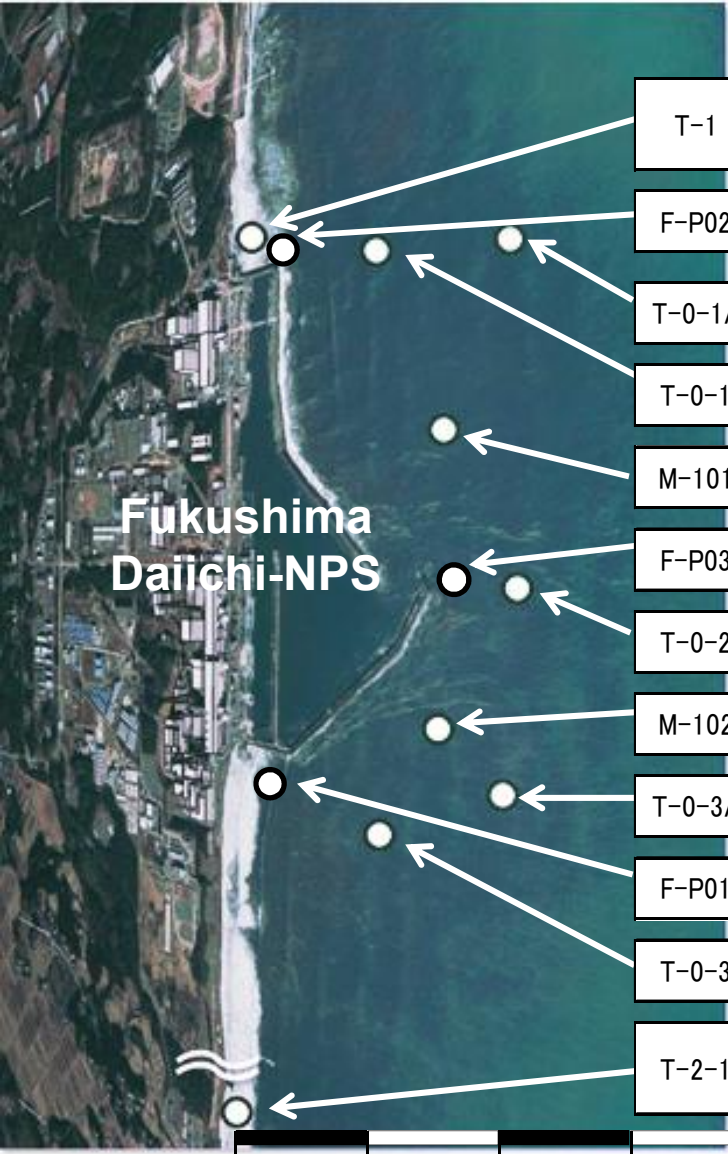


# Sea Area Monitoring

February 24, 2015

Nuclear Regulation Authority (NRA), Japan

# Sea area within 2km radius from the NPS



Fukushima Daiichi-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	2015/2/9	ND(0.84)	ND(0.78)	13 <sup>*1</sup>	ND(1.5)				
	2015/1/5	ND(0.74)	ND(0.53)	9.9 <sup>*1</sup>	ND(1.5)	0.032	ND(1.6)		
	2014/10/21	ND(0.69)	ND(0.83)					ND( $5.1 \times 10^{-6}$ )	ND( $7 \times 10^{-6}$ )
F-P02	2015/1/14	ND(0.070)	0.069	0.05 <sup>*2</sup>	ND(0.44)	In progress		ND( $7 \times 10^{-6}$ )	$7 \times 10^{-6}$
	2014/12/8	ND(0.060)	0.095	0.06 <sup>*2</sup>	ND(0.43)	0.024		ND( $9 \times 10^{-6}$ )	ND( $8 \times 10^{-6}$ )
T-0-1A	2015/2/10	ND(0.65)	ND(0.54)	ND(15) <sup>*1</sup>	In progress				
	2015/2/3	ND(0.56)	ND(0.73)	ND(18) <sup>*1</sup>	ND(1.7)				
T-0-1	2015/2/10	ND(0.66)	ND(0.58)	ND(15) <sup>*1</sup>	In progress				
	2015/2/3	ND(0.67)	ND(0.65)	ND(18) <sup>*1</sup>	ND(1.7)				
M-101	2014/12/9	0.018	0.062		0.15	In progress			
	2014/11/6	0.021	0.070		0.18	0.0087			
F-P03	2015/1/14	ND(0.070)	0.082	0.12 <sup>*2</sup>	ND(0.44)	In progress		ND( $6 \times 10^{-6}$ )	ND( $7 \times 10^{-6}$ )
