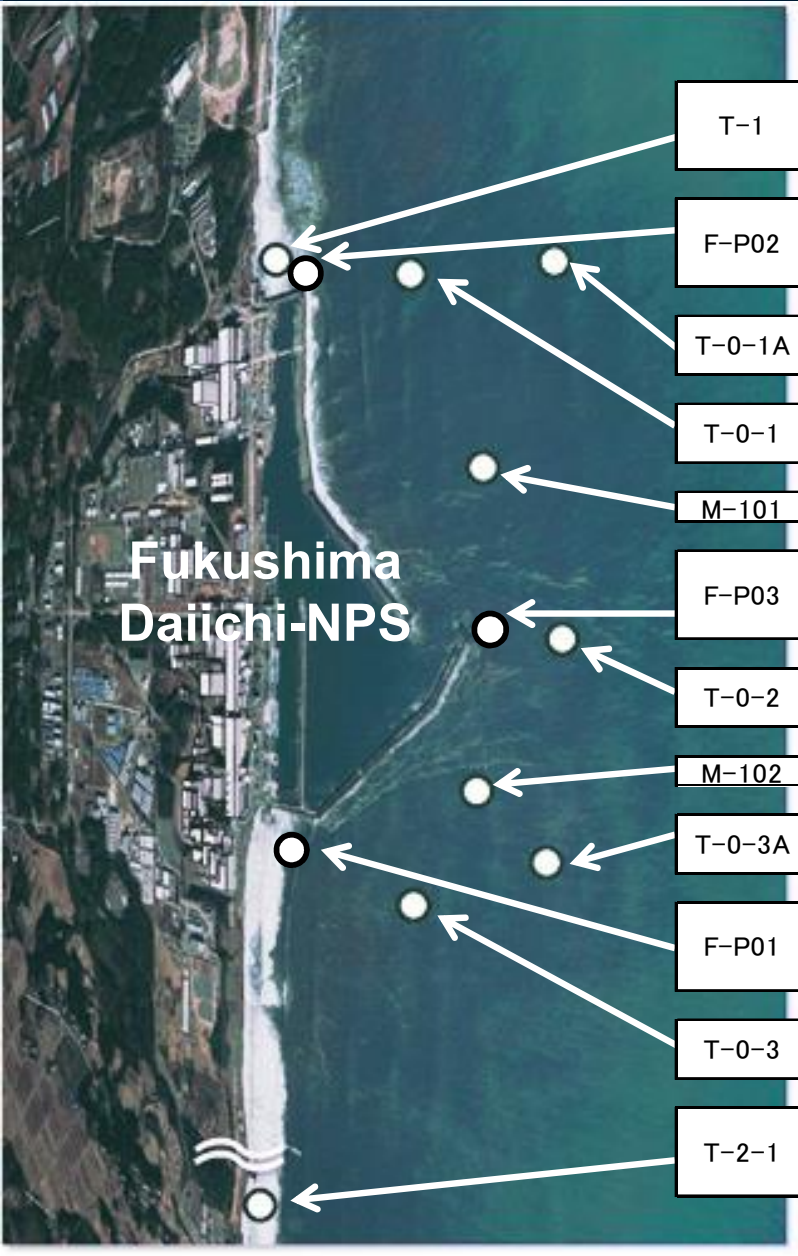


# Sea Area Monitoring

May 27 , 2014

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+Pu-240
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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-1	2014/5/12	ND(0.77)	0.97	11 <sup>*1</sup>	8.7				
	2014/4/10	ND(0.85)	ND(0.82)					ND( $5.6 \times 10^{-6}$ )	( $9.4 \pm 2.2$ ) $\times 10^{-6}$
	2014/3/10	ND(0.78)	0.77	13 <sup>*1</sup>	4.4	0.69	ND(1.5)		
F-P02	2014/4/14	ND(0.060)	ND(0.052)	0.04 <sup>*2</sup>	In progress	In progress		In progress	In progress
	2014/3/10	ND(0.067)	0.085	0.04 <sup>*2</sup>	ND(0.31)	In progress		In progress	In progress
	2014/2/3	0.084	0.19	0.08 <sup>*2</sup>	0.47	0.063		ND( $6 \times 10^{-6}$ )	ND( $8 \times 10^{-6}$ )
T-0-1A	2014/5/14	ND(0.66)	ND(0.60)	ND(16) <sup>*1</sup>	In progress				
	2014/5/7	ND(0.55)	ND(0.62)	ND(17) <sup>*1</sup>	ND(1.9)				
T-0-1	2014/5/14	ND(0.67)	ND(0.68)	ND(16) <sup>*1</sup>	In progress				
	2014/5/7	ND(0.60)	ND(0.71)	ND(17) <sup>*1</sup>	2.5				
M-101	2014/1/15	0.030	0.078		0.17	0.022			
F-P03	2014/4/14	ND(0.069)	ND(0.053)	0.03 <sup>*2</sup>	In progress	In progress		In progress	In progress
