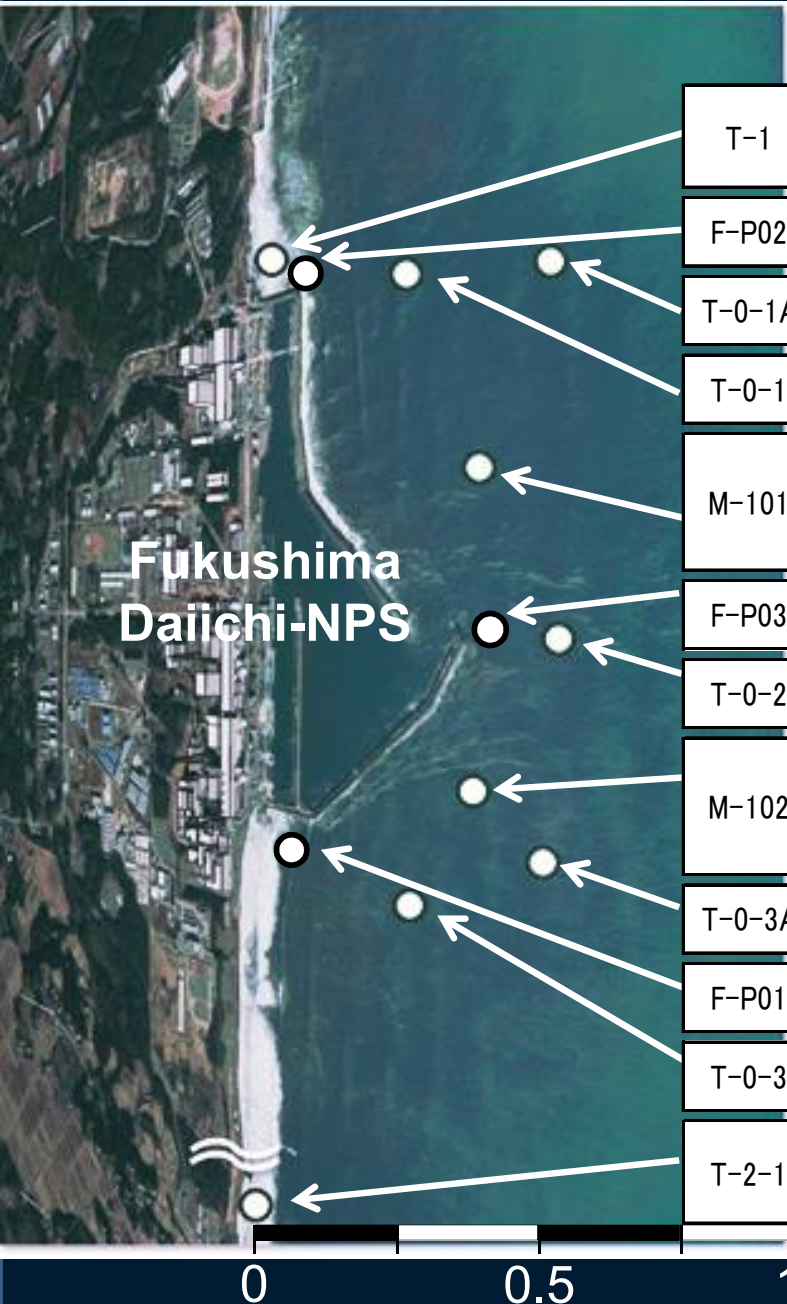


# Sea Area Monitoring

July 14, 2015

Nuclear Regulation Authority (NRA), Japan

# Sea area within 2km radius from the NPS



Sampling point	Sampling Date	Cs-134	Cs-137	total $\beta$	H-3	Sr-90	total $\alpha$	Pu-238	Pu-239+240
T-1	2015/6/29	ND(0.72)	ND(0.70)	9.9 <sup>*1</sup>	ND(1.6)				
	2015/5/4	ND(0.61)	ND(0.70)	12 <sup>*1</sup>	2.1	0.33	ND(2.0)		
	2015/4/8	ND(0.55)	ND(0.64)					ND( $5.5 \times 10^{-6}$ )	ND( $6.1 \times 10^{-6}$ )
F-P02	2015/4/22	ND(0.070)	ND(0.057)	0.02 <sup>*2</sup>	ND(0.43)	In progress		In progress	In progress
	2015/3/3	ND(0.072)	0.094	0.06 <sup>*2</sup>	ND(0.43)	0.041		ND( $7 \times 10^{-6}$ )	$1.1 \times 10^{-5}$
T-0-1A	2015/6/30	ND(0.68)	ND(0.58)	16 <sup>*1</sup>	In progress				
	2015/6/22	ND(0.59)	ND(0.82)	ND(16) <sup>*1</sup>	ND(1.8)				
T-0-1	2015/6/30	ND(0.62)	ND(0.58)	ND(16) <sup>*1</sup>	In progress				
	2015/6/22	ND(0.79)	ND(0.68)	ND(16) <sup>*1</sup>	ND(1.8)				
M-101	2015/5/20	0.0075	0.032		In progress	In progress			
	2015/4/28	0.0067	0.025		0.17	In progress			
	2015/3/5	0.072	0.26		0.92	0.32			
	2015/2/4	0.010	0.039		0.063	0.0036			
F-P03	2015/4/22	ND(0.062)	ND(0.051)	0.02 <sup>*2</sup>	ND(0.44)	In progress		In progress	In progress
	2015/3/3	0.079	0.23	0.14 <sup>*2</sup>	1.4	0.23		ND( $6 \times 10^{-6}$ )	ND( $8 \times 10^{-6}$ )