	2014/12/8	ND(0.065)	ND(0.062)	0.05 <sup>*2</sup>	ND(0.43)	0.008		ND( $9 \times 10^{-6}$ )	ND( $7 \times 10^{-6}$ )
T-0-2	2015/2/10	ND(0.58)	ND(0.58)	ND(15) <sup>*1</sup>	In progress				
	2015/2/3	ND(0.60)	ND(0.72)	ND(18) <sup>*1</sup>	ND(1.7)				
M-102	2014/12/10	0.057	0.18		0.31	In progress			
	2014/11/5	0.015	0.047		0.11	0.0036			
T-0-3A	2015/2/10	ND(0.63)	ND(0.53)	ND(15) <sup>*1</sup>	In progress				
	2015/2/3	ND(0.89)	ND(0.64)	ND(18) <sup>*1</sup>	ND(1.7)				
F-P01	2015/1/14	ND(0.059)	ND(0.051)	0.04 <sup>*2</sup>	ND(0.43)	In progress		ND( $8 \times 10^{-6}$ )	ND( $6 \times 10^{-6}$ )
	2014/12/8	ND(0.067)	0.091	0.06 <sup>*2</sup>	ND(0.43)	0.007		ND( $7 \times 10^{-6}$ )	ND( $7 \times 10^{-6}$ )
T-0-3	2015/2/10	ND(0.70)	ND(0.56)	ND(15) <sup>*1</sup>	In progress				
	2015/2/3	ND(0.70)	ND(0.76)	ND(18) <sup>*1</sup>	ND(1.7)				
T-2-1	2015/2/9	ND(0.81)	0.98	13 <sup>*1</sup>	ND(1.5)				
	2015/1/5	ND(0.83)	ND(0.59)	11 <sup>*1</sup>	ND(1.5)	0.013	ND(1.6)		
	2014/10/21	ND(0.81)	1.1	11 <sup>*1</sup>				ND( $5.3 \times 10^{-6}$ )	$(1.2 \pm 0.25) \times 10^{-5}$

0 0.5 1km

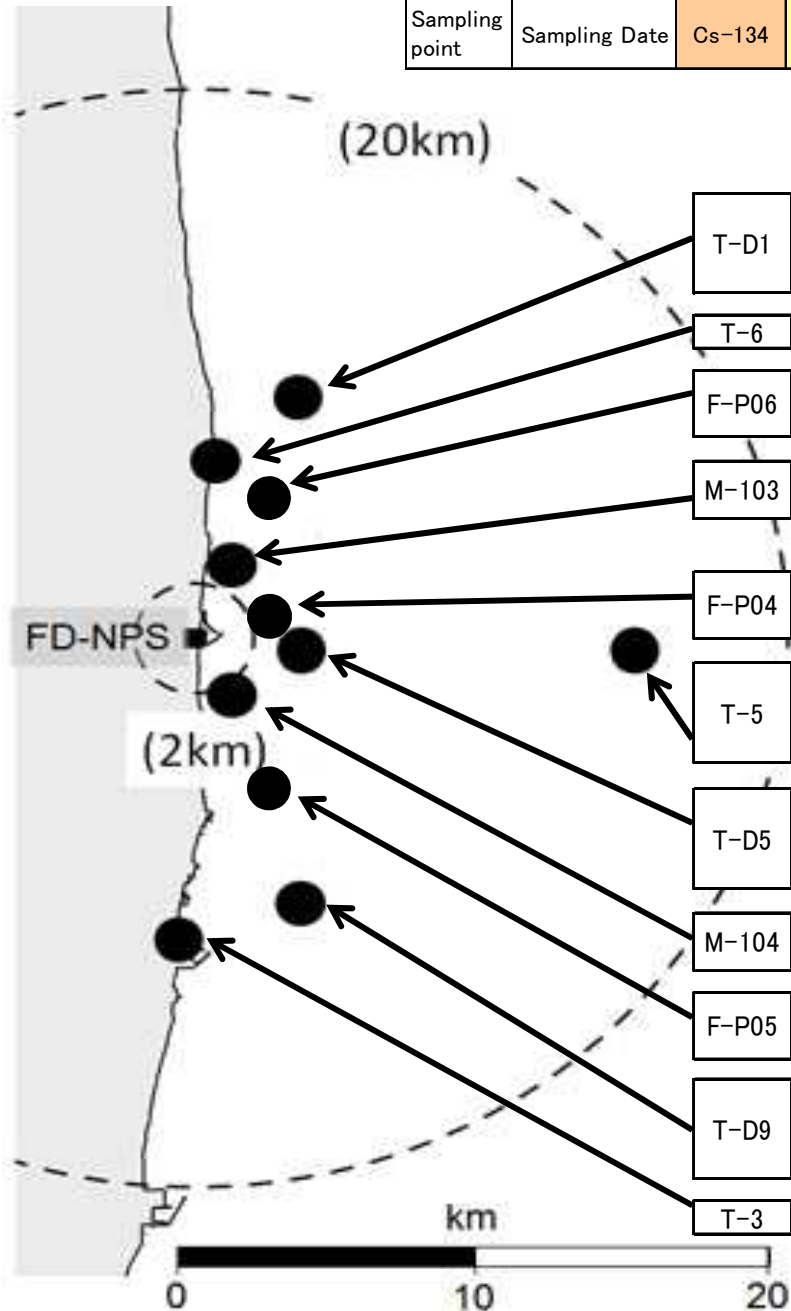
# Sea area between 2-20km radius from the NPS (1)