	2014/3/10	ND(0.065)	0.15	0.07 <sup>*2</sup>	ND(0.031)	In progress		In progress	In progress
	2014/2/3	0.54	1.3	0.68 <sup>*2</sup>	3.4	1.1		ND( $6 \times 10^{-6}$ )	$6 \times 10^{-6}$
T-0-2	2014/5/14	ND(0.74)	ND(0.60)	ND(16) <sup>*1</sup>	In progress				
	2014/5/7	ND(0.88)	ND(0.56)	ND(17) <sup>*1</sup>	2.6				
M-102	2014/1/16	0.054	0.13		0.47	0.063			
T-0-3A	2014/5/14	ND(0.76)	ND(0.69)	ND(16) <sup>*1</sup>	In progress				
	2014/5/7	ND(0.64)	ND(0.52)	ND(17) <sup>*1</sup>	ND(1.9)				
F-P01	2014/4/14	ND(0.065)	0.078	0.04 <sup>*2</sup>	In progress	In progress		In progress	In progress
	2014/3/10	ND(0.069)	0.14	0.06 <sup>*2</sup>	0.40	In progress		In progress	In progress
	2014/2/3	ND(0.070)	0.20	0.05 <sup>*2</sup>	0.48	0.046		ND( $6 \times 10^{-6}$ )	ND( $6 \times 10^{-6}$ )
T-0-3	2014/5/14	ND(0.69)	ND(0.57)	ND(16) <sup>*1</sup>	In progress				
	2014/5/7	ND(0.67)	ND(0.45)	ND(17) <sup>*1</sup>	2.4				
T-2-1	2014/5/12	ND(0.53)	ND(0.69)	13 <sup>*1</sup>	4.3				
	2014/4/10	ND(0.70)	ND(0.58)	9.0 <sup>*1</sup>				ND( $5.6 \times 10^{-6}$ )	( $3.1 \pm 0.41$ ) $\times 10^{-5}$
	2014/3/10	ND(0.55)	ND(0.70)	13 <sup>*1</sup>	ND(1.4)	0.032	ND(1.5)		

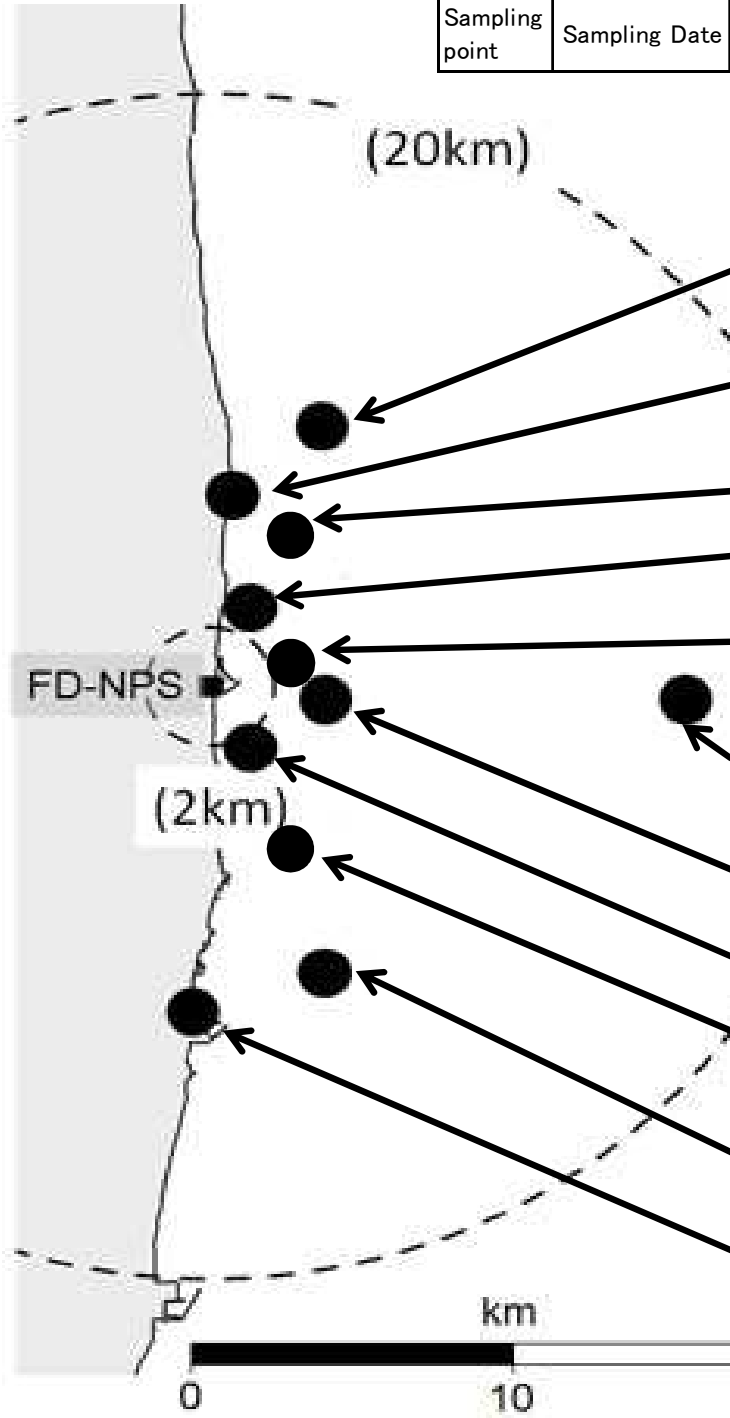
# Sea area between 2-20km radius from the NPS (1)

