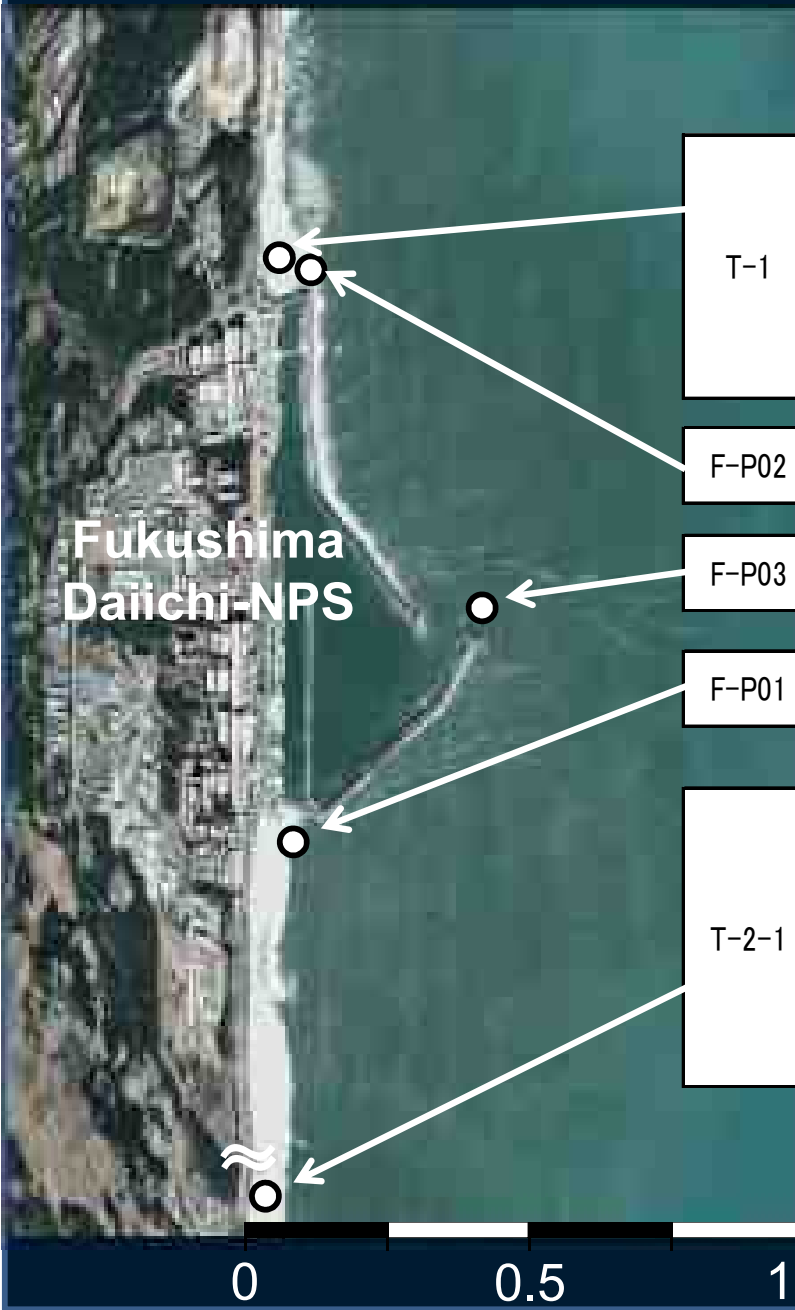


# Sea Area Monitoring

September 26, 2016

Nuclear Regulation Authority (NRA), Japan

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



Sampling point	Sampling Date	Cs-134	Cs-137	Gross $\beta$	H-3	Sr-90	Gross $\alpha$	Pu-238	Pu-239+Pu-240
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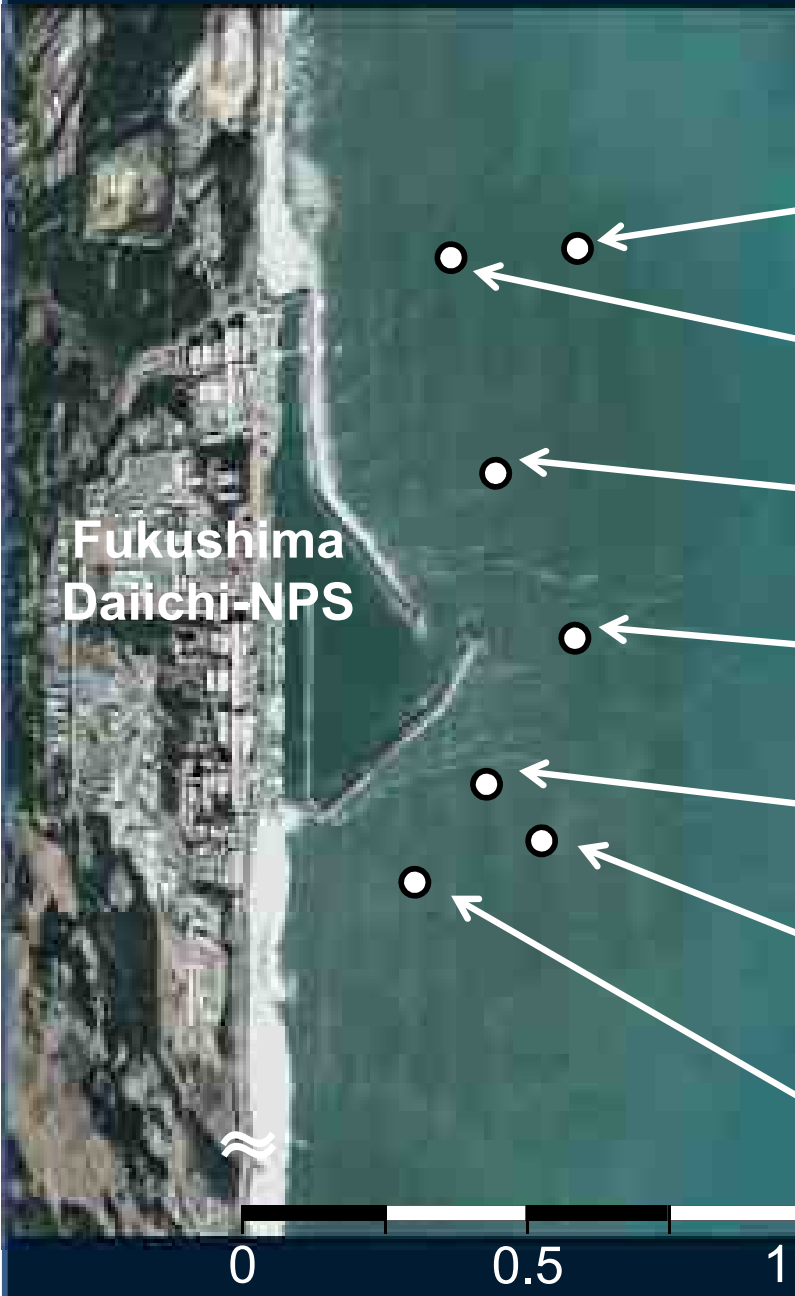
Sea water radioactivity (Bq/L):