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



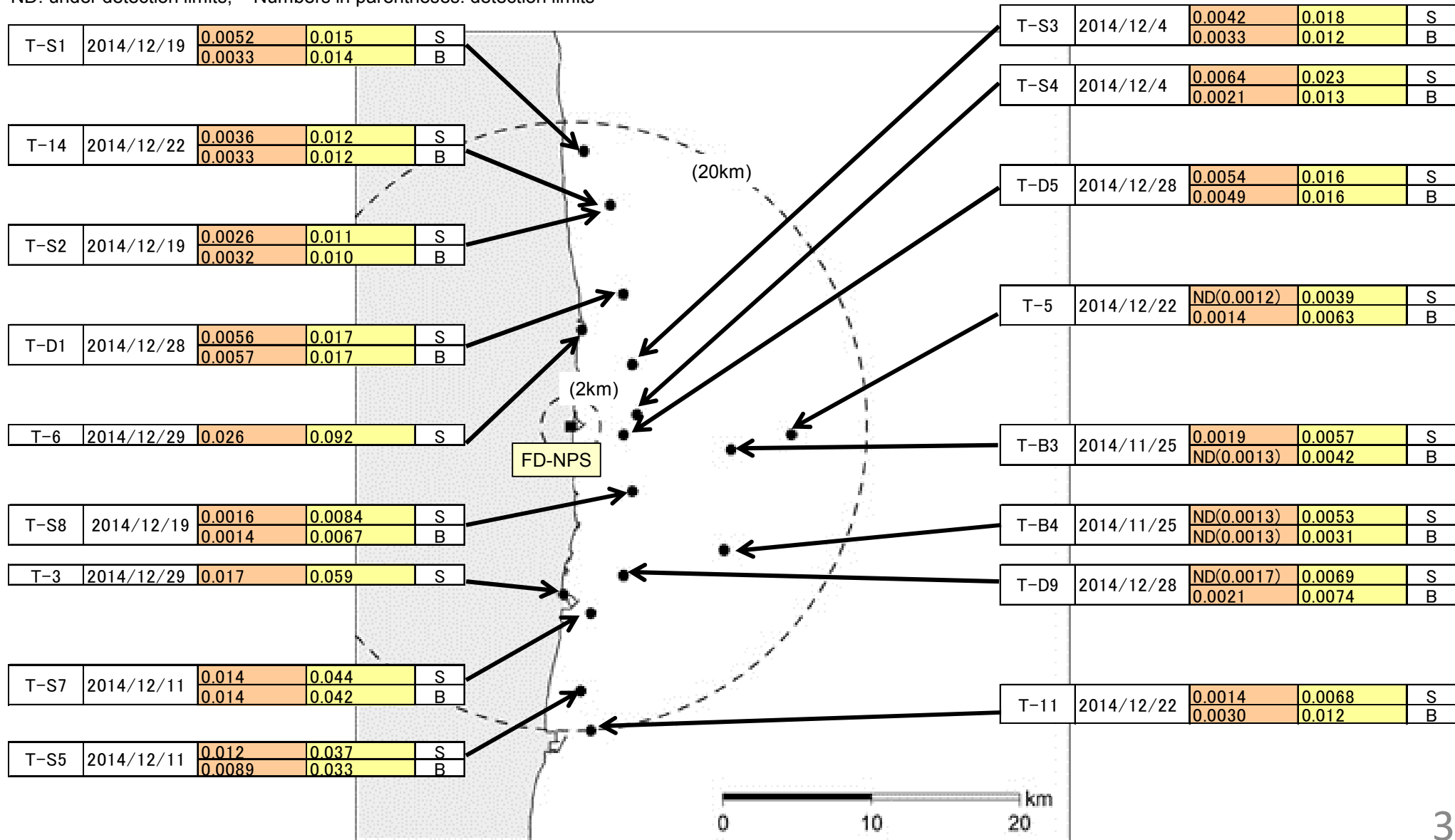
T-D1	2014/12/16	0.0090	0.033	ND(17) <sup>*1</sup>	ND(0.30)					S
	2014/12/6	0.0020	0.0094	ND(17) <sup>*1</sup>	ND(0.31)	ND(0.0085)	ND(1.6)			S
	2014/10/8	0.022	0.070					ND(6.2 × 10 <sup>-6</sup> )	(5.5 ± 1.7) × 10 <sup>-6</sup>	S
T-6	2014/12/16	0.019	0.068	ND(16) <sup>*1</sup>	ND(0.34)					S
F-P06	2015/1/14	ND(0.058)	ND(0.049)	0.03 <sup>*2</sup>	ND(0.44)	In progress		ND(9 × 10 <sup>-6</sup> )	ND(7 × 10 <sup>-6</sup> )	S
	2014/12/8	ND(0.070)	ND(0.064)	0.03 <sup>*2</sup>	ND(0.43)	0.002		ND(7 × 10 <sup>-6</sup> )	ND(8 × 10 <sup>-6</sup> )	S
M-103	2014/12/9	0.010	0.035		0.093	In progress				0.5m
	2014/11/6	0.0094	0.035		0.12	0.0025				0.5m
F-P04	2015/1/14	ND(0.074)	ND(0.065)	0.04 <sup>*2</sup>	ND(0.44)	In progress		ND(7 × 10 <sup>-6</sup> )	9 × 10 <sup>-6</sup>	S
	2014/12/8	ND(0.058)	0.13	0.04 <sup>*2</sup>	ND(0.43)	0.007		ND(7 × 10 <sup>-6</sup> )	ND(7 × 10 <sup>-6</sup> )	S
T-5	2014/12/15	ND(0.0013)	0.0035	ND(17) <sup>*1</sup>	ND(0.30)					S
	2014/12/4	ND(0.0013)	0.0043	ND(15) <sup>*1</sup>	ND(0.31)	ND(0.0095)	ND(1.6)			S