Sampling point	Sampling Date	Cs-134	Cs-137	total $\beta$	H-3	Sr-90	total $\alpha$	Pu-238	Pu-239+Pu-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

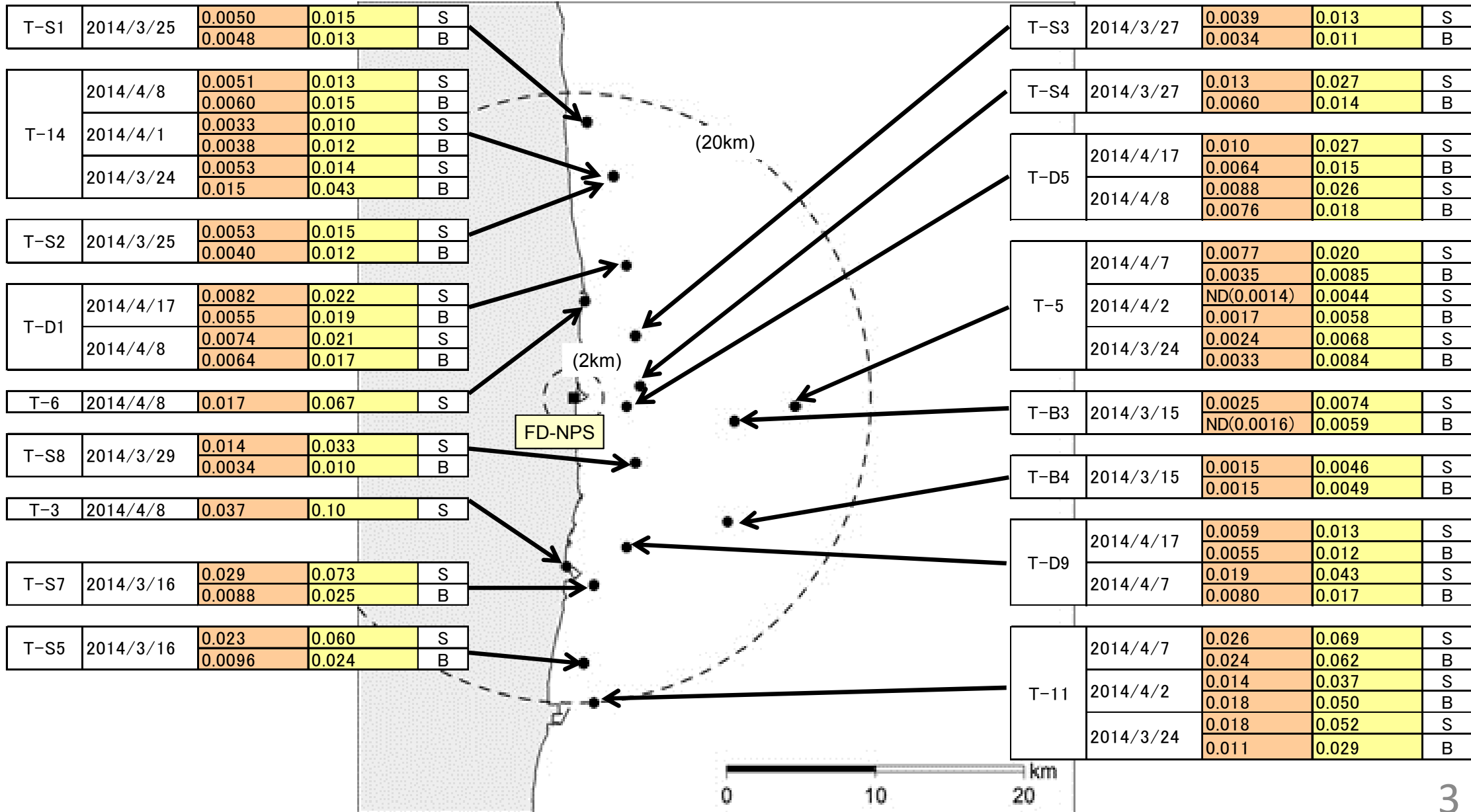


T-D1	2014/4/1	0.0027	0.0086	ND(17) <sup>*1</sup>	ND(0.30)	ND(0.009)	ND(1.9)	In progress	In progress	S
	2014/3/19	0.0074	0.021	ND(17) <sup>*1</sup>	ND(0.31)					S
	2014/3/4	0.0039	0.015	ND(15) <sup>*1</sup>	ND(0.29)	ND(0.009)	ND(1.9)	ND(7.3 × 10 <sup>-6</sup> )	(7.8+2.4) × 10 <sup>-6</sup>	S
T-6	2014/4/8	0.017	0.067	ND(16) <sup>*1</sup>	0.84					S
	2014/3/25	0.025	0.065	ND(17) <sup>*1</sup>	ND(0.31)					S
F-P06	2014/4/14	ND(0.058)	ND(0.047)	0.03 <sup>*2</sup>	In progress	In progress		In progress	In progress	S
	2014/3/10	ND(0.058)	ND(0.049)	0.03 <sup>*2</sup>	ND(0.30)	In progress		In progress	In progress	S
	2014/2/3	ND(0.057)	0.17	0.07 <sup>*2</sup>	0.39	0.084		ND(8 × 10 <sup>-6</sup> )	7 × 10 <sup>-6</sup>	S
M-103	2014/1/15	0.016	0.040		0.058	0.0053				0.5m
F-P04	2014/4/14	ND(0.072)	ND(0.051)	0.03 <sup>*2</sup>	In progress	In progress		In progress	In progress	S
	2014/3/10	ND(0.067)	ND(0.061)	0.03 <sup>*2</sup>	ND(0.31)	In progress		In progress	In progress	S
	2014/2/3	ND(0.071)	0.088	0.04 <sup>*2</sup>	ND(0.32)	0.014		ND(7 × 10 <sup>-6</sup> )	ND(7 × 10 <sup>-6</sup> )	S
T-5	2014/4/2	ND(0.0014)	0.0044	ND(17) <sup>*1</sup>	ND(0.30)	ND(0.009)	ND(1.9)	In progress	In progress	S
	2014/3/24	0.0024	0.0068	ND(17) <sup>*1</sup>	ND(0.31)					S
	2014/3/5	0.0016	0.0042	ND(15) <sup>*1</sup>	ND(0.29)	ND(0.009)	ND(1.9)	ND(7.6 × 10 <sup>-6</sup> )	ND(7.3 × 10 <sup>-6</sup> )	S
T-D5	2014/4/1	0.0058	0.012	ND(17) <sup>*1</sup>	ND(0.30)	ND(0.009)	ND(1.9)	In progress	In progress	S
	2014/3/19	0.0073	0.026	ND(17) <sup>*1</sup>	ND(0.31)					S
	2014/3/4	0.0073	0.018	ND(15) <sup>*1</sup>	ND(0.29)	ND(0.009)	ND(1.9)	ND(7.8 × 10 <sup>-6</sup> )	ND(8.4 × 10 <sup>-6</sup> )	S
M-104	2014/1/16	0.024	0.062		0.12	0.019				0.5m
F-P05	2014/4/14	ND(0.058)	ND(0.060)	0.03 <sup>*2</sup>	In progress	In progress		In progress	In progress	S
	2014/3/10	ND(0.057)	ND(0.056)	0.03 <sup>*2</sup>	ND(0.31)	In progress		In progress	In progress	S
	2014/2/3	ND(0.058)	0.068	0.04 <sup>*2</sup>	ND(0.32)	0.007		ND(8 × 10 <sup>-6</sup> )	ND(9 × 10 <sup>-6</sup> )	S
T-D9	2014/4/2	0.0041	0.010	ND(16) <sup>*1</sup>	ND(0.30)	ND(0.008)	ND(1.9)			S
	2014/3/19	0.0092	0.025	ND(16) <sup>*1</sup>	ND(0.27)					S
	2014/3/3	0.0058	0.014	ND(15) <sup>*1</sup>	ND(0.29)	ND(0.008)	ND(1.9)	ND(7.1 × 10 <sup>-6</sup> )	(7.6+2.2) × 10 <sup>-6</sup>	S
T-3	2014/4/1	0.054	0.16	ND(16) <sup>*1</sup>	ND(0.30)					S
	2014/3/18	0.049	0.12	ND(17) <sup>*1</sup>	ND(0.31)					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