ND: Not detected; Numbers in parentheses: detection limits

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

T-1	2016/8/29	ND(0.56)	ND(0.72)	9.7 <sup>*1</sup>	In progress				
	2016/8/22	ND(0.70)	ND(0.68)	9.7 <sup>*1</sup>	ND(1.6)				
	2016/8/15	ND(0.70)	ND(0.76)	12 <sup>*1</sup>	ND(1.6)				
	2016/8/10	ND(0.84)	ND(0.58)	8.2 <sup>*1</sup>	2.9				
	2016/8/1	ND(0.70)	ND(0.59)	9.9 <sup>*1</sup>	ND(1.7)				
	2016/7/25	ND(0.63)	ND(0.59)	13 <sup>*1</sup>	ND(1.6)				
	2016/6/6	ND(0.67)	ND(0.69)	14 <sup>*1</sup>	ND(1.8)	0.0097	ND(1.6)		
	2016/4/11	ND(0.70)	ND(0.62)	11 <sup>*1</sup>	ND(1.7)			ND( $4.7 \times 10^{-6}$ )	( $6.1 \pm 1.7$ ) $\times 10^{-6}$
F-P02	2016/7/11	ND(0.061)	ND(0.051)	0.02 <sup>*2</sup>	ND(0.50)	In progress		In progress	In progress
	2016/6/15	ND(0.054)	0.092	0.07 <sup>*2</sup>	ND(0.35)	0.003		ND( $8.0 \times 10^{-6}$ )	$1.6 \times 10^{-5}$
F-P03	2016/7/11	ND(0.057)	ND(0.047)	ND(0.02) <sup>*2</sup>	ND(0.50)	In progress		In progress	In progress
	2016/6/15	ND(0.064)	ND(0.060)	0.02 <sup>*2</sup>	ND(0.35)	0.001		ND( $6.0 \times 10^{-6}$ )	ND( $6.0 \times 10^{-6}$ )
F-P01	2016/7/11	ND(0.050)	ND(0.048)	0.02 <sup>*2</sup>	ND(0.50)	In progress		In progress	In progress
	2016/6/15	ND(0.048)	ND(0.050)	0.04 <sup>*2</sup>	ND(0.34)	0.001		ND( $6.0 \times 10^{-6}$ )	ND( $6.0 \times 10^{-6}$ )
T-2-1	2016/8/29	ND(0.66)	1.3	10 <sup>*1</sup>	In progress				
	2016/8/24	ND(0.71)	ND(0.67)	12 <sup>*1</sup>	ND(1.4)				
	2016/8/16	ND(0.72)	0.97	13 <sup>*1</sup>	ND(1.5)				
	2016/8/10	ND(0.84)	ND(0.72)	9.7 <sup>*1</sup>	ND(1.6)				
	2016/8/1	ND(0.62)	ND(0.53)	9.9 <sup>*1</sup>	ND(1.7)				
	2016/7/25	ND(0.71)	ND(0.71)	10 <sup>*1</sup>	ND(1.6)				
	2016/6/6	ND(0.51)	ND(0.60)	11 <sup>*1</sup>	ND(1.8)	ND(0.0065)	ND(1.5)		
	2016/4/11	ND(0.79)	ND(0.76)	11 <sup>*1</sup>	ND(1.7)			ND( $4.9 \times 10^{-6}$ )	( $5.1 \pm 1.5$ ) $\times 10^{-6}$

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



Sampling point	Sampling Date	Cs-134	Cs-137	Gross $\beta$ *	H-3	Sr-90
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Sea water radioactivity (Bq/L):

ND: Not detected; Numbers in parentheses: detection limits

\*: Gross  $\beta$  including K-40

T-0-1A	2016/8/29	ND(0.70)	ND(0.59)	ND(17)	In progress	
	2016/8/22	ND(0.62)	ND(0.65)	ND(17)	ND(1.6)	
	2016/8/15	ND(0.71)	ND(0.73)	ND(17)	ND(1.8)	
	2016/8/10	ND(0.68)	ND(0.73)	ND(15)	ND(1.6)	
	2016/8/1	ND(0.73)	ND(0.73)	ND(17)	ND(1.6)	
T-0-1	2016/7/25	ND(0.75)	ND(0.73)	ND(17)	ND(1.6)	
	2016/8/29	ND(0.68)	ND(0.81)	ND(17)	In progress	
	2016/8/22	ND(0.62)	ND(0.53)	ND(17)	ND(1.6)	
	2016/8/15	ND(0.68)	ND(0.78)	ND(17)	ND(1.8)	
	2016/8/10	ND(0.59)	ND(0.77)	ND(15)	ND(1.7)	
M-101	2016/8/1	ND(0.80)	ND(0.50)	ND(17)	ND(1.6)	
	2016/7/25	ND(0.68)	ND(0.63)	ND(17)	ND(1.6)	
	2016/6/15	0.0024	0.012		0.071	In progress
	2016/5/18	0.0027	0.013		0.089	In progress
	2016/4/27	0.0015	0.0068		0.096	0.0011
T-0-2	2016/3/3	0.012	0.063		0.14	0.0024
	2016/2/3	0.0080	0.042		0.10	0.0024
	2016/8/29	ND(0.47)	ND(0.70)	ND(17)	In progress	
	2016/8/22	ND(0.67)	ND(0.59)	ND(17)	ND(1.6)	
	2016/8/15	ND(0.70)	ND(0.59)	ND(17)	ND(1.8)	
M-102	2016/8/10	ND(0.64)	ND(0.53)	ND(15)	ND(1.6)	
	2016/8/1	ND(0.70)	ND(0.53)	ND(17)	ND(1.6)	
	2016/7/25	ND(0.75)	ND(0.68)	ND(17)	ND(1.6)	
	2016/6/16	0.0060	0.038		0.081	In progress
	2016/5/19	0.0050	0.029		0.12	In progress
T-0-3A	2016/4/27	0.0023	0.013		0.14	0.0016
	2016/3/2	0.0095	0.052		0.15	0.0027
	2016/2/4	0.0052	0.024		0.080	0.0015
	2016/8/29	ND(0.67)	ND(0.67)	ND(17)	In progress	
	2016/8/22	ND(0.69)	ND(0.56)	ND(17)	ND(1.6)	
T-0-3	2016/8/15	ND(0.60)	ND(0.64)	ND(17)	ND(1.8)	
	2016/8/10	ND(0.71)	ND(0.58)	ND(15)	ND(1.6)	
	2016/8/1	ND(0.61)	ND(0.64)	ND(17)	ND(1.6)	
	2016/7/25	ND(0.66)	ND(0.67)	ND(17)	ND(1.6)	
	2016/8/29	ND(0.73)	ND(0.66)	ND(17)	In progress	
T-0-3	2016/8/22	ND(0.55)	ND(0.68)	ND(17)	ND(1.6)	
	2016/8/15	ND(0.64)	ND(0.62)	ND(17)	ND(1.8)	
	2016/8/10	ND(0.66)	ND(0.56)	ND(15)	ND(1.6)	
	2016/8/1	ND(0.64)	ND(0.65)	ND(17)	ND(1.6)	
	2016/7/25	ND(0.76)	ND(0.58)	ND(17)	ND(1.6)	