	2014/10/18	ND(0.0013)	0.0026					ND(5.4 × 10 <sup>-6</sup> )	(6.6 ± 1.8) × 10 <sup>-6</sup>	S
T-D5	2014/12/16	0.017	0.050	ND(17) <sup>*1</sup>	ND(0.30)					S
	2014/12/6	0.0057	0.017	ND(17) <sup>*1</sup>	ND(0.31)	ND(0.0086)	ND(1.6)			S
	2014/10/8	0.024	0.067					ND(6.1 × 10 <sup>-6</sup> )	(8.4 ± 2.2) × 10 <sup>-6</sup>	S
M-104	2014/12/10	0.0081	0.028		0.090	In progress				0.5m
	2014/11/5	0.0096	0.035		0.12	0.0039				0.5m
F-P05	2015/1/14	ND(0.061)	ND(0.060)	0.04 <sup>*2</sup>	ND(0.44)	In progress		ND(8 × 10 <sup>-6</sup> )	ND(6 × 10 <sup>-6</sup> )	S
	2014/12/8	ND(0.057)	ND(0.065)	0.03 <sup>*2</sup>	ND(0.44)	0.003		ND(9 × 10 <sup>-6</sup> )	ND(7 × 10 <sup>-6</sup> )	S
T-D9	2014/12/22	ND(0.0017)	0.0069	ND(17) <sup>*1</sup>	ND(0.30)					S
	2014/12/4	0.0036	0.012	ND(15) <sup>*1</sup>	ND(0.31)	ND(0.0098)	ND(1.6)			S
	2014/10/18	0.012	0.036					ND(4.8 × 10 <sup>-6</sup> )	(5.0 ± 1.6) × 10 <sup>-6</sup>	S
T-3	2014/12/16	0.022	0.079	ND(17) <sup>*1</sup>	ND(0.35)					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				

Sea water radioactivity (Bq/L):