# 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	2014/3/18	0.0027 0.0037	0.0091 0.0092		S B
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T-13-1	2014/3/18	0.0045 0.0059	0.013 0.017		S B
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T-7	2014/4/2	0.0019 0.0027	0.0075 0.0062		S B
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T-4	2014/4/8	0.035	0.082		S
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T-12	2014/3/2	0.016 0.016	0.038 0.040		S B
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T-17-1	2014/3/2	0.019 0.016	0.053 0.044		S B
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M-C1	2014/1/26	0.00096 0.00063	0.0034 0.0027	0.00090 	1m 48m
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T-B1	2014/3/20	0.0023 0.0020	0.0069 0.0065		S B
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M-D1	2014/1/23	0.00094 ND(0.00060)	0.0033 0.0034	0.00085 	1m 50m 114m
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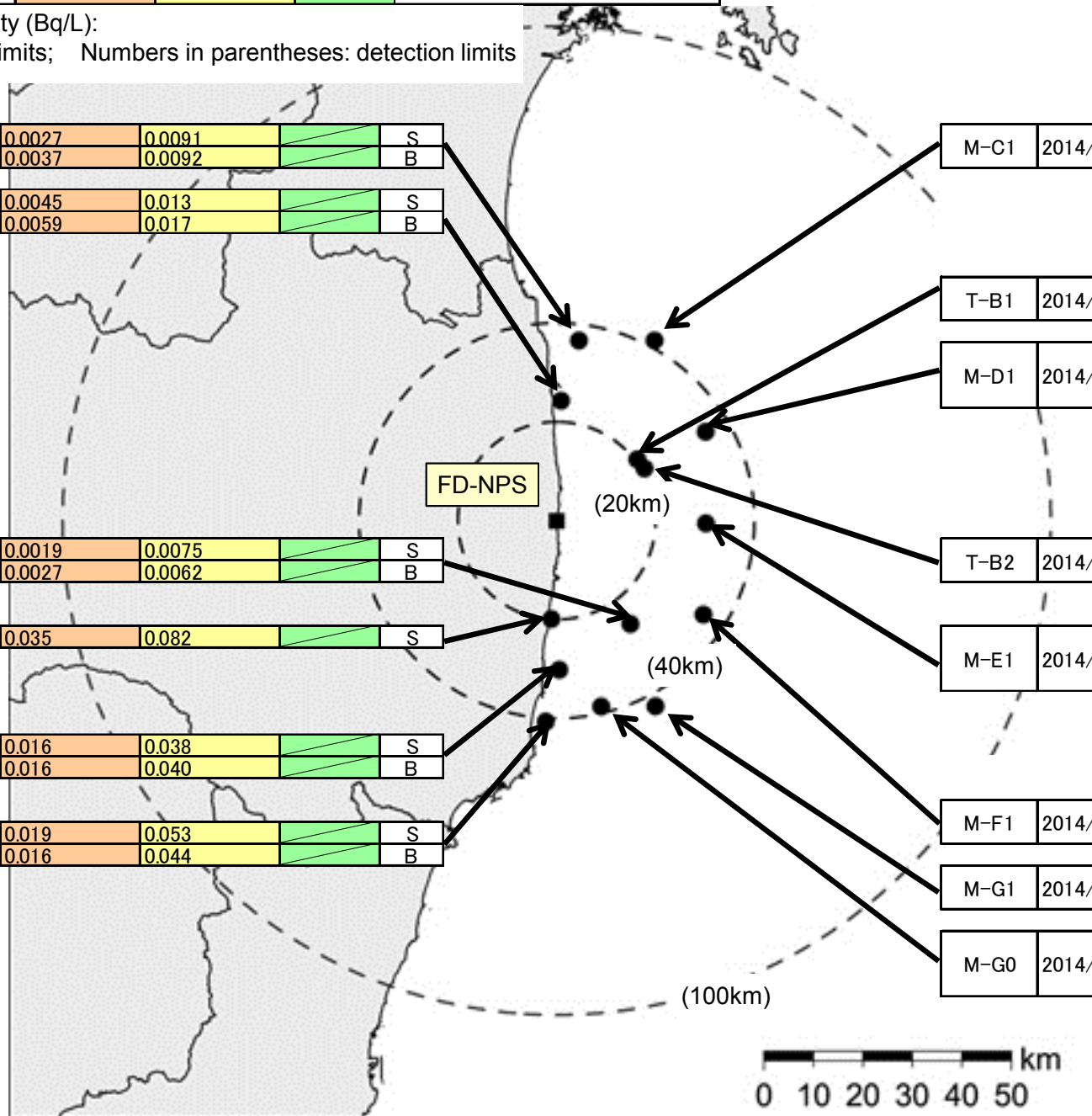
T-B2	2014/3/20	0.0047 0.0023	0.013 0.0073		S B
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M-E1	2014/1/23	ND(0.00059) ND(0.00074)	0.0027 0.0019	0.00081 	1m 50m 125m
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M-F1	2014/1/18	0.00063 ND(0.00071)	0.0025 0.0022		1m 132m
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M-G1	2014/1/16	ND(0.00067) ND(0.00071)	0.0018 0.0020		1m 129m
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M-G0	2014/1/18	0.0018 0.0019 0.0045	0.0061 0.0069 0.012		1m 50m 97m
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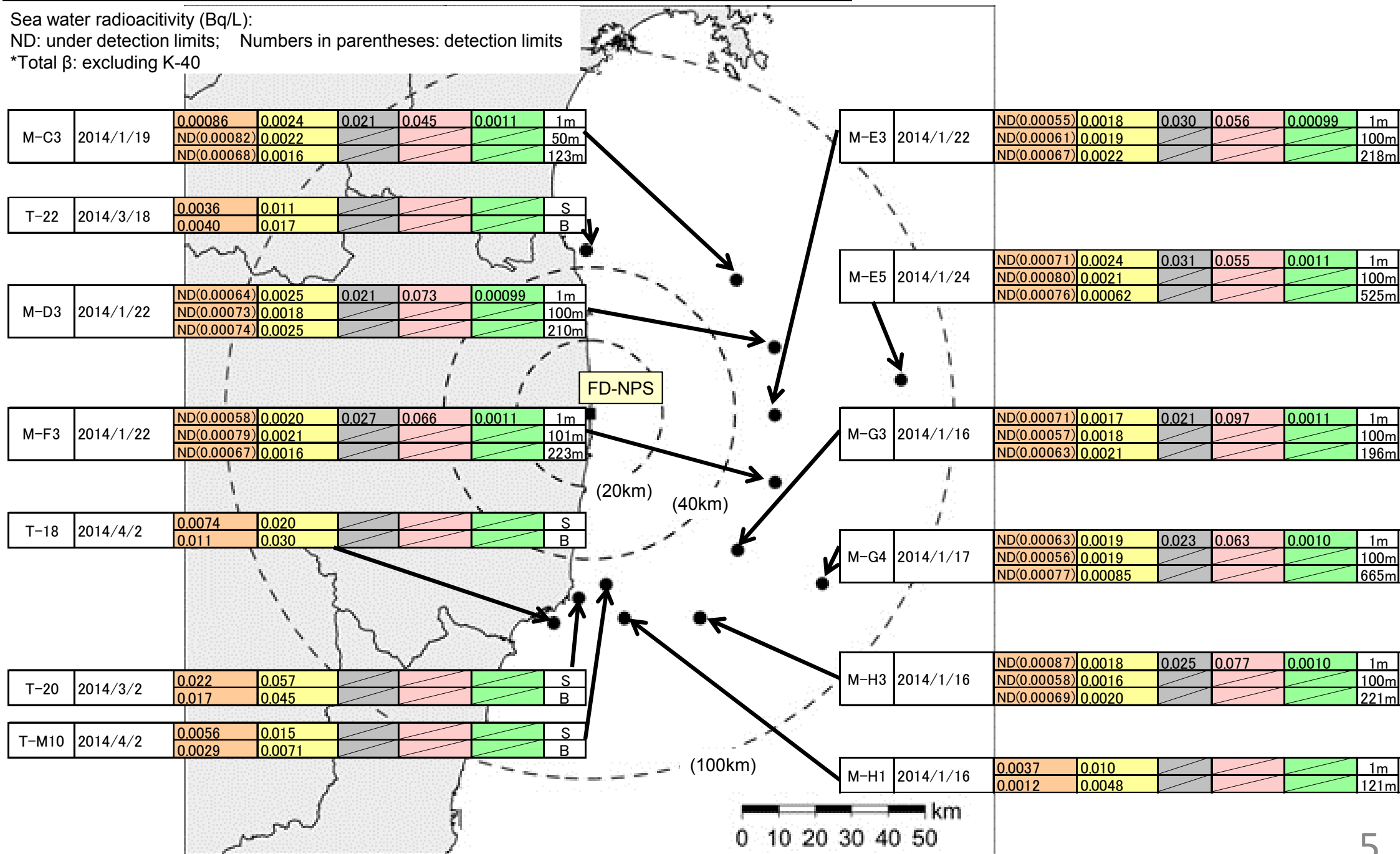
# Sea area between 20-100km radius from the NPS(2)