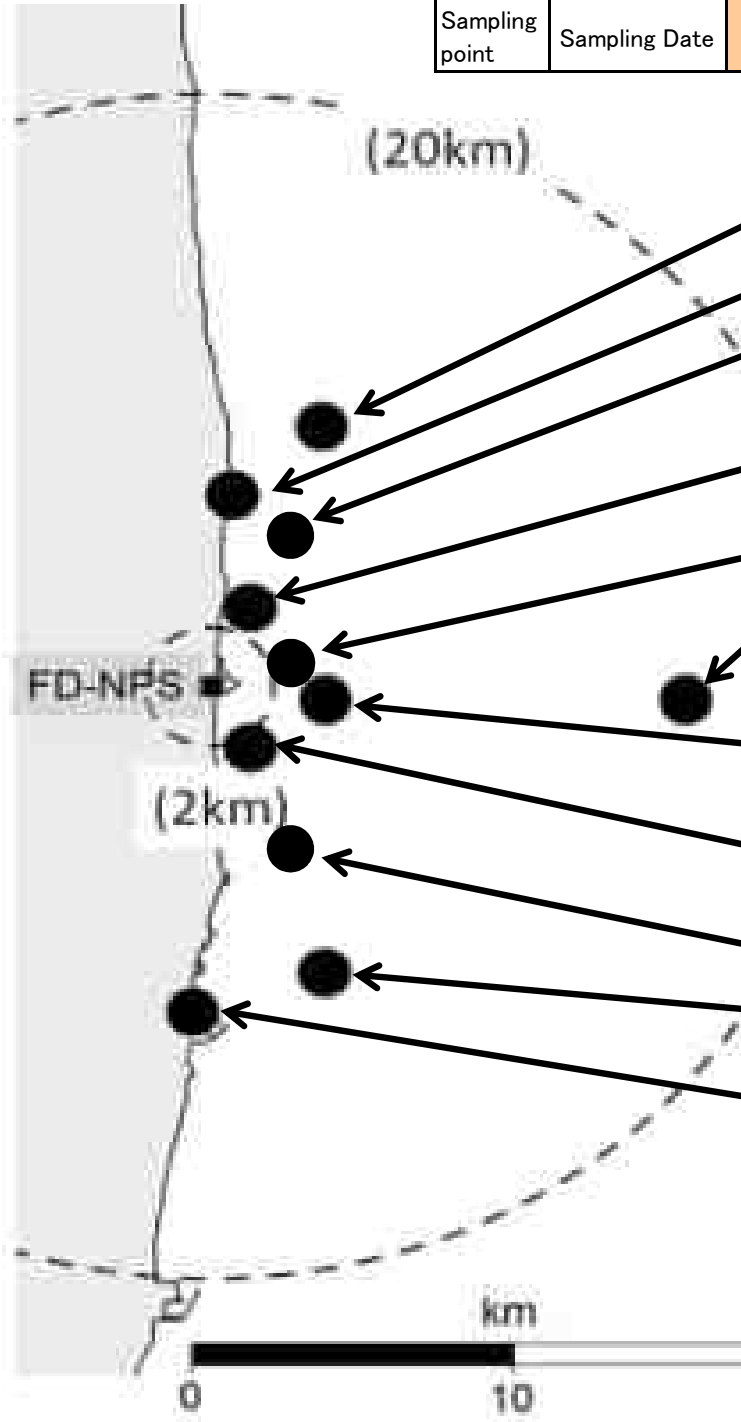
# Sea area between 2-20km from the NPS (1)

Sampling point	Sampling Date	Cs-134	Cs-137	Gross $\beta$	H-3	Sr-90	Gross $\alpha$	Pu-238	Pu-239+240	S	S:2m below sea level
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Sea water radioactivity (Bq/L):

