	ND(0.46)	0.014		ND(1.0×10^{-5})	ND(1.0×10^{-5})
	2015/6/16	ND(0.055)	ND(0.052)	0.03 ^{*2}	ND(0.46)	0.004		ND(5×10^{-6})	ND(5×10^{-6})
	2015/5/18	ND(0.060)	ND(0.052)	0.05 ^{*2}	ND(0.45)	0.015		ND(5×10^{-6})	ND(6×10^{-6})
	2015/4/22	ND(0.068)	ND(0.050)	0.02 ^{*2}	ND(0.44)	0.010		ND(2.1×10^{-5})	ND(1.7×10^{-5})

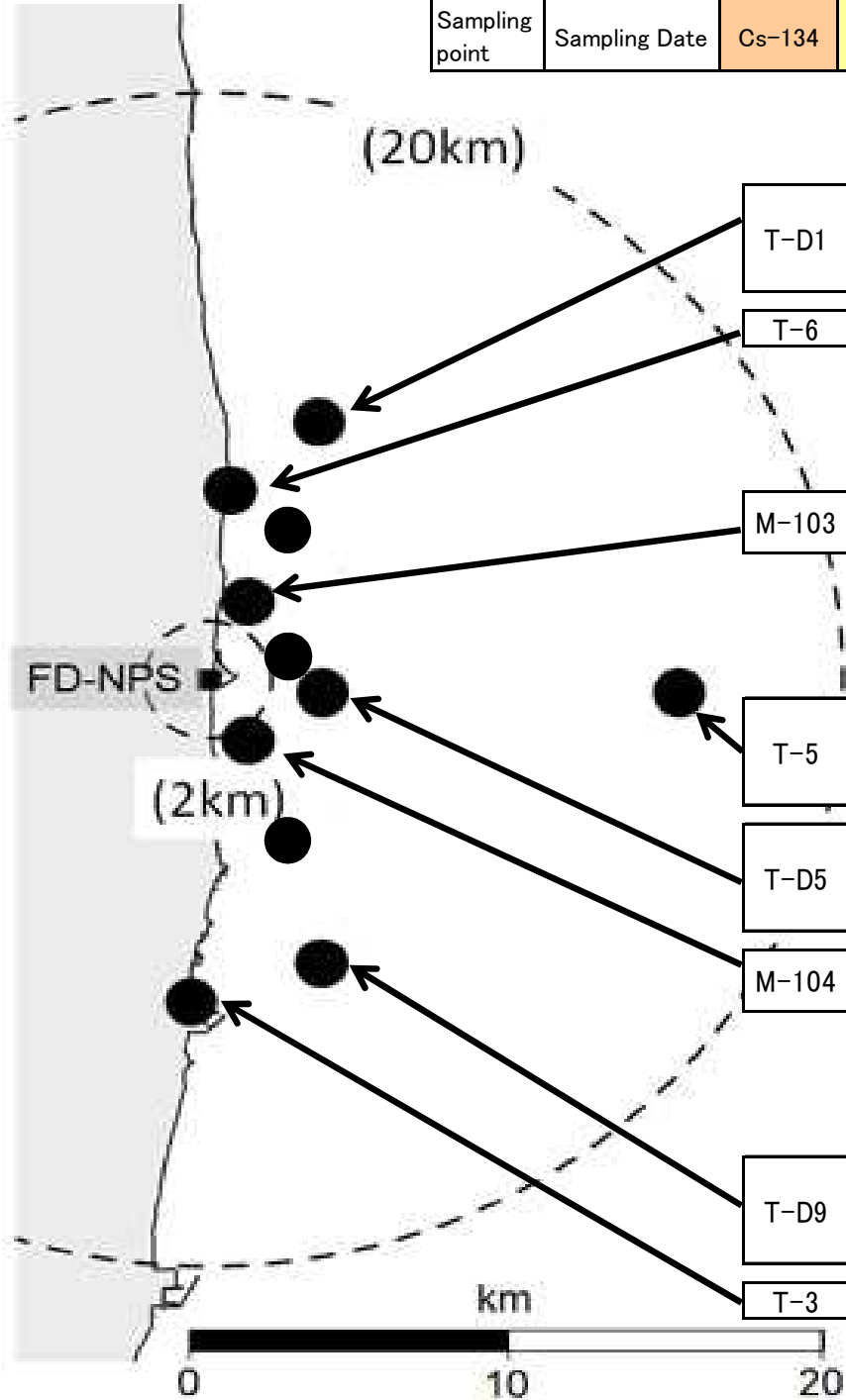
Sea area between 2-20km radius from the NPS (1)

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240	S	S:2m below sea level Depth(m) from sea level
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Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*1: Total β : including K-40 *2: Total β : excluding K-40



T-D1	2015/11/16	0.0078	0.032	ND(17) ^{*1}	ND(0.36)					S
	2015/11/2	0.0038	0.013	ND(17) ^{*1}	ND(0.35)	ND(0.0075)	ND(1.6)			S
	2015/4/8	0.0017	0.0048	ND(15) ^{*1}	0.49	ND(0.0099)	ND(2.0)	ND(7.0×10^{-6})	ND(6.8×10^{-6})	S

T-6	2015/11/17	0.024	0.11	18 ^{*1}	ND(0.32)					S
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M-103	2015/10/5	0.0046	0.020		0.10	In progress				0.5m
	2015/9/2	0.0068	0.030		0.10	0.0021				0.5m