T-0-2	2015/6/30	ND(0.54)	ND(0.52)	ND(16) <sup>*1</sup>	In progress				
	2015/6/22	ND(0.72)	ND(0.57)	ND(16) <sup>*1</sup>	ND(1.8)				
M-102	2015/5/21	0.027	0.10		In progress	In progress			
	2015/4/27	0.013	0.047		0.12	In progress			
	2015/3/6	0.022	0.077		0.21	0.0035			
	2015/2/5	0.016	0.052		0.17	0.015			
T-0-3A	2015/6/30	ND(0.66)	ND(0.73)	ND(16) <sup>*1</sup>	In progress				
	2015/6/22	ND(0.71)	ND(0.68)	ND(16) <sup>*1</sup>	ND(1.8)				
F-P01	2015/4/22	ND(0.068)	ND(0.050)	0.02 <sup>*2</sup>	ND(0.44)	In progress		In progress	In progress
	2015/3/3	ND(0.068)	0.075	0.04 <sup>*2</sup>	ND(0.43)	0.004		ND( $6 \times 10^{-6}$ )	ND( $6 \times 10^{-6}$ )
T-0-3	2015/6/30	ND(0.81)	ND(0.67)	ND(16) <sup>*1</sup>	In progress				
	2015/6/22	ND(0.76)	ND(0.59)	17 <sup>*1</sup>	ND(1.8)				
T-2-1	2015/6/29	ND(0.68)	ND(0.53)	11 <sup>*1</sup>	ND(1.6)				
	2015/5/4	ND(0.71)	ND(0.74)	12 <sup>*1</sup>	ND(1.5)	ND(0.011)	ND(2.0)		
	2015/4/8	ND(0.66)	ND(0.60)	8.9 <sup>*1</sup>				ND( $6.9 \times 10^{-6}$ )	( $9.7 \pm 2.4$ ) $\times 10^{-6}$

Sea water radioactivity (Bq/L):

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

\*1: Total  $\beta$ : including K-40    \*2: Total  $\beta$ : excluding K-40

0      0.5      1km

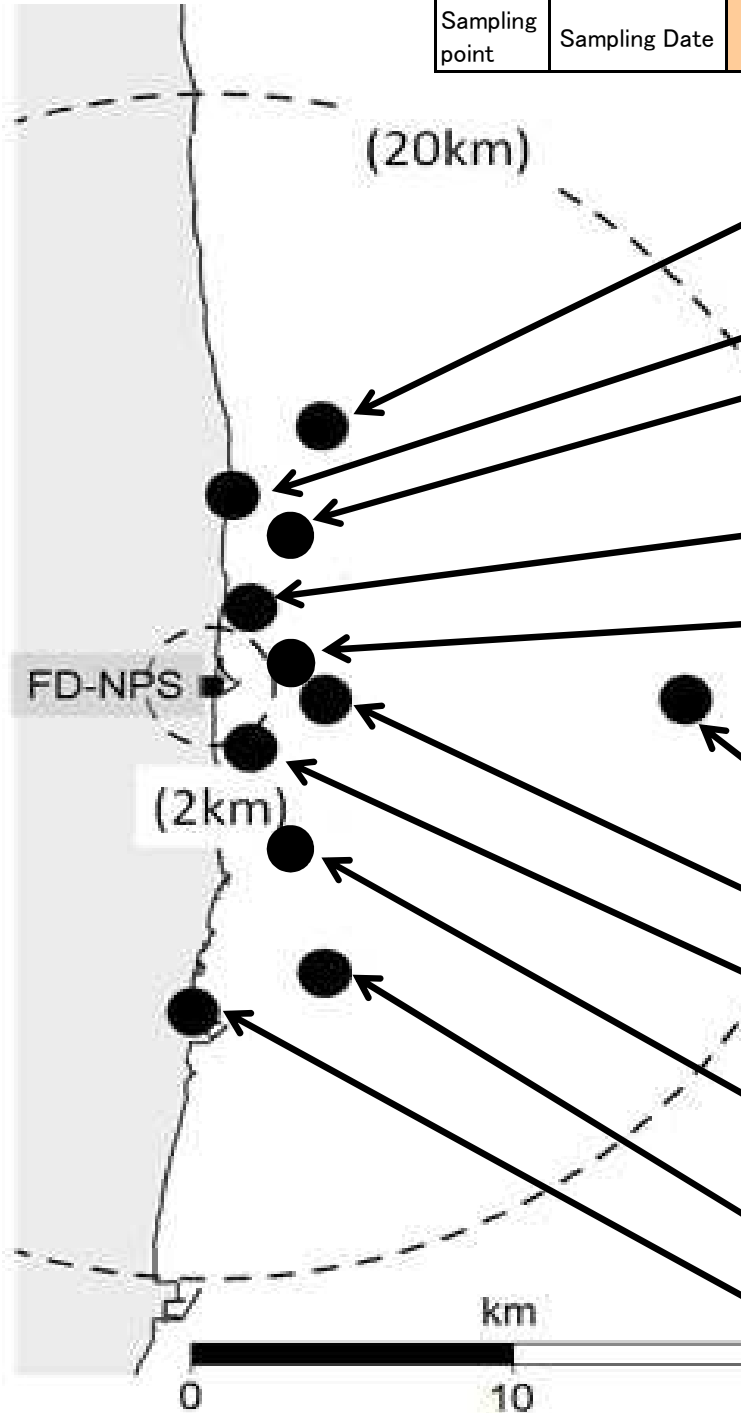
# Sea area between 2-20km radius from the NPS (1)