ND: Not detected; Numbers in parentheses: detection limits

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



Sampling point	Sampling Date	Cs-134	Cs-137	Gross $\beta$	H-3	Sr-90	Gross $\alpha$	Pu-238	Pu-239+240	S	S:2m below sea level
T-D1	2016/7/19	0.0019	0.012	ND(15) <sup>*1</sup>	ND(0.36)						S
	2016/7/4	ND(0.0014)	0.0054	ND(16) <sup>*1</sup>	ND(0.37)						S
	2016/4/5	0.0027	0.014	ND(18) <sup>*1</sup>	ND(0.35)				ND(5.5 × 10 <sup>-6</sup> )	(7.2 ± 2.0) × 10 <sup>-6</sup>	S
T-6	2016/7/19	0.0065	0.033	ND(16) <sup>*1</sup>	ND(0.31)						S
	2016/7/5	0.0045	0.023	ND(18) <sup>*1</sup>	ND(0.31)						S
F-P06	2016/7/11	ND(0.068)	ND(0.049)	0.02 <sup>*2</sup>	ND(0.50)	In progress			In progress	In progress	S
	2016/6/15	ND(0.072)	ND(0.061)	0.03 <sup>*2</sup>	ND(0.34)	0.001			ND(7.0 × 10 <sup>-6</sup> )	ND(7.0 × 10 <sup>-6</sup> )	S
M-103	2016/6/15	0.0032	0.017		0.090	In progress					0.5m
	2016/5/18	0.0013	0.0082		0.065	In progress					0.5m
	2016/4/27	0.0012	0.0071		0.11	0.0011					0.5m
	2016/3/3	0.0032	0.018		0.089	0.00091					0.5m
	2016/2/3	0.0053	0.029		0.11	0.0026					0.5m
F-P04	2016/7/11	ND(0.054)	ND(0.051)	0.02 <sup>*2</sup>	ND(0.50)	In progress			In progress	In progress	S
	2016/6/15	ND(0.053)	ND(0.051)	0.03 <sup>*2</sup>	ND(0.35)	0.001			ND(7.0 × 10 <sup>-6</sup> )	ND(7.0 × 10 <sup>-6</sup> )	S
T-5	2016/7/19	ND(0.0013)	0.0034	ND(15) <sup>*1</sup>	ND(0.36)						S
	2016/7/4	ND(0.0012)	0.0056	ND(16) <sup>*1</sup>	ND(0.37)			ND(0.0082)	ND(2.0)		S
	2016/4/5	ND(0.0011)	0.0055	ND(18) <sup>*1</sup>	ND(0.35)			ND(0.0064)	ND(1.6)	ND(5.2 × 10 <sup>-6</sup> )	ND(5.2 × 10 <sup>-6</sup> )
T-D5	2016/7/19	0.0022	0.012	ND(15) <sup>*1</sup>	ND(0.36)						S
	2016/7/4	0.0020	0.013	ND(16) <sup>*1</sup>	ND(0.37)			ND(0.0077)	ND(1.5)		S
	2016/4/5	0.0018	0.012	ND(18) <sup>*1</sup>	ND(0.35)			ND(0.0075)	ND(1.9)	ND(5.4 × 10 <sup>-6</sup> )	ND(5.7 × 10 <sup>-6</sup> )
M-104	2016/6/16	0.0021	0.011		0.069	In progress					0.5m
	2016/5/19	0.0012	0.0066		0.074	In progress					0.5m
	2016/4/27	0.00098	0.0067		0.079	0.0014					0.5m
	2016/3/2	0.0033	0.019		0.094	0.00099					0.5m
	2016/2/4	0.0051	0.028		0.084	0.0024					0.5m
F-P05	2016/7/11	ND(0.064)	ND(0.063)	0.03 <sup>*2</sup>	ND(0.50)	In progress			In progress	In progress	S
	2016/6/15	ND(0.055)	ND(0.050)	0.03 <sup>*2</sup>	ND(0.35)	0.001			ND(8.0 × 10 <sup>-6</sup> )	ND(6.0 × 10 <sup>-6</sup> )	S
T-D9	2016/7/19	ND(0.0011)	0.0063	ND(15) <sup>*1</sup>	ND(0.36)						S
	2016/7/4	ND(0.0014)	0.0075	ND(16) <sup>*1</sup>	ND(0.37)			ND(0.0074)	ND(2.0)		S
	2016/4/5	0.0015	0.010	ND(18) <sup>*1</sup>	ND(0.35)			ND(0.0076)	ND(1.6)	ND(4.9 × 10 <sup>-6</sup> )	ND(4.9 × 10 <sup>-6</sup> )
T-3	2016/7/19	0.0089	0.045	ND(15) <sup>*1</sup>	ND(0.31)						S
	2016/7/5	0.0088	0.046	ND(17) <sup>*1</sup>	ND(0.29)						S

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

Sampling point	Sampling Date	Cs-134	Cs-137	S/B
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S: 2m below sea level  
 B: 2-3m above sea bottom

Sea water radioactivity (Bq/L):

ND: Not detected; Numbers in parentheses: detection limits

T-S1	2016/8/4	ND(0.0014)	0.0085	S
		ND(0.0014)	0.0058	B
	2016/7/13	0.0017	0.0085	S
		ND(0.0012)	0.0043	B

T-6	2016/8/10	0.0075	0.045	S
	2016/8/2	0.0079	0.044	S
	2016/7/26	0.0048	0.029	S
	2016/7/19	0.0065	0.033	S
	2016/7/12	0.0055	0.029	S

T-3	2016/8/10	0.017	0.11	S
	2016/8/2	0.0078	0.039	S
	2016/7/26	0.0084	0.044	S
	2016/7/19	0.0089	0.045	S
	2016/7/12	0.0056	0.031	S

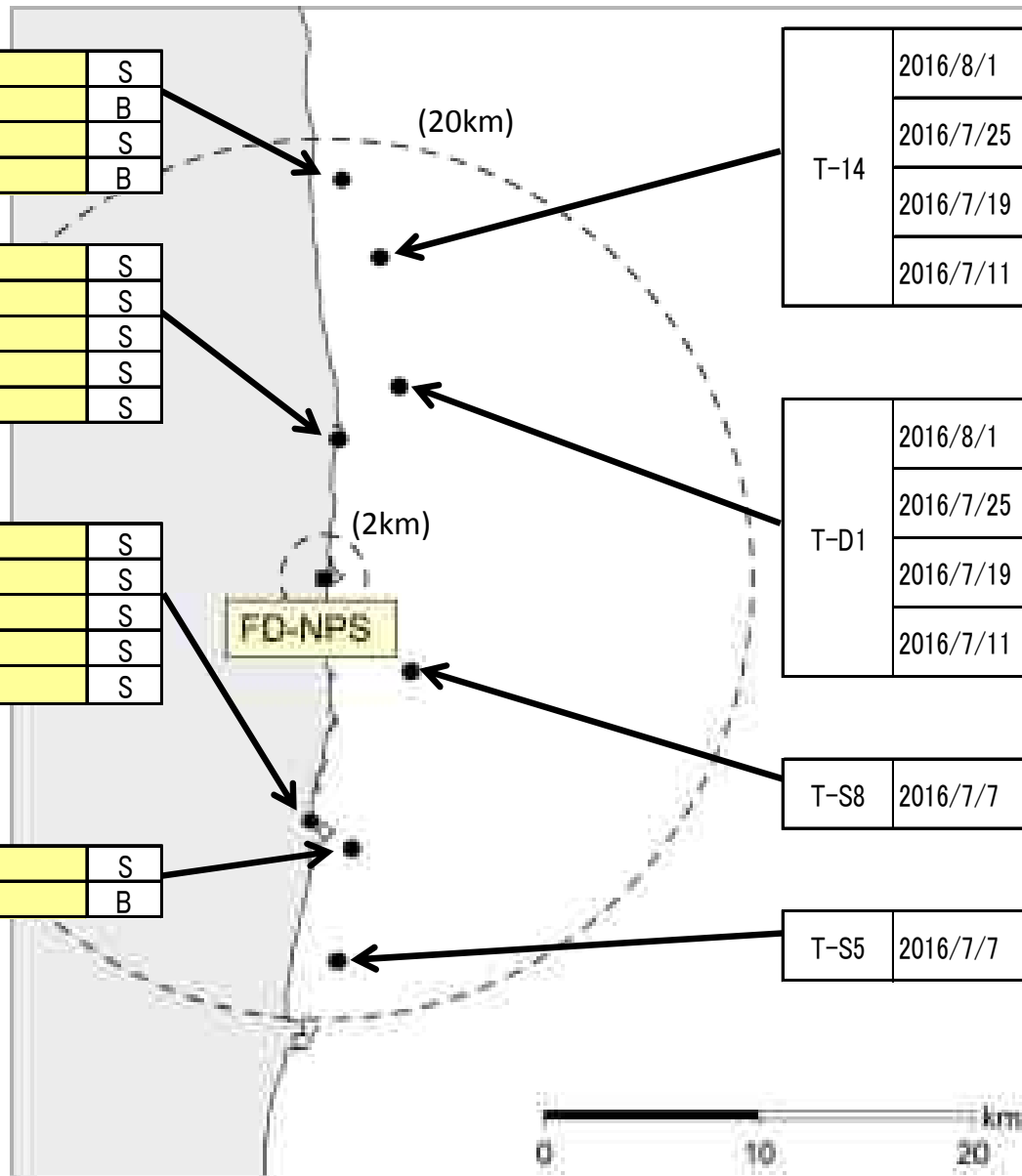
T-S7	2016/7/7	ND(0.0014)	0.013	S
		0.0017	0.011	B