T-5	2015/11/16	ND(0.0016)	0.0072	ND(17) ^{*1}	ND(0.36)					S
	2015/11/2	ND(0.0014)	0.0043	ND(17) ^{*1}	ND(0.35)	ND(0.0077)	ND(1.9)			S
	2015/4/9	ND(0.0014)	0.0021	ND(17) ^{*1}	ND(0.32)	ND(0.011)	ND(1.6)	ND(5.7×10^{-6})	ND(5.6×10^{-6})	S

T-D5	2015/11/16	0.0053	0.022	ND(17) ^{*1}	ND(0.36)					S
	2015/11/2	0.0044	0.021	ND(17) ^{*1}	ND(0.35)	ND(0.0086)	ND(1.6)			S
	2015/4/8	ND(0.0016)	0.0062	ND(15) ^{*1}	0.70	ND(0.011)	ND(2.0)	ND(6.3×10^{-6})	ND(6.0×10^{-6})	S

M-104	2015/10/6	0.0041	0.016		0.080	In progress				0.5m
	2015/9/3	0.0062	0.030		0.14	0.0012				0.5m

T-D9	2015/11/16	0.0044	0.022	ND(17) ^{*1}	ND(0.36)					S
	2015/11/2	0.0051	0.020	ND(17) ^{*1}	ND(0.35)	ND(0.0074)	ND(1.9)			S
	2015/4/9	ND(0.0017)	0.0043	ND(17) ^{*1}	ND(0.32)	ND(0.0092)	ND(1.6)	ND(6.7×10^{-6})	ND(6.5×10^{-6})	S

T-3	2015/11/17	0.018	0.079	ND(16) ^{*1}	ND(0.32)					S
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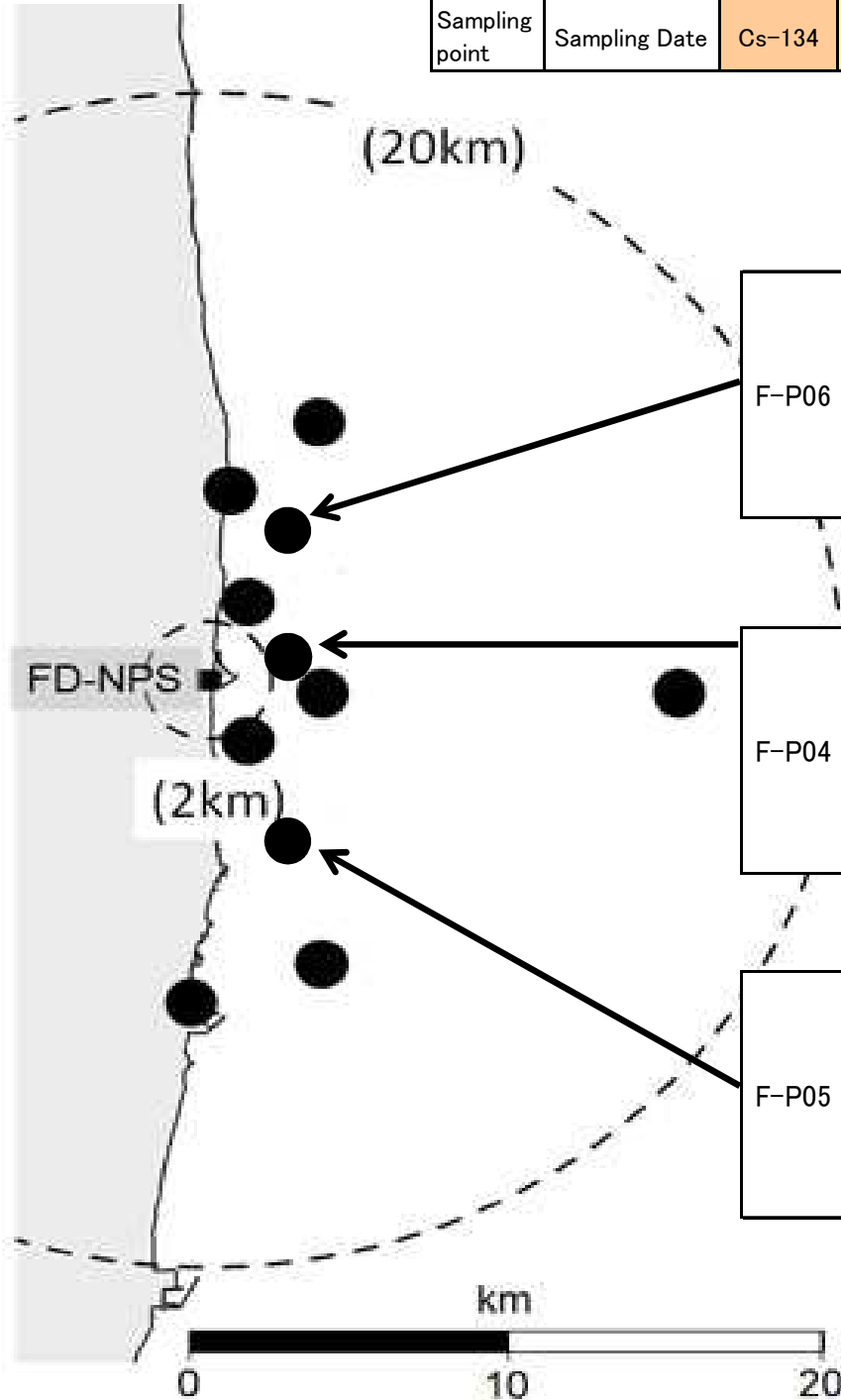
Sea area between 2-20km radius from the NPS (2)