Sampling point	Sampling Date	Cs-134	Cs-137	total $\beta$	H-3	Sr-90	total $\alpha$	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  $\beta$ : including K-40 \*2: Total  $\beta$ : excluding K-40



T-D1	2015/5/18	ND(0.0019)	0.0074	20 <sup>*1</sup>	ND(0.34)						S
	2015/5/7	0.0032	0.0097	ND(17) <sup>*1</sup>	0.36	ND(0.0079)	ND(1.9)				S
	2015/4/8	0.0017	0.0048	ND(15) <sup>*1</sup>	0.49	ND(0.0099)	ND(2.0)	ND(7.0 × 10 <sup>-6</sup> )	ND(6.8 × 10 <sup>-6</sup> )		S
T-6	2015/5/26	0.028	0.081	ND(18) <sup>*1</sup>	ND(0.36)						S
F-P06	2015/4/22	ND(0.056)	ND(0.050)	0.02 <sup>*2</sup>	ND(0.44)	In progress		In progress	In progress		S
	2015/3/3	ND(0.059)	ND(0.057)	0.03 <sup>*2</sup>	ND(0.43)	0.004		ND(6 × 10 <sup>-6</sup> )	6 × 10 <sup>-6</sup>		S
M-103	2015/5/20	0.0037	0.015		In progress	In progress					0.5m
	2015/4/28	0.0044	0.015		0.14	In progress					0.5m
	2015/3/5	0.0061	0.027		0.11	0.0040					0.5m
	2015/2/4	0.0087	0.032		0.083	0.0041					0.5m
F-P04	2015/4/22	ND(0.066)	ND(0.053)	0.02 <sup>*2</sup>	ND(0.43)	In progress		In progress	In progress		S
	2015/3/3	ND(0.064)	ND(0.052)	0.03 <sup>*2</sup>	0.48	0.002		ND(7 × 10 <sup>-6</sup> )	ND(8 × 10 <sup>-6</sup> )		S
T-5	2015/5/18	ND(0.0018)	0.0038	ND(17) <sup>*1</sup>	ND(0.34)						S
	2015/5/7	ND(0.0018)	0.0048	ND(17) <sup>*1</sup>	ND(0.36)	ND(0.0089)	ND(1.6)				S
	2015/4/9	ND(0.0014)	0.0021	ND(17) <sup>*1</sup>	ND(0.32)	ND(0.011)	ND(1.6)	ND(5.7 × 10 <sup>-6</sup> )	ND(5.6 × 10 <sup>-6</sup> )		S
T-D5	2015/5/18	ND(0.0019)	0.0064	ND(17) <sup>*1</sup>	ND(0.34)						S
	2015/5/7	0.0042	0.012	17 <sup>*1</sup>	ND(0.36)	ND(0.0082)	ND(1.9)				S
	2015/4/8	ND(0.0016)	0.0062	ND(15) <sup>*1</sup>	0.70	ND(0.011)	ND(2.0)	ND(6.3 × 10 <sup>-6</sup> )	ND(6.0 × 10 <sup>-6</sup> )		S
M-104	2015/5/21	0.0016	0.0083		In progress	In progress					0.5m
	2015/4/27	0.0040	0.015		0.091	In progress					0.5m
	2015/3/6	0.0056	0.020		0.10	0.0033					0.5m
	2015/2/5	0.0040	0.017		0.082	0.0034					0.5m
F-P05	2015/4/22	ND(0.075)	ND(0.066)	0.02 <sup>*2</sup>	ND(0.44)	In progress		In progress	In progress		S
	2015/3/3	ND(0.096)	ND(0.053)	0.04 <sup>*2</sup>	ND(0.43)	0.004		ND(6 × 10 <sup>-6</sup> )	8 × 10 <sup>-6</sup>		S
T-D9	2015/5/18	ND(0.0019)	0.0036	17 <sup>*1</sup>	ND(0.34)						S
	2015/5/7	0.0035	0.014	ND(17) <sup>*1</sup>	ND(0.36)	ND(0.0090)	ND(1.6)				S
	2015/4/9	ND(0.0017)	0.0043	ND(17) <sup>*1</sup>	ND(0.32)	ND(0.0092)	ND(1.6)	ND(6.7 × 10 <sup>-6</sup> )	ND(6.5 × 10 <sup>-6</sup> )		S
T-3	2015/5/26	0.0083	0.034	ND(15) <sup>*1</sup>	ND(0.32)						S