T-14	2016/8/1	ND(0.0014)	0.0050	S
		ND(0.0015)	0.0053	B
	2016/7/25	ND(0.0015)	0.0052	S
		ND(0.0014)	0.0029	B
	2016/7/19	ND(0.0014)	0.0047	S
		ND(0.0014)	0.0047	B
	2016/7/11	ND(0.0013)	0.0045	S
		ND(0.0012)	0.0054	B

T-D1	2016/8/1	ND(0.0012)	0.0054	S
		0.0016	0.0099	B
	2016/7/25	ND(0.0013)	0.0053	S
		ND(0.0012)	0.0034	B
	2016/7/19	0.0019	0.012	S
		0.0014	0.0088	B
	2016/7/11	ND(0.0014)	0.0050	S
		0.0030	0.015	B

T-S8	2016/7/7	0.0022	0.013	S
		ND(0.0012)	0.0054	B

T-S5	2016/7/7	0.0019	0.013	S
		0.0019	0.011	B



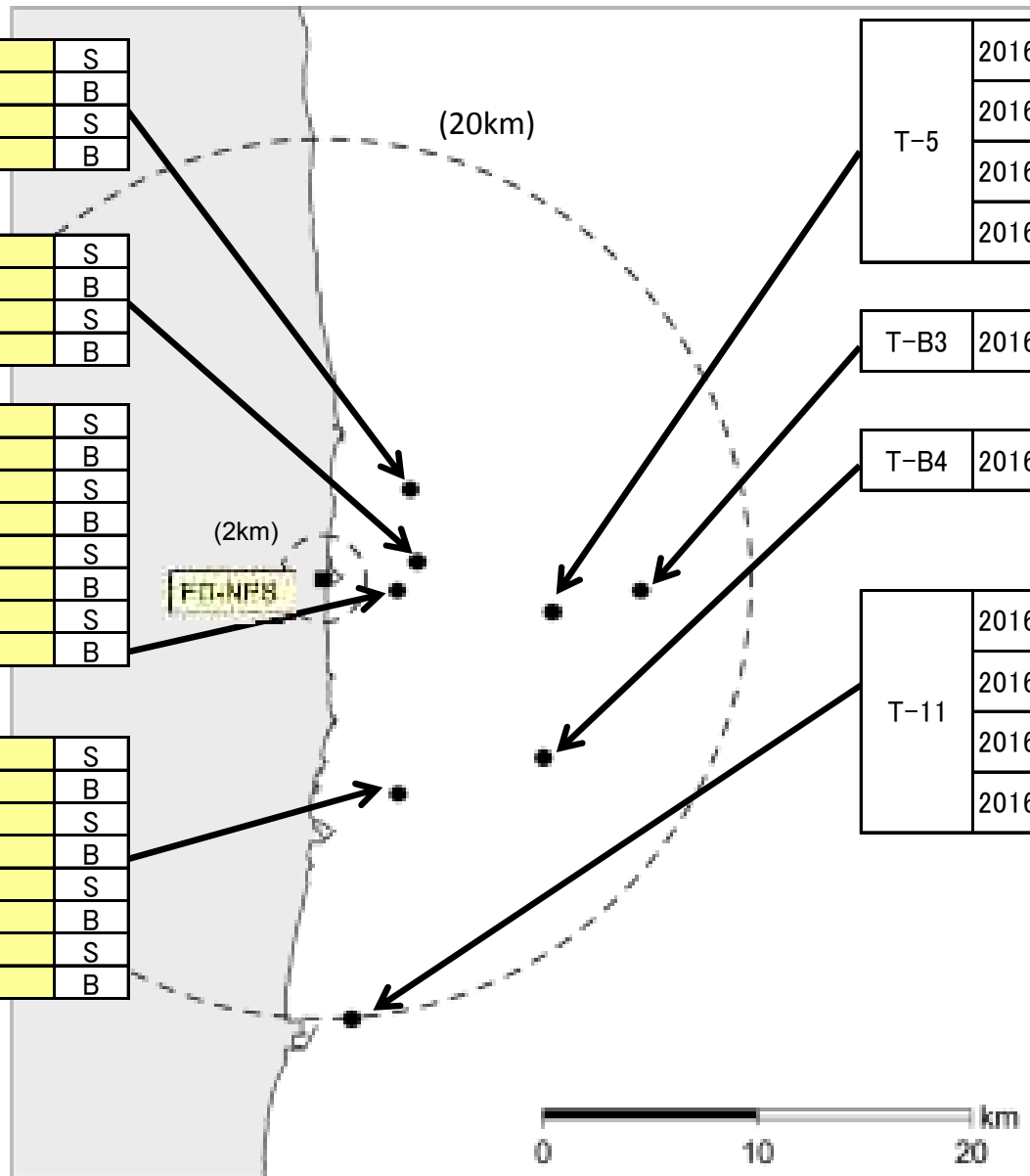
# Sea area between 2-20km from the NPS (3)

Sampling point	Sampling Date	Cs-134	Cs-137	S/B
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S: 2m below sea level  
 B: 2-3m above sea bottom

Sea water radioactivity (Bq/L):

ND: Not detected; Numbers in parentheses: detection limits



T-S3	2016/8/3	ND(0.0014)	0.0059	S
		ND(0.0015)	0.0082	B
	2016/7/13	ND(0.0014)	0.0082	S
		ND(0.0015)	0.0080	B

T-S4	2016/8/3	ND(0.0014)	0.0068	S
		0.0015	0.0072	B
	2016/7/13	0.0022	0.016	S
		ND(0.0014)	0.0077	B

T-D5	2016/8/1	ND(0.0014)	0.0062	S
		0.0016	0.010	B
	2016/7/25	ND(0.0014)	0.0050	S
		ND(0.0012)	0.0031	B
	2016/7/19	0.0022	0.012	S
		ND(0.0013)	0.0094	B
	2016/7/11	ND(0.0014)	0.0048	S
		ND(0.0014)	0.0070	B

T-D9	2016/8/1	ND(0.00093)	0.0035	S
		0.0031	0.019	B
	2016/7/25	ND(0.0013)	0.0037	S
		ND(0.0014)	0.0040	B
	2016/7/19	ND(0.0011)	0.0063	S
		0.0016	0.0089	B
	2016/7/12	ND(0.0014)	0.0053	S
		0.0013	0.0071	B