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240	S	S:2m below sea level
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Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*1: Total β : including K-40 *2: Total β : excluding K-40



Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240	S	S:2m below sea level
F-P06	2015/10/13	ND(0.087)	ND(0.070)	0.03*2	ND(0.45)	0.010		In progress	In progress	S	
	2015/9/14	ND(0.050)	0.082	0.02*2	0.47	0.001		ND(8×10^{-6})	ND(8×10^{-6})	S	
	2015/8/17	ND(0.070)	ND(0.066)	0.02*2	ND(0.41)	0.001		ND(7×10^{-6})	ND(7×10^{-6})	S	
	2015/7/21	ND(0.056)	ND(0.051)	0.02*2	ND(0.45)	0.002		ND(8×10^{-6})	ND(1.0×10^{-5})	S	
	2015/6/16	ND(0.067)	ND(0.069)	0.03*2	ND(0.45)	0.003		ND(1.3×10^{-5})	ND(1.3×10^{-5})	S	
	2015/5/18	ND(0.074)	ND(0.072)	0.04*2	ND(0.44)	0.002		ND(8×10^{-6})	8×10^{-6}	S	
	2015/4/22	ND(0.056)	ND(0.050)	0.02*2	ND(0.44)	0.002		ND(7×10^{-6})	ND(6×10^{-6})	S	

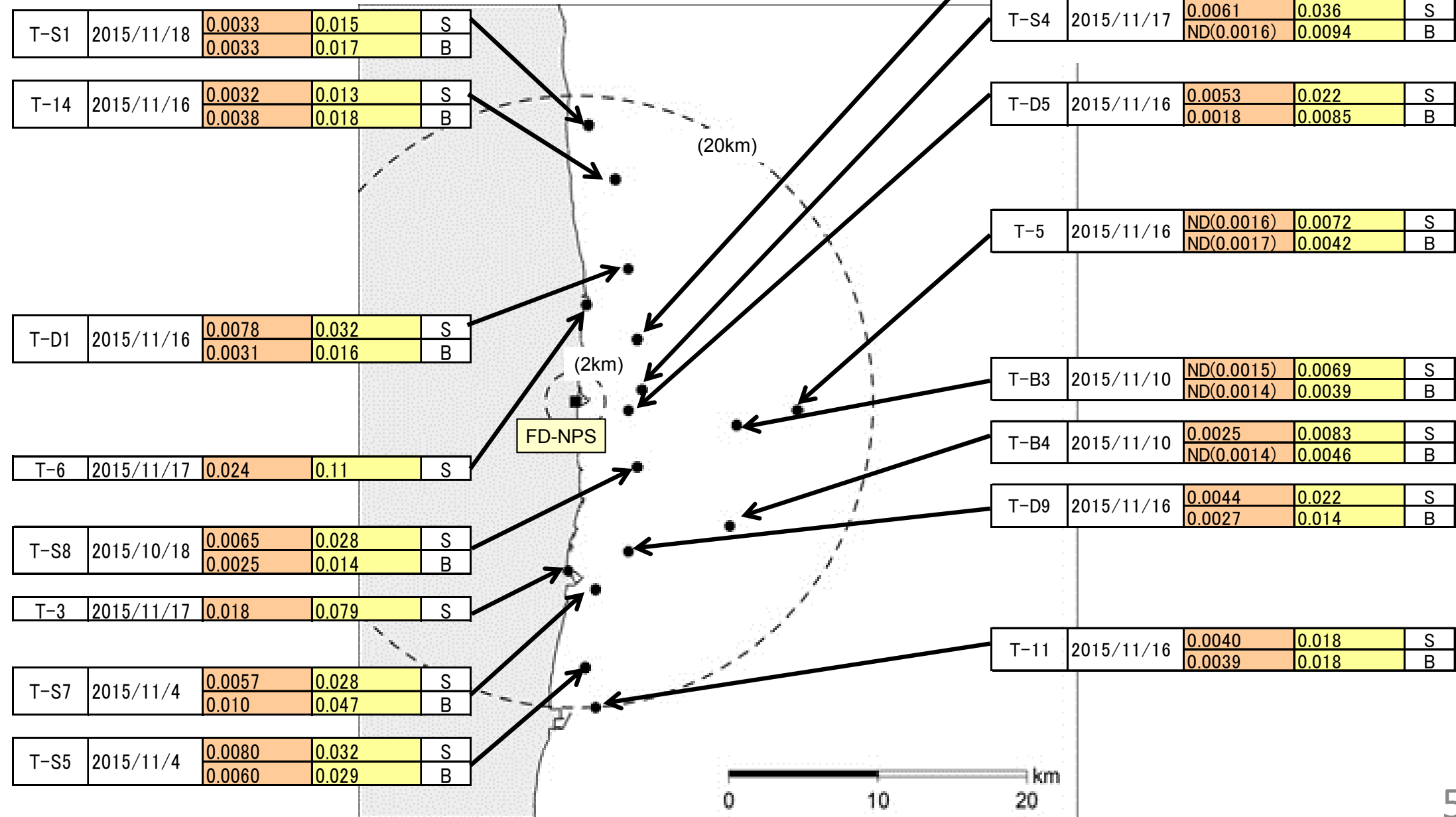
Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240	S	S:2m below sea level
F-P04	2015/10/13	ND(0.074)	ND(0.071)	0.02*2	ND(0.46)	0.001		In progress	In progress	S	
	2015/9/14	ND(0.054)	0.052	0.02*2	ND(0.40)	0.002		ND(7×10^{-6})	ND(7×10^{-6})	S	
	2015/8/17	ND(0.090)	ND(0.066)	0.02*2	ND(0.42)	0.001		ND(8×10^{-6})	ND(7×10^{-6})	S	
	2015/7/21	ND(0.058)	0.054	0.02*2	ND(0.45)	0.002		ND(1.1×10^{-5})	ND(9×10^{-6})	S	
	2015/6/16	ND(0.062)	ND(0.053)	0.03*2	ND(0.44)	0.002		ND(2.1×10^{-5})	ND(2.1×10^{-5})	S	
	2015/5/18	ND(0.063)	0.054	0.04*2	ND(0.45)	0.005		ND(6×10^{-6})	ND(6×10^{-6})	S	
	2015/4/22	ND(0.066)	ND(0.053)	0.02*2	ND(0.43)	0.001		ND(7×10^{-6})	9×10^{-6}	S	