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

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

T-S1	2015/5/21	0.0022	0.0065	S
		0.0035	0.014	B

T-14	2015/5/25	0.036	0.14	S
		0.0019	0.0087	B

T-D1	2015/5/25	0.0031	0.013	S
		0.0054	0.021	B

T-6	2015/5/26	0.028	0.081	S
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T-S8	2015/5/10	0.0020	0.0084	S
		0.0015	0.0073	B

T-3	2015/5/26	0.0083	0.034	S
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T-S7	2015/5/14	0.0034	0.013	S
		0.0028	0.012	B

T-S5	2015/5/14	ND(0.0014)	0.0088	S
		0.0025	0.013	B

T-S3	2015/5/19	0.0053	0.025	S
		0.0021	0.011	B

T-S4	2015/5/19	ND(0.0014)	0.0065	S
		ND(0.0015)	0.0075	B

T-D5	2015/5/25	0.0069	0.022	S
		0.0017	0.0074	B

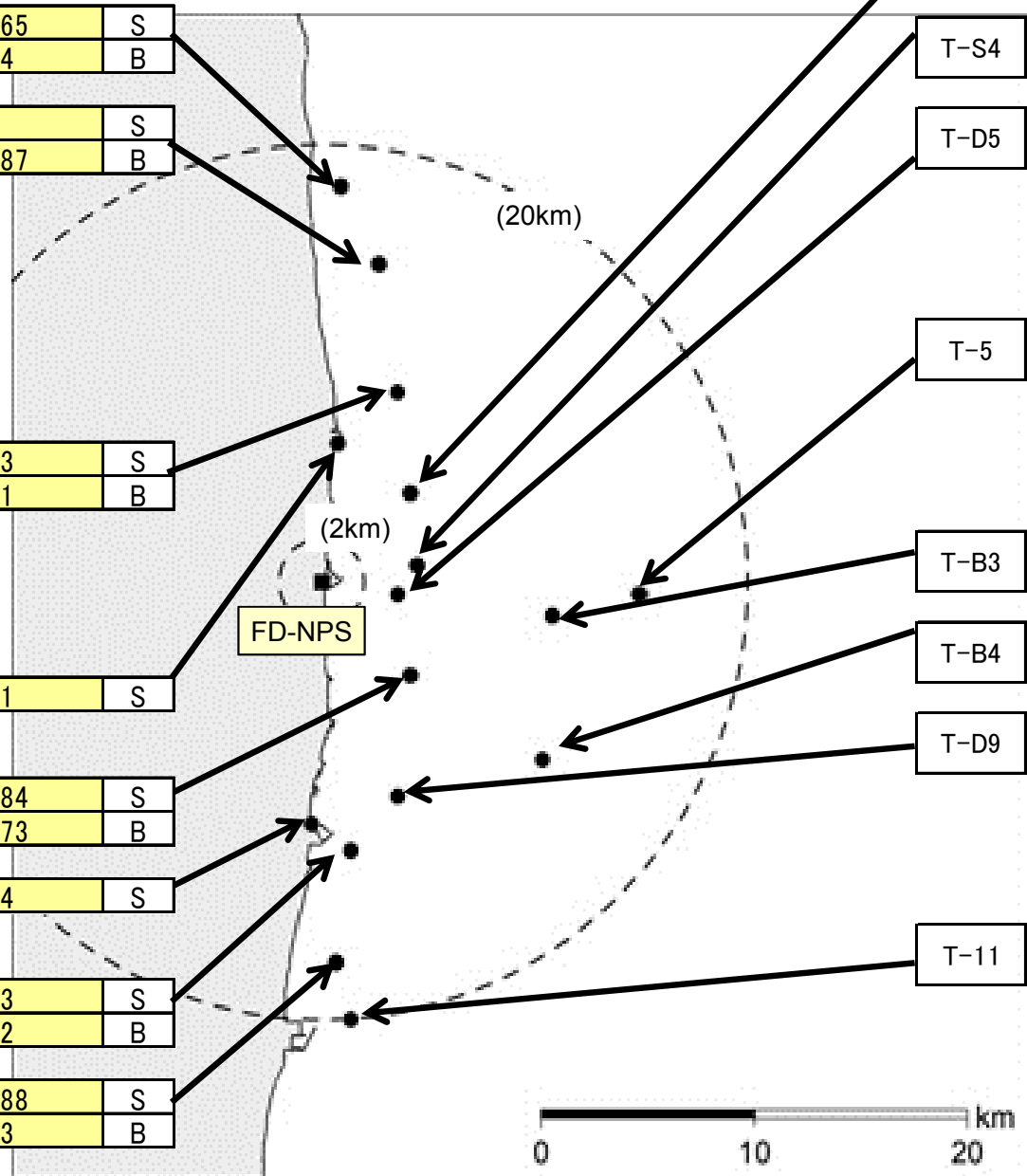
T-5	2015/5/25	ND(0.0019)	0.0037	S
		ND(0.0019)	0.0041	B