Sampling point	Sampling Date	Cs-134	Cs-137	Total $\beta$ *	H-3	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

\*Total  $\beta$ : excluding K-40

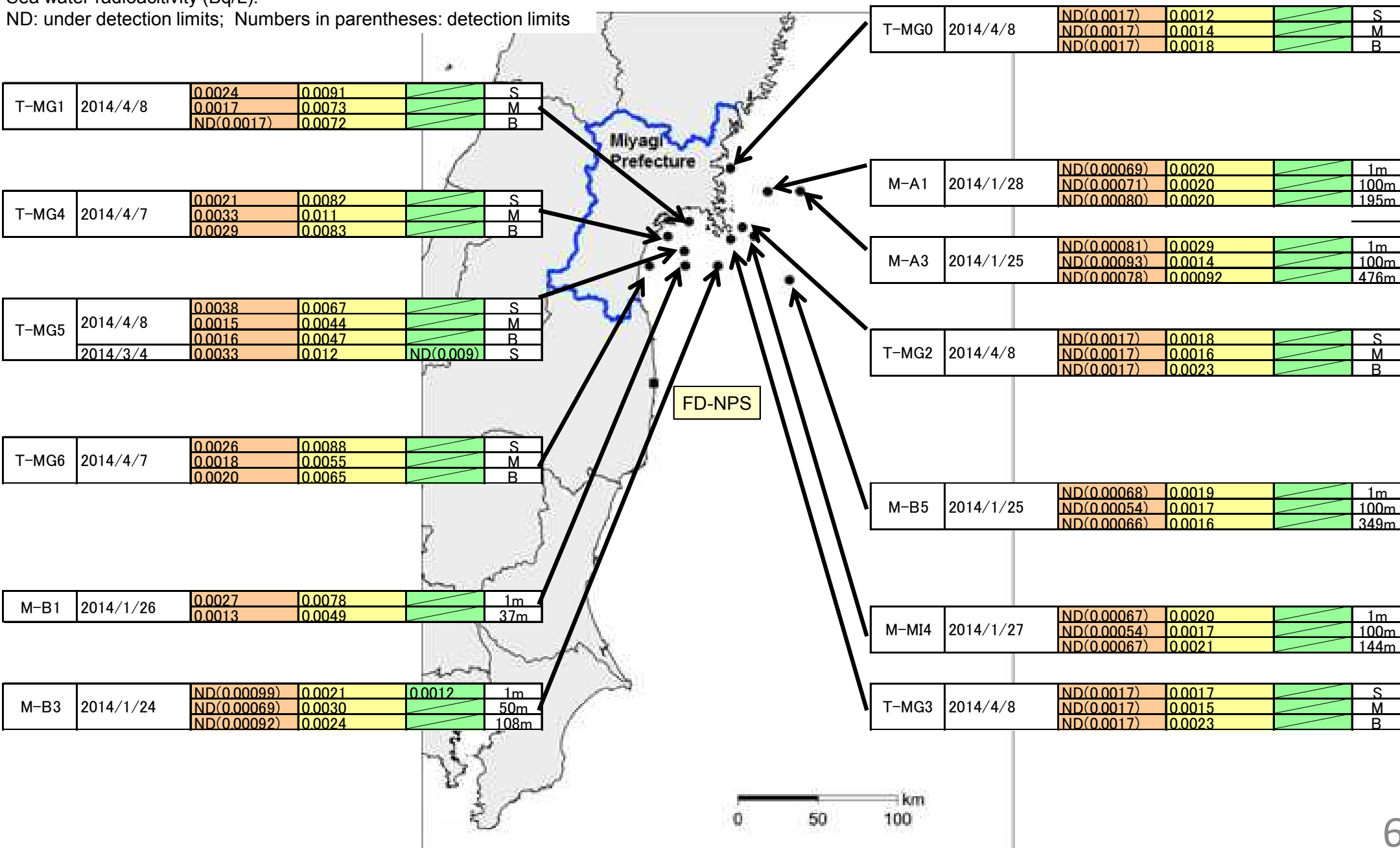


# Sea area along and off the coast of Miyagi Prefecture

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