Sampling point	Sampling Date	Cs-134	Cs-137	total β	H-3	Sr-90	total α	Pu-238	Pu-239+240	S	S:2m below sea level
F-P05	2015/10/13	ND(0.075)	ND(0.069)	0.03*2	ND(0.44)	0.001		In progress	In progress	S	
	2015/9/14	0.067	0.31	0.03*2	ND(0.39)	0.009		ND(5×10^{-6})	ND(5×10^{-6})	S	
	2015/8/17	ND(0.080)	ND(0.070)	0.02*2	ND(0.42)	0.002		ND(6×10^{-6})	ND(6×10^{-6})	S	
	2015/7/21	ND(0.061)	0.061	0.03*2	ND(0.45)	0.004		ND(7×10^{-6})	ND(8×10^{-6})	S	
	2015/6/16	ND(0.058)	ND(0.049)	0.02*2	ND(0.44)	0.003		ND(1.5×10^{-5})	ND(2.1×10^{-5})	S	
	2015/5/18	ND(0.062)	ND(0.052)	0.03*2	ND(0.44)	0.001		ND(6×10^{-6})	ND(6×10^{-6})	S	
	2015/4/22	ND(0.075)	ND(0.066)	0.02*2	ND(0.44)	0.002		ND(6×10^{-6})	ND(6×10^{-6})	S	

Sea area between 2-20km radius from the NPS (3)

Sampling point	Sampling Date	Cs-134	Cs-137	S/B	S:2m below sea level B:2-3m above sea bottom
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Sea water radioactivity (Bq/L):
 ND: under detection limits; Numbers in parentheses: detection limits