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

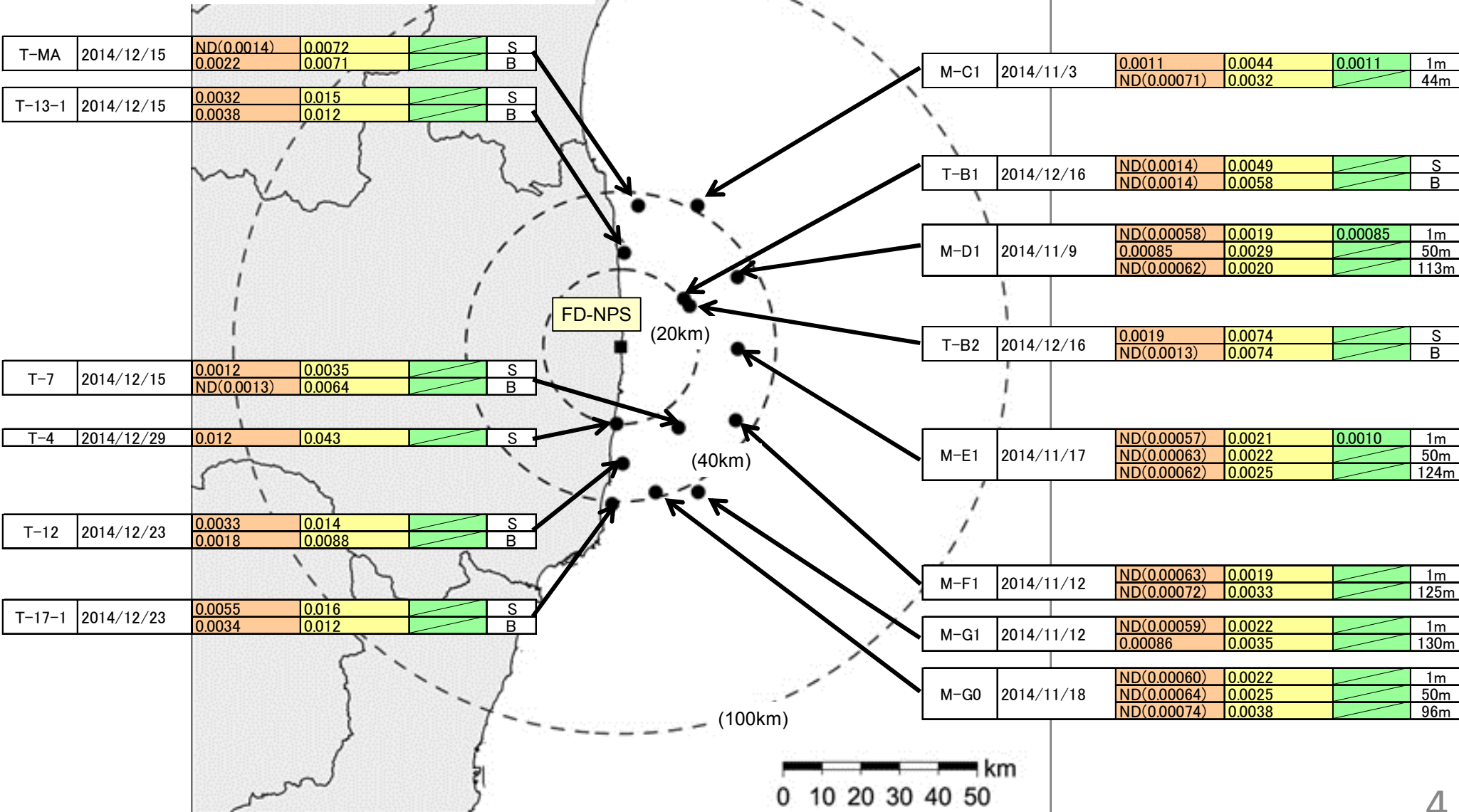


# Sea area between 20-100km radius from the NPS(1)