T-5	2016/8/2	ND(0.0011)	0.0029	S
		ND(0.0011)	0.0040	B
	2016/7/25	ND(0.0011)	0.0023	S
		ND(0.0012)	0.0035	B
	2016/7/19	ND(0.0013)	0.0034	S
		ND(0.0014)	0.0038	B
	2016/7/12	ND(0.0012)	0.0036	S
		ND(0.0013)	0.0050	B

T-B3	2016/7/15	ND(0.0012)	0.0039	S
		ND(0.0014)	0.0057	B

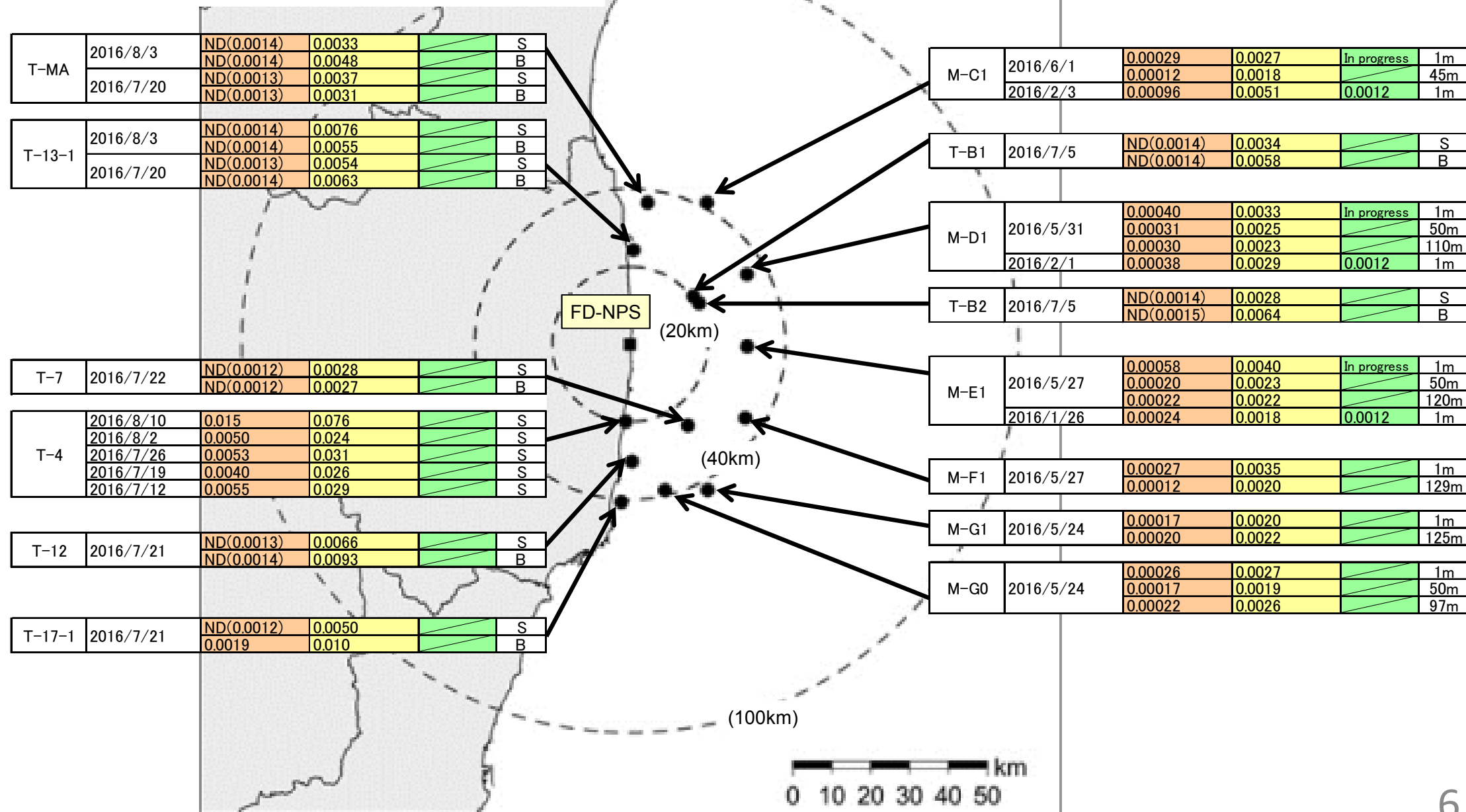
T-B4	2016/7/15	ND(0.0012)	0.0037	S
		ND(0.0012)	0.0046	B

T-11	2016/8/1	ND(0.0012)	0.0043	S
		ND(0.0014)	0.0097	B
	2016/7/25	0.0018	0.0074	S
		0.0020	0.0093	B
	2016/7/19	0.0013	0.0061	S
		ND(0.0012)	0.0068	B
	2016/7/12	ND(0.0014)	0.0051	S
		0.0019	0.012	B

# Sea area between 20-100km 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
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Sea water radioactivity (Bq/L):  
 ND: Not detected; Numbers in parentheses: detection limits



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

Sampling point	Sampling Date	Cs-134	Cs-137	Gross 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: Not detected; Numbers in parentheses: detection limits

\*Gross β excluding K-40

M-C3	2016/5/31	0.00037	0.0033	0.025	0.090	In progress	1m
		ND(0.00012)	0.0017				
		0.00011	0.0019				120m
	2016/2/1	0.00017	0.0020	0.024	0.091	0.0018	1m

T-22	2016/8/3	ND(0.00014)	0.0049				S
		ND(0.00014)	0.0073				
	2016/7/20	ND(0.00013)	0.0046				S
		ND(0.00015)	0.0070				B

M-D3	2016/5/31	0.00033	0.0029	0.026	0.079	In progress	1m
		ND(0.00010)	0.0018				
		0.00015	0.0018				206m
	2016/2/1	0.00013	0.0018	0.029	0.076	0.0013	1m

M-F3	2016/5/27	0.00037	0.0033	0.025	0.080	In progress	1m
		0.00013	0.0021				
		0.00011	0.0018				213m
	2016/2/2	0.00019	0.0019	0.023	0.085	0.0015	1m

T-18	2016/7/22	0.0013	0.0055				S
		ND(0.0012)	0.0053				

T-20	2016/7/21	ND(0.0012)	0.0043				S
		ND(0.0014)	0.0069				

T-M10	2016/7/22	ND(0.0012)	0.0024				S
		ND(0.0012)	0.0032				

M-E3	2016/5/28	0.00019	0.0025	0.027	0.069	In progress	1m
		ND(0.00011)	0.0020				
		0.00016	0.0018				213m
	2016/2/2	0.00018	0.0020	0.029	0.097	0.0012	1m