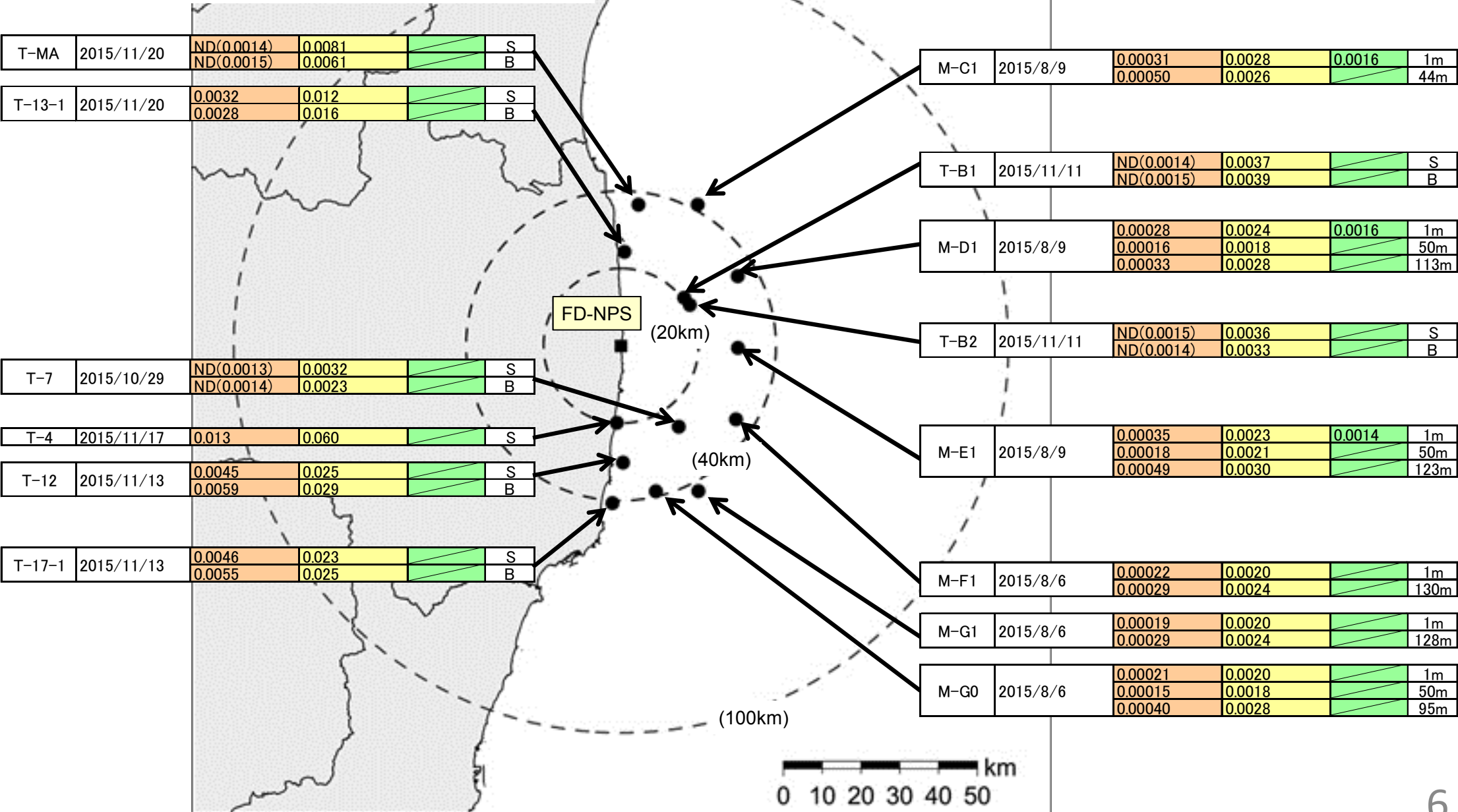


Sea area between 20-100km radius from the NPS(1)

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B	S:2m below sea level	B:2-3m above sea bottom
					Depth(m) from sea level		

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits



Sea area between 20-100km radius from the NPS(2)

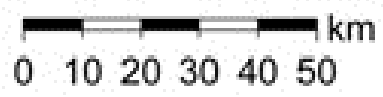
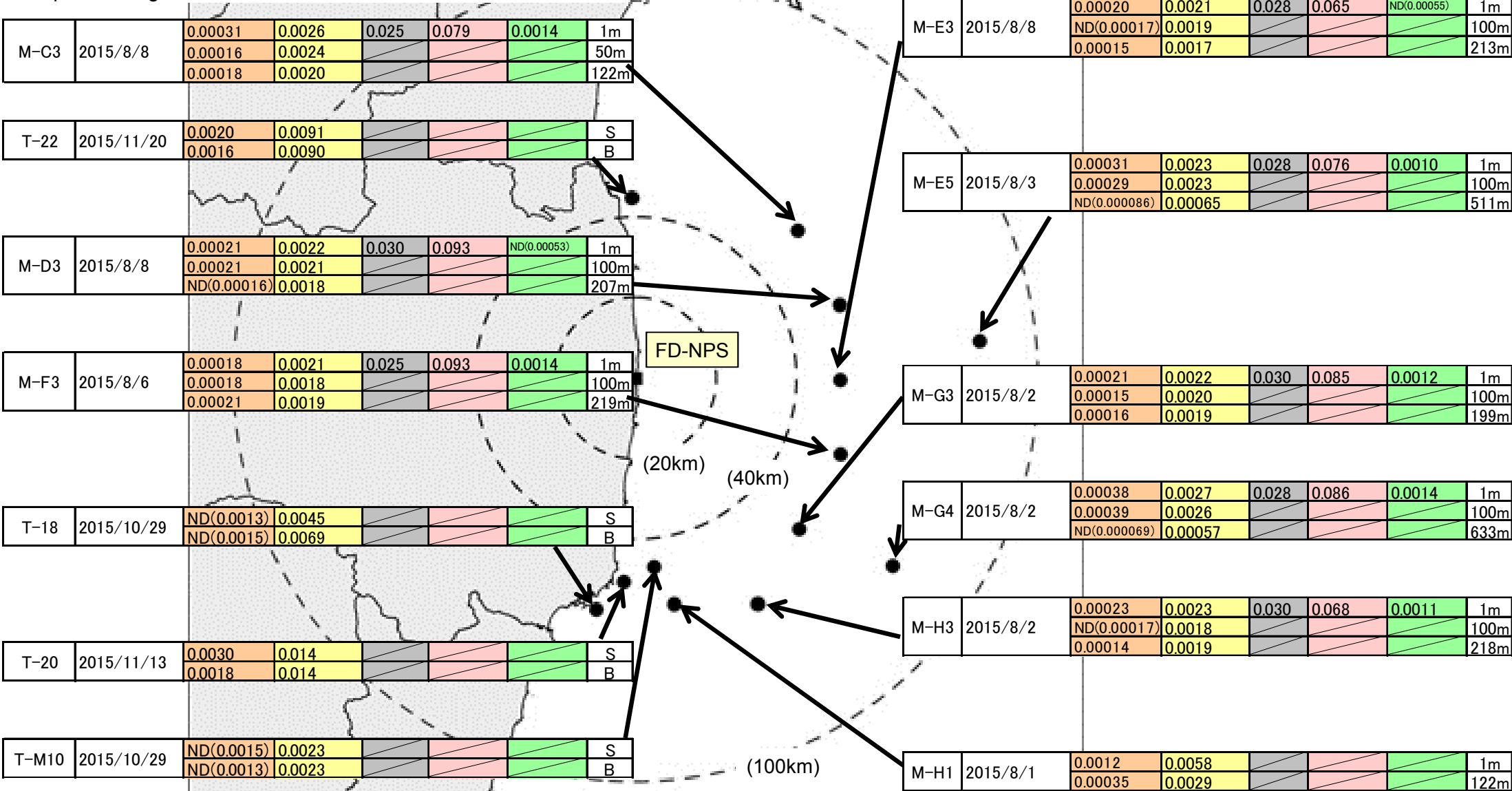
Sampling point	Sampling Date	Cs-134	Cs-137	Total β^*	H-3	Sr-90	S/B	S:2m below sea level	B:2-3m above sea bottom
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Depth(m) from sea level