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



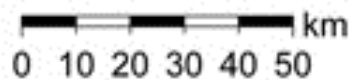
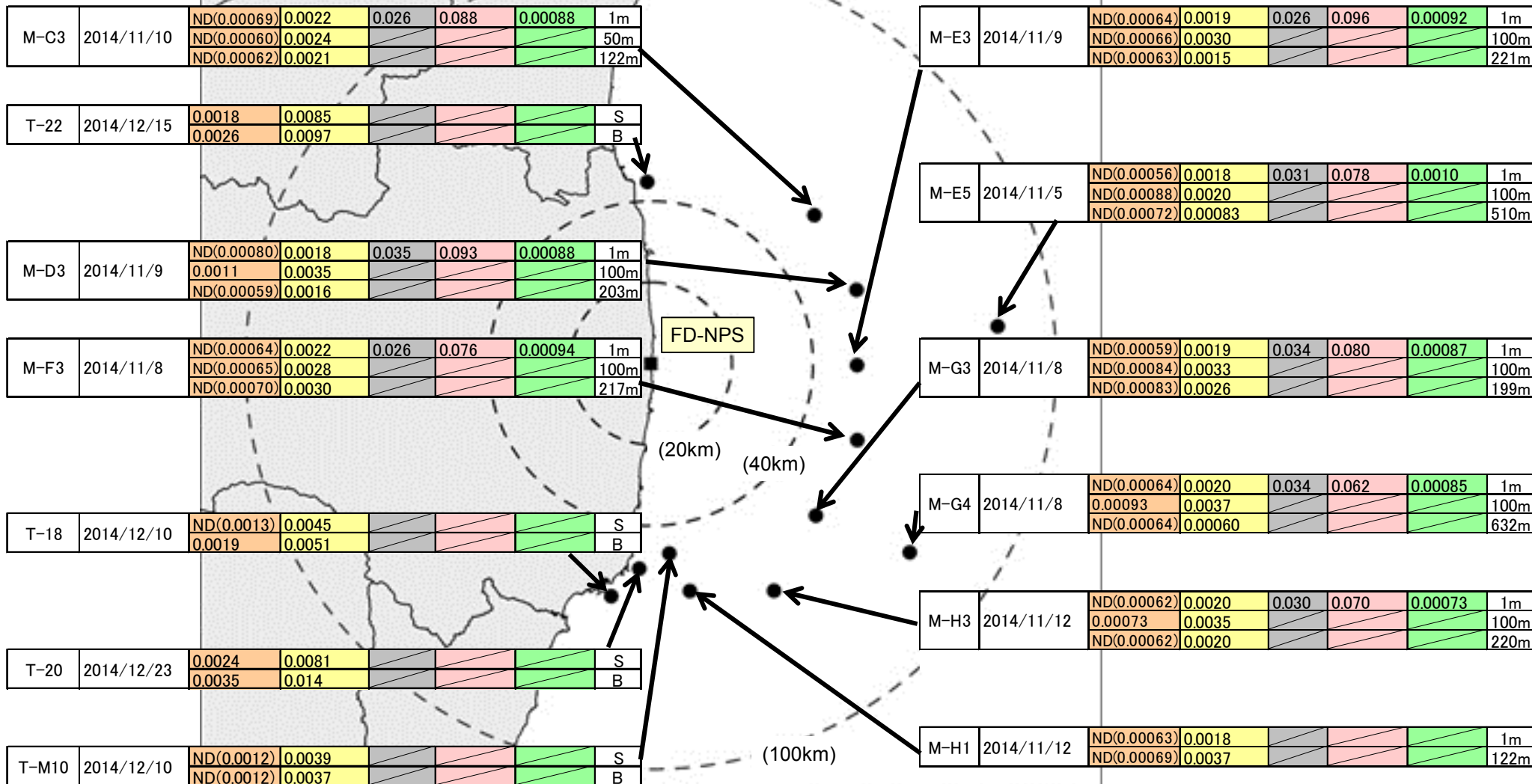
# Sea area between 20-100km radius from the NPS(2)