T-B3	2015/5/22	ND(0.0013)	0.0039	S
		ND(0.0014)	0.0050	B

T-B4	2015/5/22	ND(0.0013)	0.0035	S
		ND(0.0014)	0.0055	B

T-D9	2015/5/25	0.0028	0.0085	S
		ND(0.0018)	0.0063	B

T-11	2015/5/25	ND(0.0013)	0.0077	S
		0.0020	0.0075	B



# 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

T-MA	2015/5/21	0.0015 0.0016	0.0074 0.0077		S B
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T-13-1	2015/5/21	ND(0.0013) 0.0016	0.0060 0.011		S B
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T-7	2015/5/27	ND(0.0014) ND(0.0013)	0.0035 0.0026		S B
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T-4	2015/5/26	0.0054	0.023		S
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T-12	2015/5/15	0.0021 0.0015	0.0065 0.0061		S B
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T-17-1	2015/5/15	ND(0.0013) ND(0.0012)	0.0060 0.0065		S B
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M-C1	2015/1/22	ND(0.00072) ND(0.00087)	0.0028 0.0030		1m 50m
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T-B1	2015/5/26	ND(0.0014) ND(0.0014)	0.0037 0.0057		S B
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M-D1	2015/2/2	ND(0.00076) ND(0.00061) ND(0.00075)	0.0024 0.0019 0.0021		1m 50m 120m
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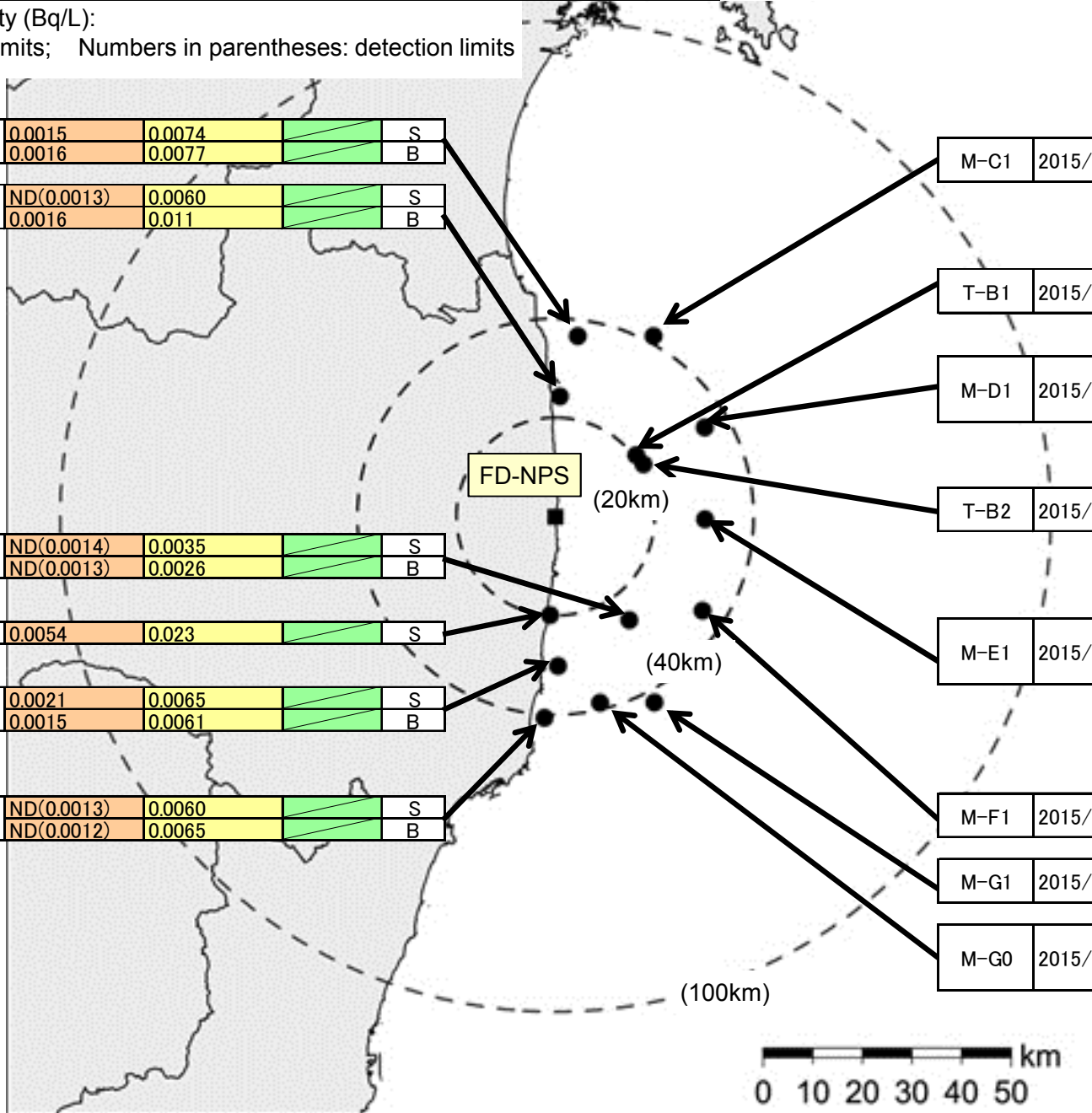
T-B2	2015/5/26	ND(0.0014) 0.0016	0.0042 0.0073		S B
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M-E1	2015/2/6	ND(0.00057) ND(0.00067) ND(0.00065)	0.0022 0.0025 0.0020		1m 50m 131m
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M-F1	2015/1/24	ND(0.00069) 0.00091	0.0038 0.0043		1m 138m
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M-G1	2015/1/24	ND(0.00068) ND(0.00065)	0.0032 0.0026		1m 133m
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M-G0	2015/1/26	0.00064 0.0015 0.0014	0.0048 0.0054 0.0057		1m 50m 102m
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# Sea area between 20-100km radius from the NPS(2)