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

*Total β : excluding K-40



Sea area along and off the coast of Miyagi Prefecture

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/M/B
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S:2m below sea level
M:between 2m below sea level and 2-3m above sea bottom
B:2-3m above sea bottom

Sea water radioactivity (Bq/L):
ND: under detection limits; Numbers in parentheses: detection limits

T-MG1	2015/11/4	ND(0.0015)	0.0074		S
		ND(0.0014)	0.0078		M
		0.0019	0.0078		B

T-MG4	2015/11/5	0.0020	0.0070		S
		0.0015	0.0072		M
		ND(0.0015)	0.0079		B

T-MG5	2015/11/5	ND(0.0018)	0.0055		S
		ND(0.0015)	0.0055		M
		0.0015	0.0055		B
	2015/9/2	ND(0.0014)	0.0052	ND(0.0065)	S

T-MG6	2015/11/5	0.0024	0.0073		S
		ND(0.0016)	0.0069		M
		0.0018	0.0068		B

M-B1	2015/8/10	0.00041	0.0029		1m
		0.00016	0.0020		33m

M-B3	2015/8/9	ND(0.00011)	0.0016		1m
		0.00014	0.0018		50m
		0.00029	0.0026		106m

T-MG0	2015/11/4	ND(0.0013)	0.0017		S
		ND(0.0015)	0.0018		M
		ND(0.0015)	0.0025		B

M-A1	2015/8/7	0.00013	0.0018		1m
		0.00019	0.0018		100m
		0.00015	0.0021		186m

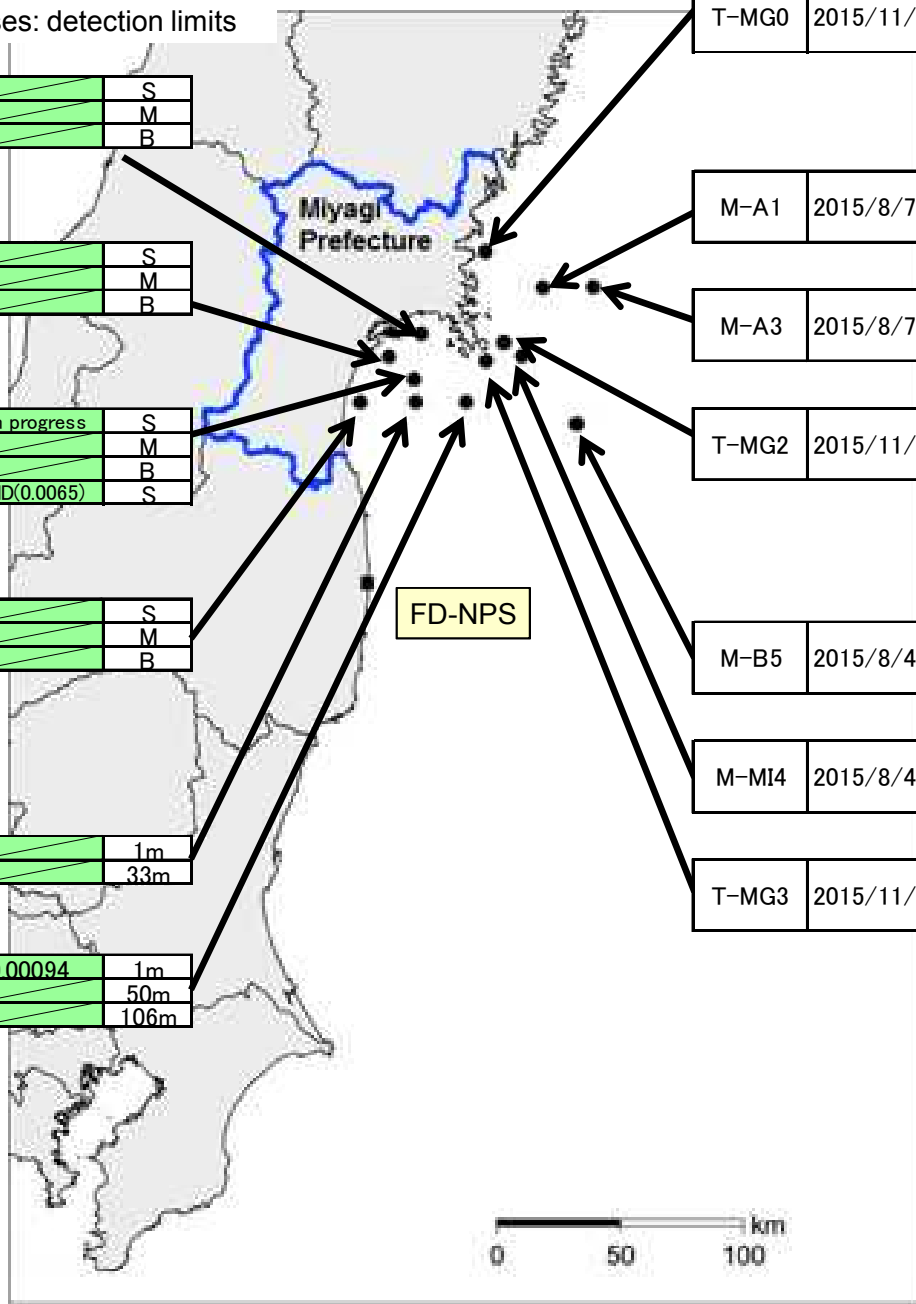
M-A3	2015/8/7	0.00013	0.0016		1m
		0.00031	0.0023		100m
		ND(0.000096)	0.00077		466m