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
							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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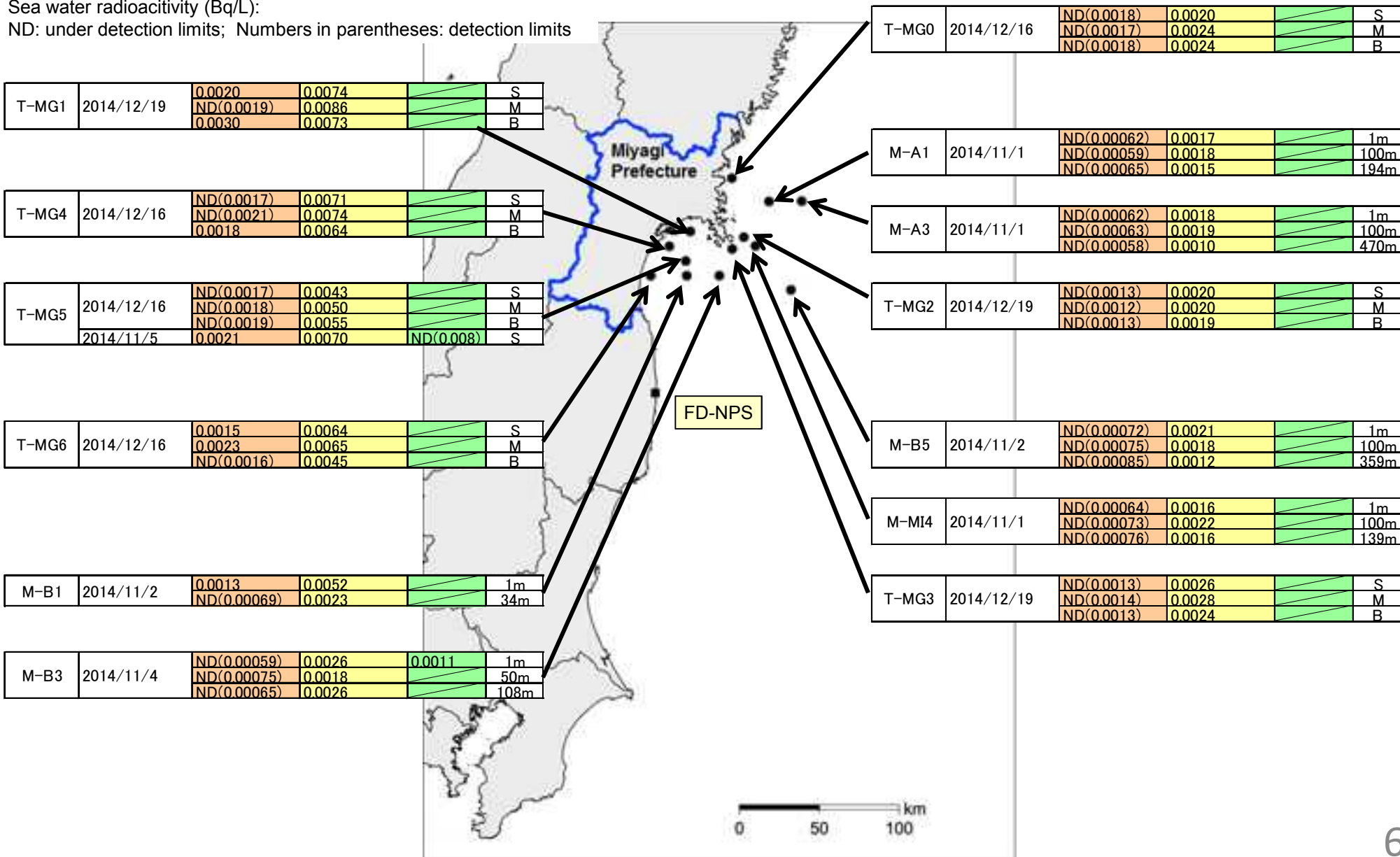
S:2m below sea level

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



# 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	2015/1/13	ND(1.0)	ND(1.0)	/	S
		ND(1.1)	ND(1.1)		B

T-A	2015/1/13	ND(0.94)	ND(1.2)	/	S
		ND(1.1)	ND(1.2)		B

T-B	2015/1/15	ND(0.99)	ND(1.0)	/	S
		ND(0.93)	ND(1.1)		B

M-J1	2014/11/14	ND(0.00062)	0.0023	0.00099	1m
		ND(0.00069)	0.0023	/	33m

T-C	2015/1/14	ND(1.1)	ND(1.2)	/	S
		ND(0.90)	ND(1.1)		B
	2014/11/12	ND(1.2)	ND(1.3)	ND(0.008)	S

M-K1	2014/11/16	ND(0.00061)	0.0024	/	1m
		ND(0.00059)	0.0026		25m

T-D	2015/1/15	ND(1.2)	ND(1.1)	/	S
		ND(1.3)	ND(1.1)		B

M-M1	2014/11/15	ND(0.00073)	0.0018	/	1m
		ND(0.00067)	0.0023		99m

M-I0	2014/11/13	ND(0.00083)	0.0027	0.00083	1m
		0.0013	0.0057	/	62m

M-I1	2014/11/13	ND(0.00078)	0.0025	/	1m
		ND(0.00069)	0.0031		50m
		0.00090	0.0041		90m

M-I3	2014/11/13	ND(0.00058)	0.0019	/	1m
		0.00073	0.0044		100m
		ND(0.00068)	0.0031		171m