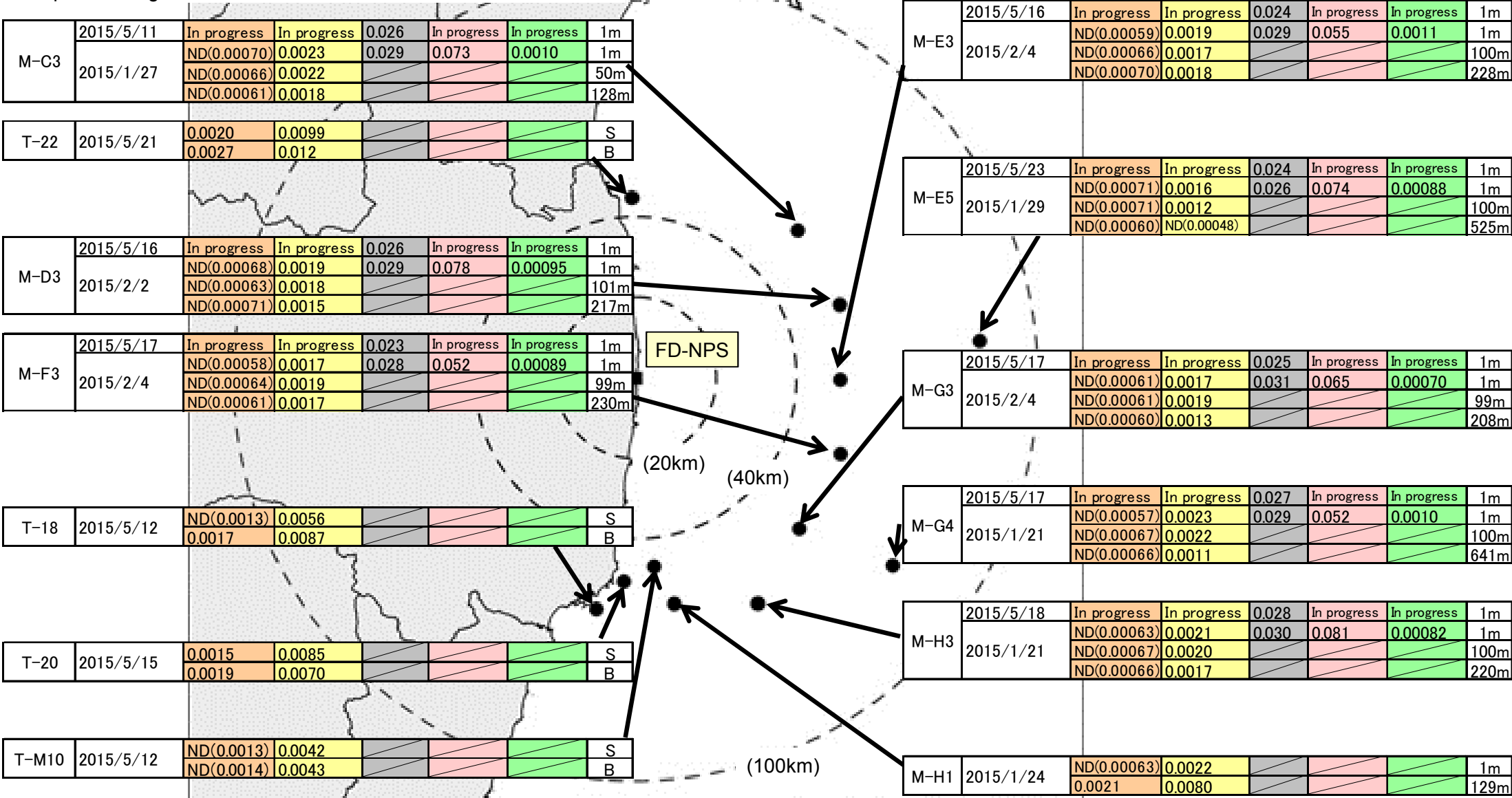
Sampling point	Sampling Date	Cs-134	Cs-137	Total β*	H-3	Sr-90	S/B	S:2m below sea level	B:2-3m above sea bottom
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Depth(m) from sea level
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Sea water radioactivity (Bq/L):