T-MG2	2015/11/4	ND(0.0015)	0.0020		S
		ND(0.0014)	0.0019		M
		ND(0.0014)	0.0024		B

M-B5	2015/8/4	0.00023	0.0020		1m
		0.00021	0.0022		100m
		ND(0.00013)	0.0012		347m

M-MI4	2015/8/4	0.00018	0.0021		1m
		0.00031	0.0024		100m
		0.00013	0.0019		141m

T-MG3	2015/11/4	ND(0.0016)	0.0030		S
		ND(0.0016)	0.0018		M
		ND(0.0014)	0.0034		B



Sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

Sampling point	Sampling Date	Cs-134	Cs-137	Sr-90	S/B	S:2m below sea level B:2-3m above sea bottom	
					Depth(m) from sea level		

Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

T-Z	2015/11/9	ND(0.91)	ND(1.2)	/	S
		ND(0.91)	ND(1.2)		B

T-A	2015/11/9	ND(1.0)	ND(1.2)	/	S
		ND(0.98)	ND(1.2)		B

T-B	2015/11/11	ND(1.0)	ND(1.0)	/	S
		ND(1.1)	ND(1.2)		B

M-J1	2015/7/30	0.00058	0.0035	0.0011	1m
		0.0010	0.0051	/	37m

T-C	2015/11/10	ND(0.86)	ND(1.1)	In progress	S
		ND(0.99)	ND(1.2)	/	B
	2015/9/16	ND(0.99)	ND(1.0)	ND(0.0083)	S

M-K1	2015/7/30	0.00035	0.0028	/	1m
		0.00028	0.0022	/	20m

T-D	2015/11/11	ND(1.0)	ND(1.2)	/	S
		ND(0.98)	ND(1.2)		B

M-M1	2015/7/29	0.00023	0.0020	/	1m
		0.00039	0.0026	/	103m

M-I0	2015/7/31	0.00037	0.0025	0.0011	1m
		0.00040	0.0031	/	61m

M-I1	2015/8/1	0.00046	0.0031	/	1m
		ND(0.00013)	0.0018	/	50m
		0.00033	0.0025	/	88m

M-I3	2015/8/1	0.00033	0.0025	/	1m
		0.00028	0.0023	/	100m
		0.00031	0.0023	/	173m