T-Z	2014/4/14	ND(1.1)	ND(1.3)	/	S
		ND(1.1)	ND(1.3)		B

T-A	2014/4/14	ND(1.1)	ND(1.3)	/	S
		ND(1.1)	ND(1.3)		B

T-B	2014/4/16	ND(1.1)	ND(1.3)	/	S
		ND(1.1)	ND(1.3)		B

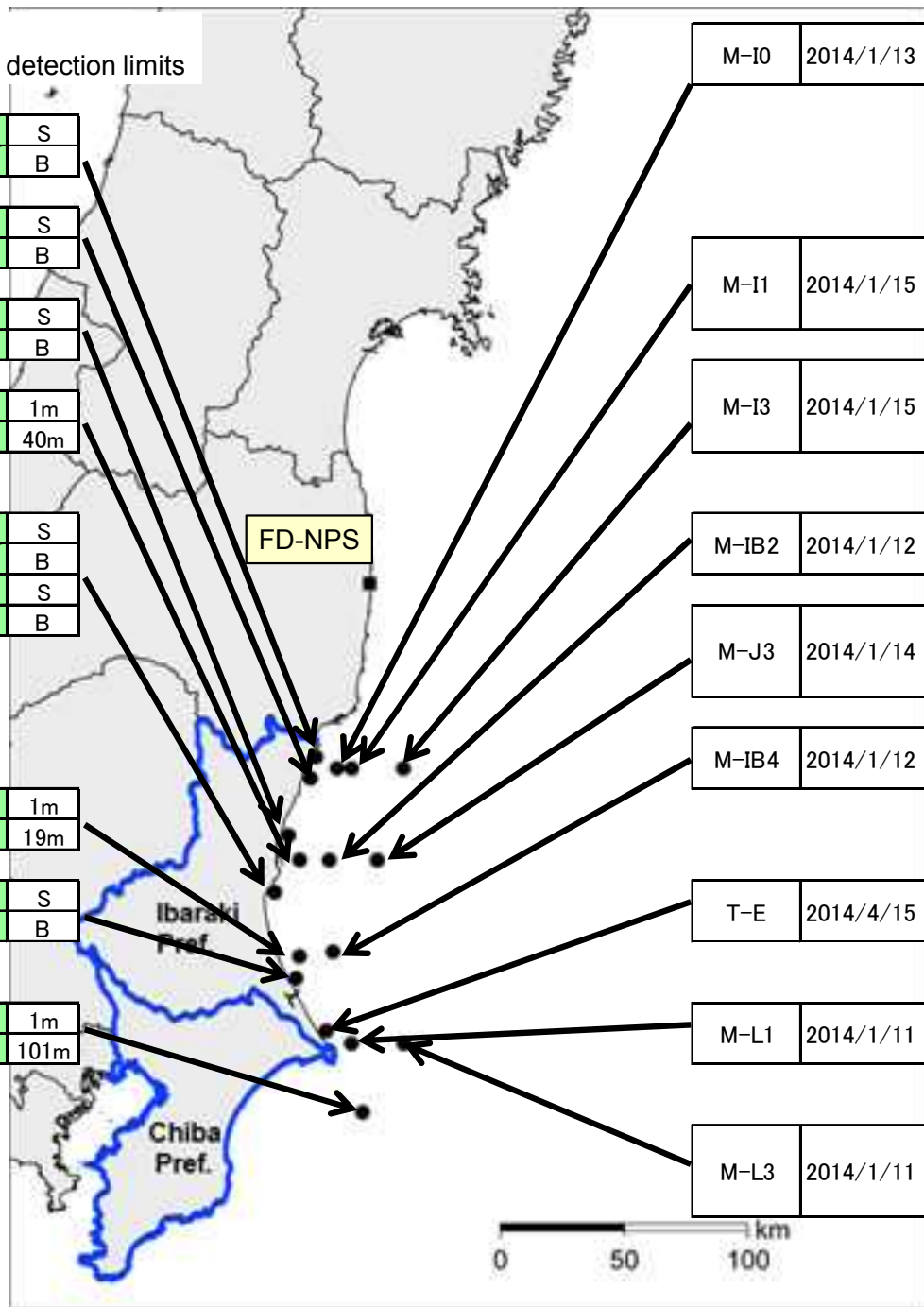
M-J1	2014/1/13	0.0027	0.0076	0.00079	1m
		0.0026	0.0082	/	40m