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

\*Total β: excluding K-40

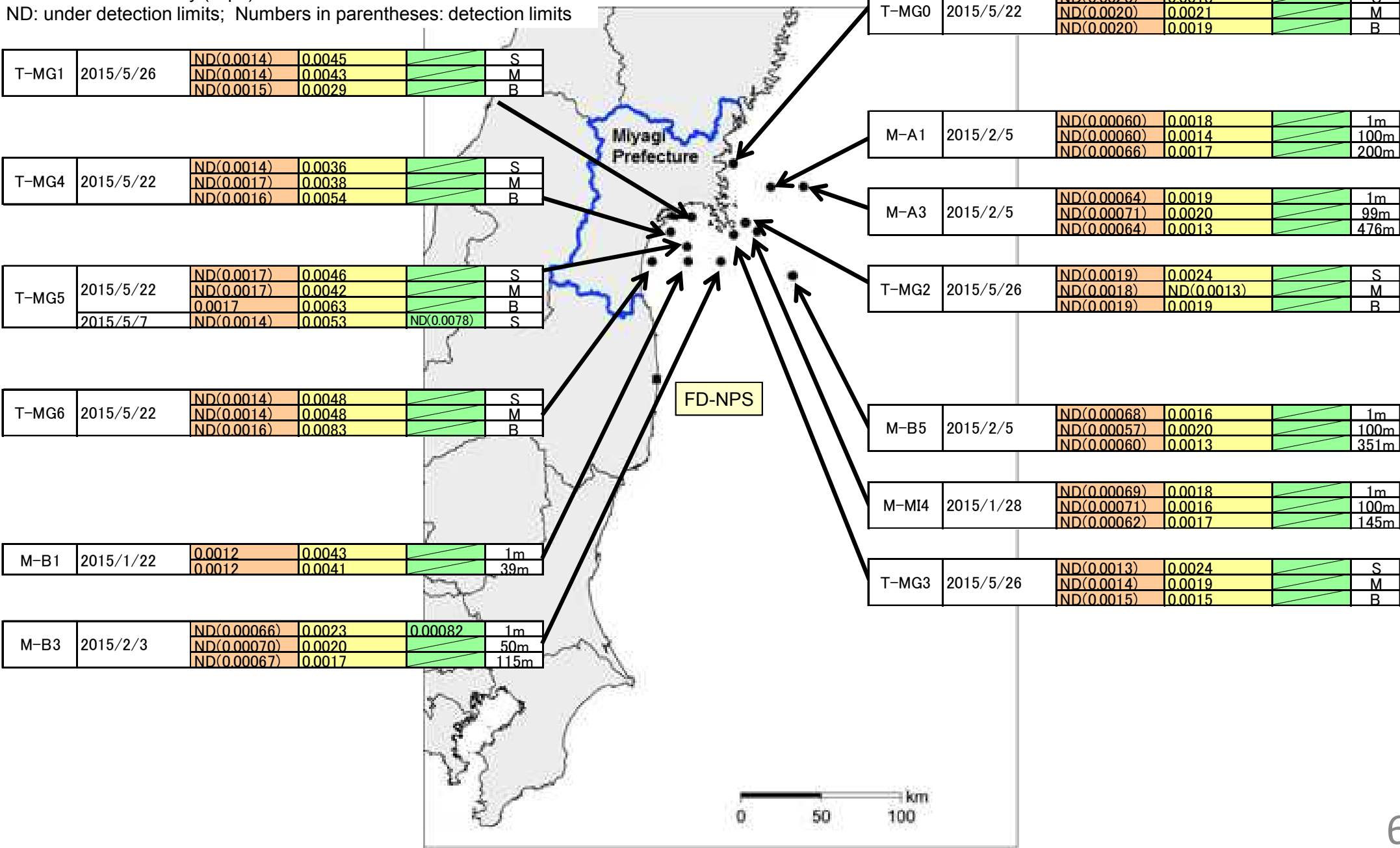


# Sea area along and off the coast of Miyagi Prefecture

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

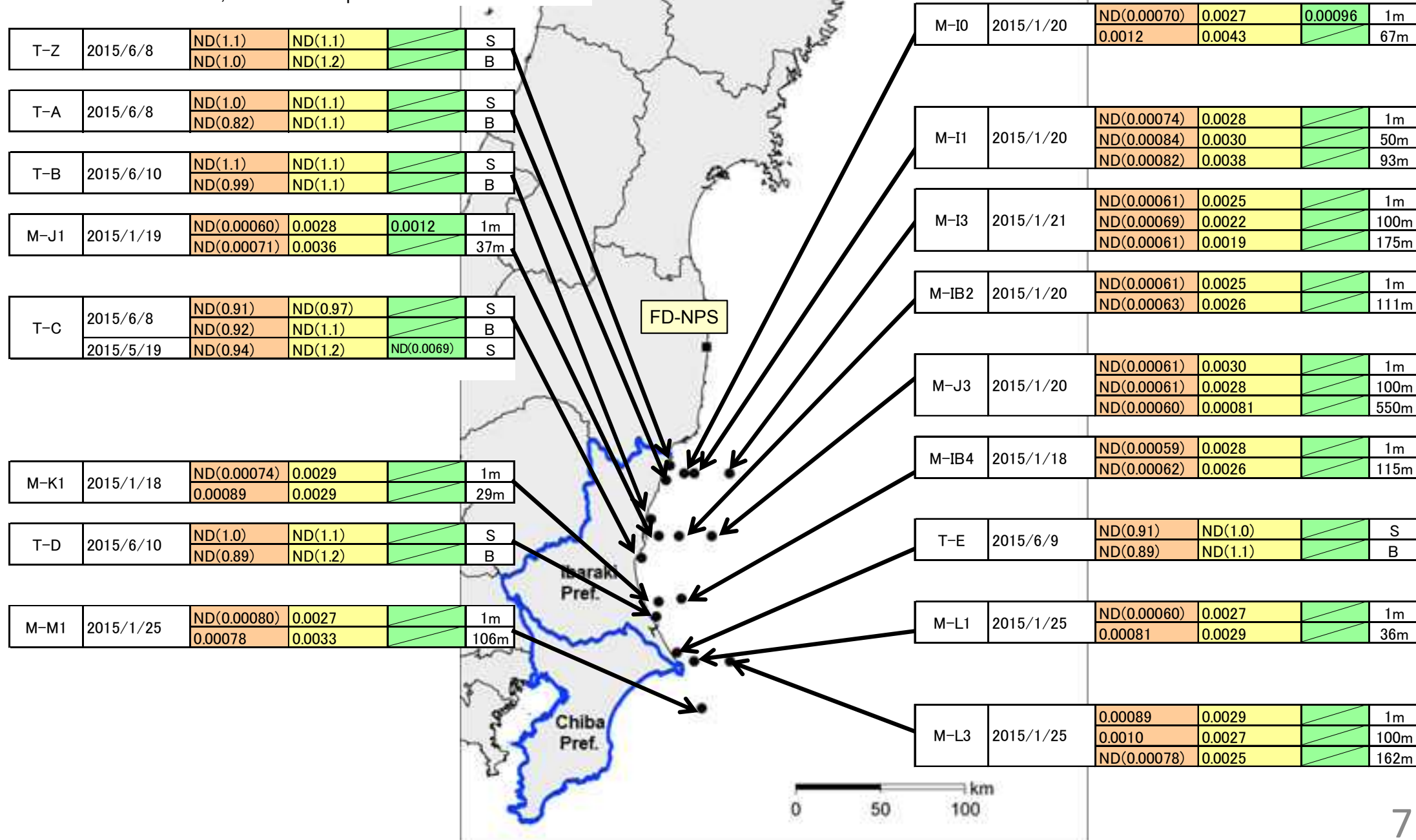


# Sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

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





# 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	2014/10/22	ND(0.00073)	0.0018	1m
		ND(0.00061)	0.0017	103m
		ND(0.00065)	0.0013	200m
		ND(0.00066)	0.0010	301m
		ND(0.00061)	0.00060	498m

M-11	2014/10/25	ND(0.00065)	0.0018	1m
		ND(0.00060)	0.0031	100m
		ND(0.00059)	0.0020	200m
		ND(0.00057)	0.0014	300m
		ND(0.00059)	0.0011	500m

M-14	2014/10/24	ND(0.00065)	0.0023	1m
		0.00064	0.0028	100m
		ND(0.00061)	0.0017	200m
		ND(0.00071)	0.0012	300m
		ND(0.00067)	0.00073	500m

M-15	2014/10/25	ND(0.00057)	0.0020	1m