M-IB2	2015/7/31	0.00089	0.0045	/	1m
		0.00052	0.0030	/	105m

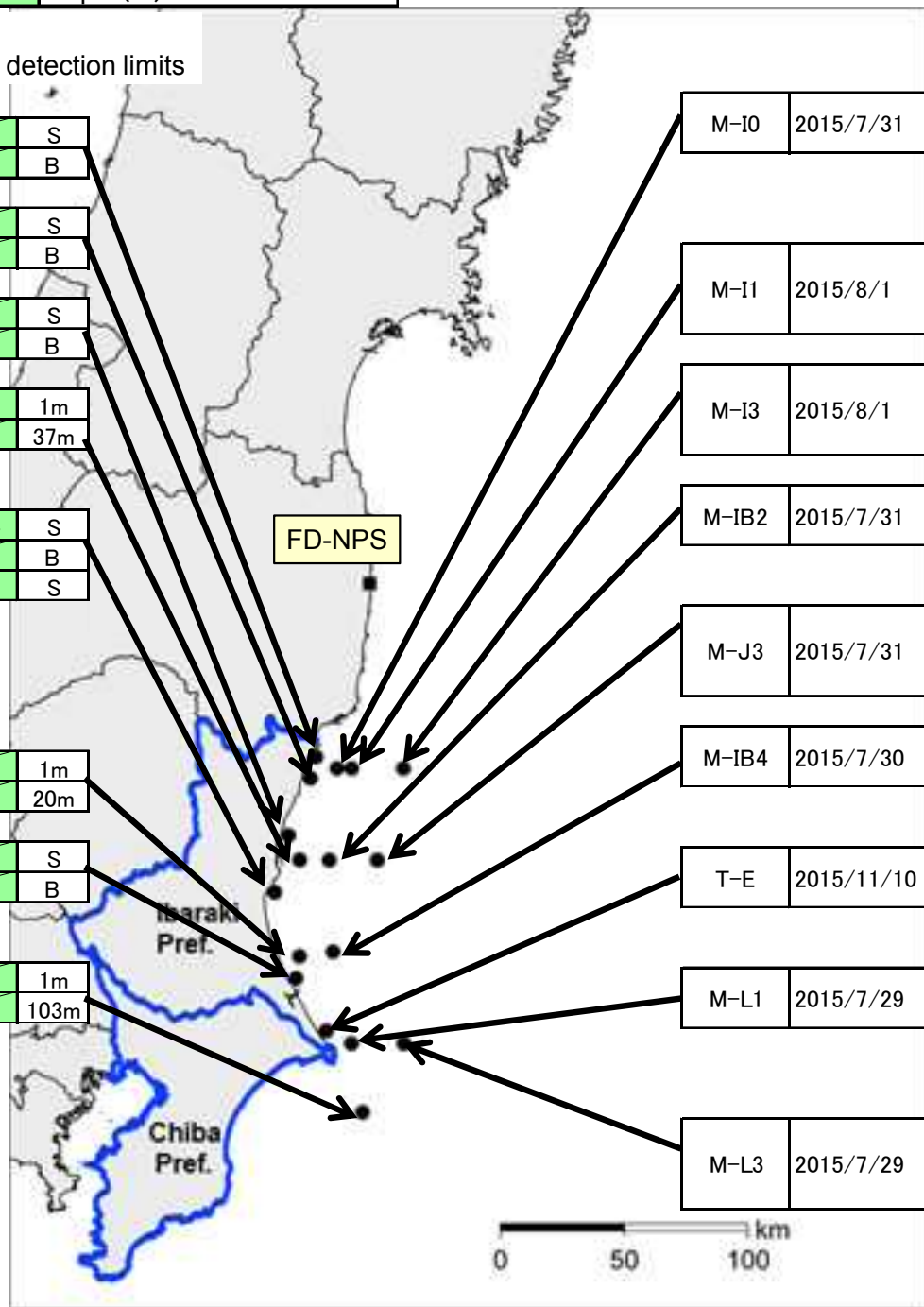
M-J3	2015/7/31	0.00040	0.0030	/	1m
		0.00029	0.0024	/	100m
		ND(0.000067)	0.00061	/	550m

M-IB4	2015/7/30	0.00034	0.0028	/	1m
		0.00026	0.0024	/	110m

T-E	2015/11/10	ND(0.91)	ND(1.2)	/	S
		ND(0.91)	ND(1.1)		B

M-L1	2015/7/29	0.00042	0.0031	/	1m
		0.00061	0.0032	/	33m

M-L3	2015/7/29	0.00041	0.0030	/	1m
		0.00028	0.0025	/	100m
		0.00018	0.0022	/	159m



Open sea off the coast of Eastern Japan

Sampling point	Sampling Date	Cs-134	Cs-137	Depth(m) from sea level
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Sea water radioactivity (Bq/L):

ND: under detection limits; Numbers in parentheses: detection limits

M-10	2015/5/26	ND(0.00082)	0.0024	1m
		ND(0.00075)	0.0031	101m
		ND(0.00068)	0.0018	201m
		ND(0.00078)	0.0017	301m
		ND(0.00078)	0.00089	500m

M-11	2015/5/26	ND(0.00069)	0.0030	1m
		ND(0.00063)	0.0029	101m
		ND(0.00062)	0.0024	201m
		ND(0.00070)	0.0018	301m
		ND(0.00068)	0.0015	502m

M-14	2015/5/27	ND(0.00064)	0.0028	1m
		ND(0.00054)	0.0018	102m
		ND(0.00060)	0.0015	200m
		ND(0.00053)	0.0011	303m
		ND(0.00060)	0.00086	502m

M-15	2015/5/27	ND(0.00068)	0.0026	1m
		ND(0.00061)	0.0022	100m
		ND(0.00061)	0.0016	201m
		ND(0.00062)	0.0016	300m
		ND(0.00059)	0.00073	501m

M-19	2015/5/29	ND(0.00058)	0.0026	1m
		ND(0.00057)	0.0022	102m
		ND(0.00056)	0.0015	201m
		ND(0.00055)	0.0016	300m
		ND(0.00056)	0.00071	502m

M-21	2015/5/31	ND(0.00057)	0.0016	1m
		ND(0.00061)	0.0023	102m
		0.00061	0.0039	200m
		ND(0.00052)	0.0023	300m
		ND(0.00062)	0.00087	500m

M-20	2015/5/31	ND(0.00065)	0.0017	1m
		0.00065	0.0031	100m
		ND(0.00068)	0.0031	200m
		ND(0.00059)	0.0018	305m
		ND(0.00061)	0.0013	499m

M-26	2015/5/28	ND(0.00060)	0.0024	1m
		ND(0.00056)	0.0029	100m
		ND(0.00066)	0.0034	202m
		ND(0.00066)	0.0040	301m
		ND(0.00061)	0.0027	500m

M-25	2015/6/1	ND(0.00073)	0.0015	1m
		ND(0.00077)	0.0031	100m
		ND(0.00069)	0.0030	201m
		0.00081	0.0056	301m
		0.00067	0.0024	500m

M-27	2015/5/28	ND(0.00060)	0.0026	1m
		ND(0.00060)	0.0030	100m
		0.00082	0.0042	200m
		0.0011	0.0049	301m
		ND(0.00065)	0.0034	501m