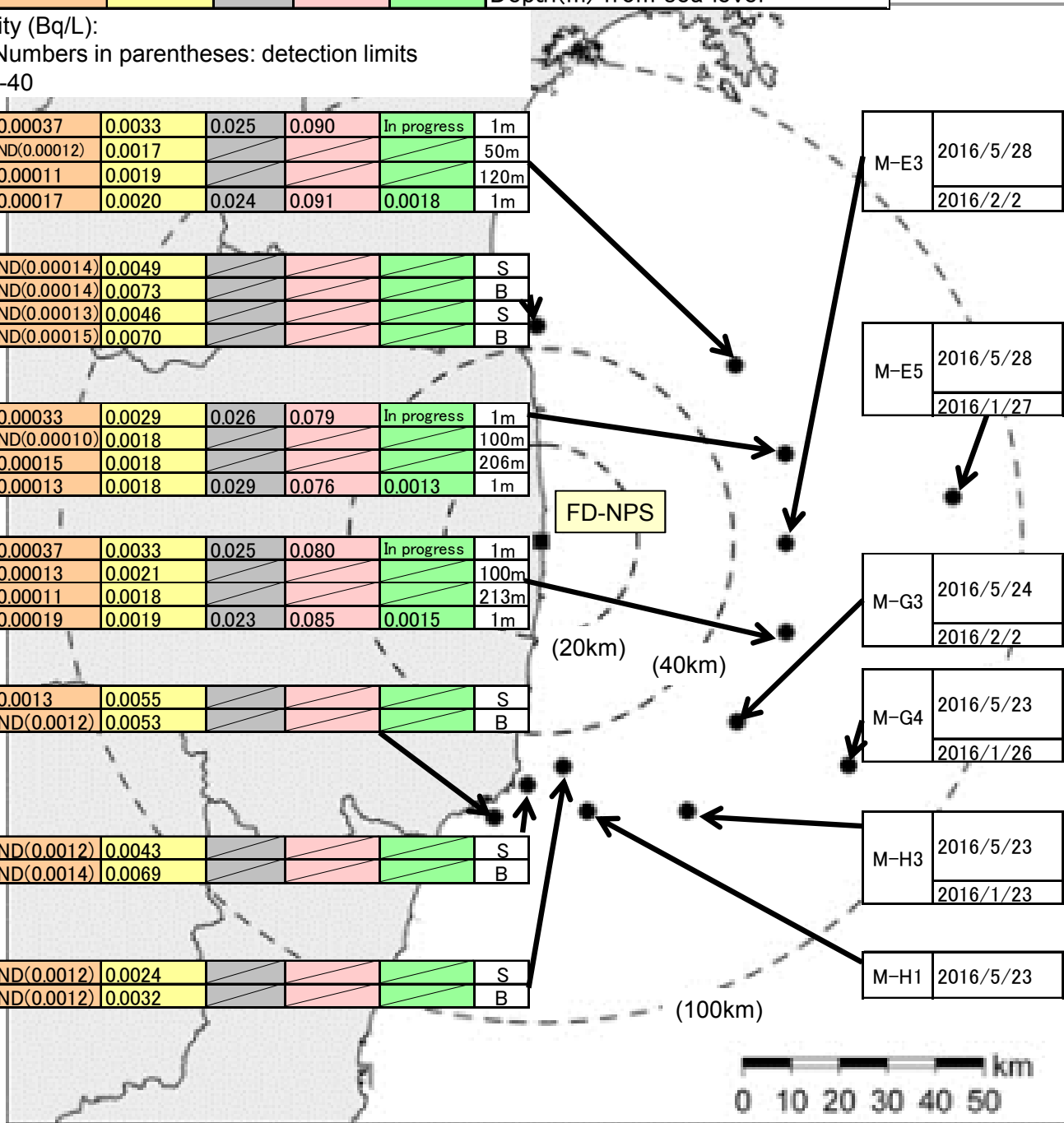
M-E5	2016/5/28	0.00018	0.0023	0.024	0.053	In progress	1m
		0.00022	0.0024				
		ND(0.000076)	0.00073				513m
	2016/1/27	0.00017	0.0021	0.032	0.065	0.0020	1m

M-G3	2016/5/24	0.00019	0.0022	0.027	0.072	In progress	1m
		ND(0.00012)	0.0016				
		ND(0.00014)	0.0017				188m
	2016/2/2	0.00018	0.0019	0.025	0.076	0.0015	1m

M-G4	2016/5/23	0.00016	0.0022	0.029	0.057	In progress	1m
		0.00017	0.0021				
		ND(0.000071)	0.00041				642m
	2016/1/26	0.00018	0.0019	0.029	0.058	0.0017	1m

M-H3	2016/5/23	0.00015	0.0020	0.028	0.072	In progress	1m
		ND(0.00015)	0.0019				
		ND(0.00012)	0.0017				214m
	2016/1/23	ND(0.00016)	0.0020	0.027	0.065	ND(0.00062)	1m