M-IB2	2014/11/13	ND(0.00059)	0.0020	/	1m
		0.00070	0.0036		109m

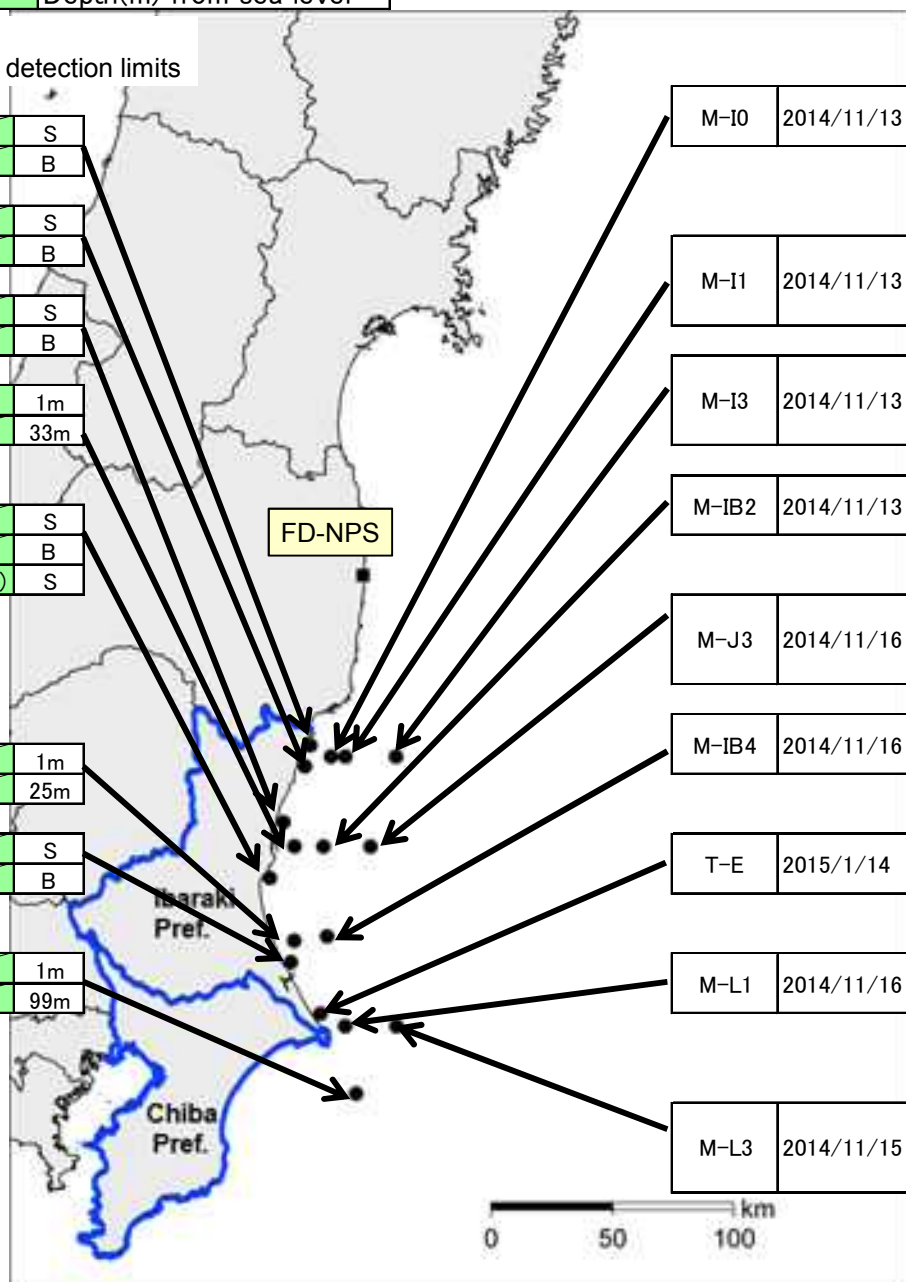
M-J3	2014/11/16	ND(0.00062)	0.0020	/	1m
		0.00087	0.0039		100m
		ND(0.00062)	0.00080		548m

M-IB4	2014/11/16	ND(0.00064)	0.0022	/	1m
		ND(0.00071)	0.0040		114m

T-E	2015/1/14	ND(1.1)	ND(1.0)	/	S
		ND(0.84)	ND(1.2)		B

M-L1	2014/11/16	ND(0.00066)	0.0021	/	1m
		ND(0.00060)	0.0023		35m

M-L3	2014/11/15	ND(0.00063)	0.0022	/	1m
		ND(0.00070)	0.0028		100m
		ND(0.00063)	0.0027		152m





# 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-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-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-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-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-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-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-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-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-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