		ND(0.00064)	0.0026	100m
		ND(0.00061)	0.0015	200m
		ND(0.00059)	0.0013	300m
		ND(0.00058)	0.00066	500m

M-19	2014/10/28	ND(0.00058)	0.0018	1m
		ND(0.00052)	0.0027	100m
		0.0013	0.0045	200m
		ND(0.00063)	0.0034	300m
		ND(0.00055)	0.0017	500m

M-21	2014/10/26	ND(0.00058)	0.0015	1m
		ND(0.00065)	0.0026	100m
		0.0010	0.0041	200m
		0.00080	0.0042	300m
		0.00068	0.0029	500m

M-20	2014/10/29	ND(0.00066)	0.0016	1m
		ND(0.00062)	0.0027	100m
		0.0016	0.0046	200m
		ND(0.00078)	0.0045	300m
		ND(0.00069)	0.0014	500m

M-26	2014/10/27	ND(0.00070)	0.0016	1m
		0.00095	0.0030	100m
		0.00074	0.0027	200m
		ND(0.00062)	0.0026	300m
		ND(0.00065)	0.00093	500m

M-25	2014/10/27	ND(0.00061)	0.0016	1m
		ND(0.00056)	0.0029	100m
		ND(0.00058)	0.0029	200m
		ND(0.00071)	0.0021	300m
		ND(0.00056)	0.00083	500m

M-27	2014/10/26	ND(0.00063)	0.0016	1m
		ND(0.00062)	0.0025	100m
		0.00070	0.0030	200m
		ND(0.00063)	0.0024	300m
		ND(0.00056)	0.0014	500m