T-C	2014/4/16	ND(1.1)	ND(1.3)	/	S
		ND(1.1)	ND(1.3)		B
	2014/3/12	ND(1.2)	ND(1.3)	ND(0.009)	S
		ND(1.2)	ND(1.3)	/	B

M-K1	2014/1/12	0.00077	0.0039	/	1m
		0.0015	0.0040		19m

T-D	2014/4/15	ND(1.1)	ND(1.3)	/	S
		ND(1.1)	ND(1.3)		B

M-M1	2014/1/11	ND(0.00092)	0.0029	/	1m
		ND(0.00073)	0.0038		101m



M-I0	2014/1/13	0.0043	0.014	/	1m
		0.0054	0.013		63m

M-I1	2014/1/15	0.0043	0.011	/	1m
		0.0050	0.013		50m
		0.0060	0.015		90m

M-I3	2014/1/15	0.00099	0.0040	/	1m
		0.0013	0.0040		100m
		0.0012	0.0043		175m

M-IB2	2014/1/12	0.00092	0.0029	0.0011	1m
		0.0047	0.012	/	104m

M-J3	2014/1/14	ND(0.00069)	0.0023	/	1m
		ND(0.00068)	0.0025		100m
		ND(0.00061)	0.0011		560m

M-IB4	2014/1/12	ND(0.00089)	0.0031	/	1m
		0.00099	0.0029		107m

T-E	2014/4/15	ND(1.1)	ND(1.3)	/	S
		ND(1.1)	ND(1.3)		B

M-L1	2014/1/11	ND(0.00089)	0.0024	/	1m
		0.0012	0.0030		35m

M-L3	2014/1/11	ND(0.00083)	0.0023	/	1m
		ND(0.00091)	0.0029		100m
		0.00088	0.0027		156m



# 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	2013/10/19	ND(0.00080)	0.0026	1m
		ND(0.00079)	0.0029	100m
		ND(0.00056)	0.0018	200m
		ND(0.00064)	0.0012	300m
		ND(0.00071)	0.00080	500m

M-11	2013/10/19	ND(0.00064)	0.0022	1m
		0.0020	0.0061	100m
		0.00071	0.0029	200m
		ND(0.00077)	0.0025	300m
		ND(0.00054)	0.0013	500m

M-14	2013/10/28	ND(0.00078)	0.0025	1m
		ND(0.00069)	0.0018	100m
		ND(0.00058)	0.0016	200m
		ND(0.00058)	0.0016	300m
		ND(0.00065)	0.00091	500m

M-15	2013/10/29	ND(0.00069)	0.0019	1m
		0.00091	0.0018	100m
		ND(0.00070)	0.0019	200m
		ND(0.00050)	0.0018	300m
		ND(0.00057)	0.00065	500m

M-19	2013/10/30	ND(0.00082)	0.0018	1m
		ND(0.00069)	0.0025	100m
		ND(0.00058)	0.0021	200m
		ND(0.00069)	0.0015	300m
		ND(0.00066)	0.00093	500m

M-21	2013/10/29	ND(0.00083)	0.0017	1m
		ND(0.00060)	0.0015	100m
		0.00097	0.0039	200m
		0.00078	0.0028	300m
		ND(0.00072)	0.0011	500m

M-20	2013/10/30	ND(0.00060)	0.0017	1m
		ND(0.00071)	0.0022	100m
		0.0014	0.0050	200m
		ND(0.00089)	0.0038	300m
		ND(0.00060)	0.0014	500m

M-26	2013/10/31	ND(0.00085)	0.0024	1m
		ND(0.00068)	0.0026	100m
		0.0012	0.0038	200m
		0.0022	0.0061	300m
		ND(0.00081)	0.0034	500m

M-25	2013/10/31	ND(0.00080)	0.0014	1m
		ND(0.00065)	0.0019	100m
		0.00084	0.0034	200m
		0.0025	0.0068	300m
		ND(0.00057)	0.0022	500m

M-27	2013/11/1	ND(0.00068)	0.0021	1m
		ND(0.00060)	0.0016	100m
		0.00083	0.0029	200m
		0.0015	0.0047	300m
		0.0011	0.0038	500m