M-H1	2016/5/23	0.00034	0.0028				1m
		0.00020	0.0023				



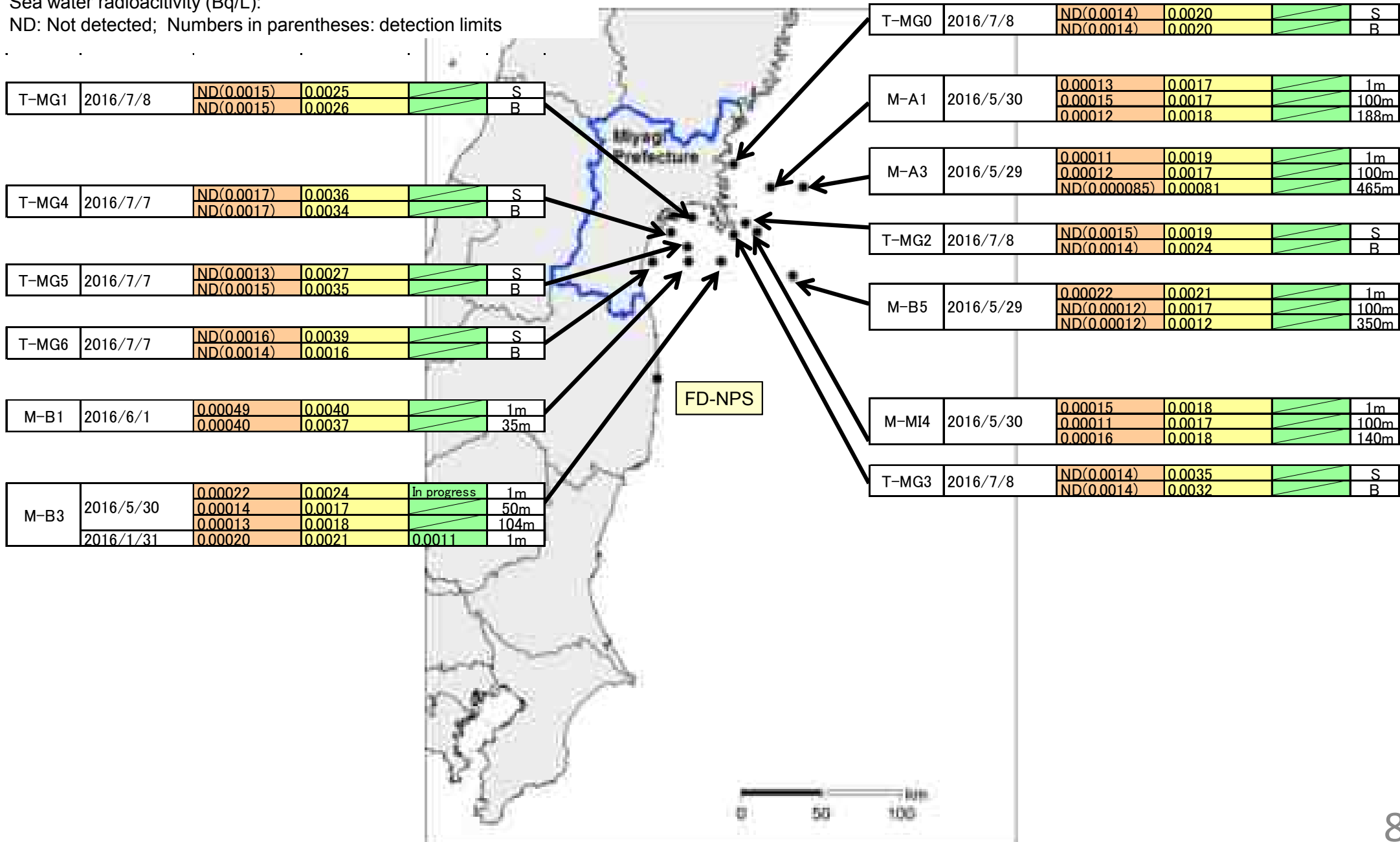


# Sea area along and off the coast of Miyagi Prefecture

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: Not detected; Numbers in parentheses: detection limits

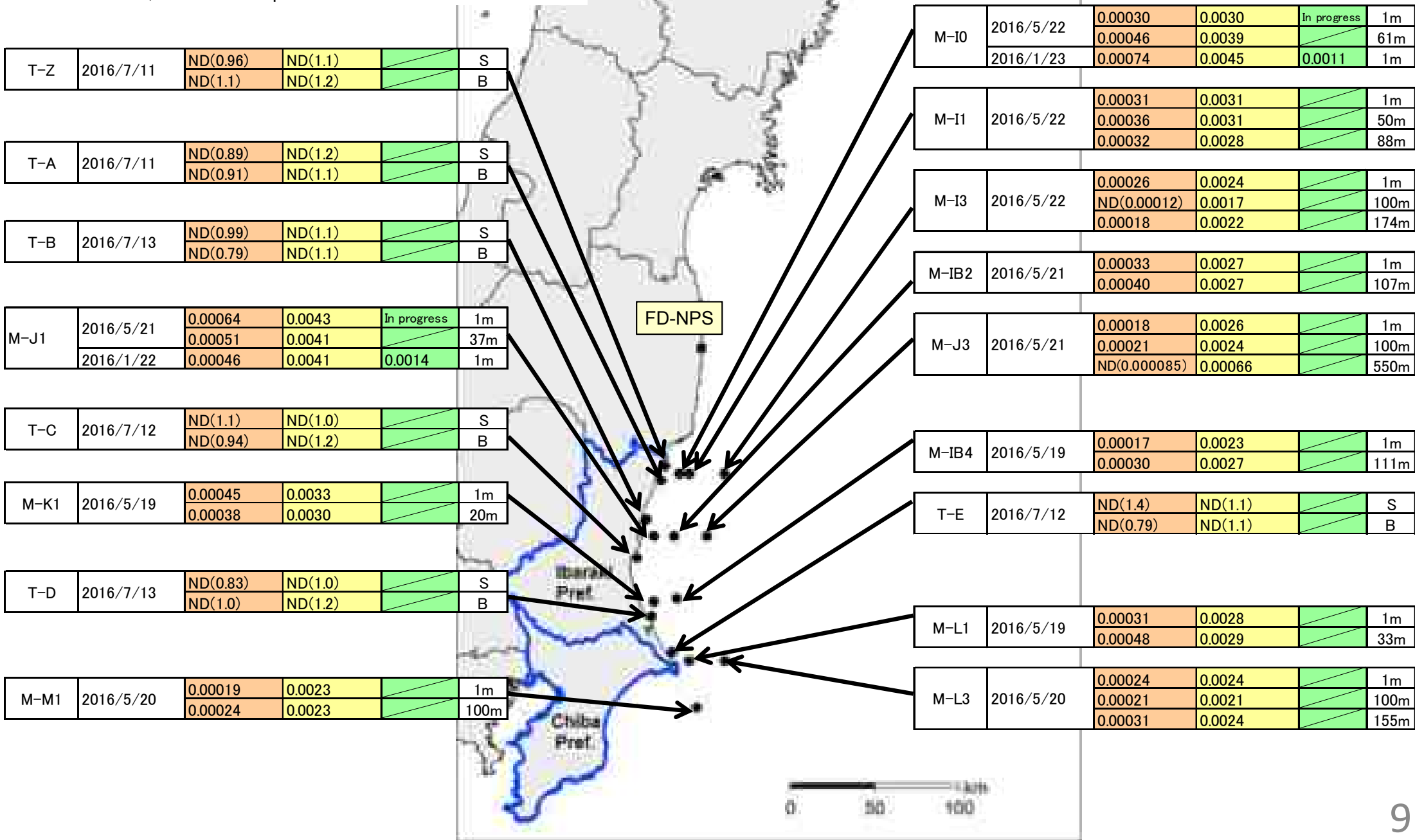


# Sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

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: Not detected; 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: Not detected; Numbers in parentheses: detection limits

M-10	2016/6/9	ND(0.00064)	0.0022	1m
		ND(0.00069)	0.0026	100m
		ND(0.00063)	0.0020	200m
		ND(0.00062)	0.0018	300m
		ND(0.00064)	0.0011	500m

M-14	2016/6/7	ND(0.00058)	0.0022	1m
		ND(0.00060)	0.0028	100m
		ND(0.00056)	0.0024	200m
		ND(0.00060)	0.0020	300m
		ND(0.00062)	0.00084	500m

M-19	2016/6/4	ND(0.00068)	0.0026	1m
		ND(0.00068)	0.0028	100m
		ND(0.00067)	0.0025	200m
		ND(0.00070)	0.0019	300m
		ND(0.00072)	0.00084	500m

M-20	2016/6/7	ND(0.00065)	0.0023	1m
		ND(0.00064)	0.0026	100m
		ND(0.00068)	0.0021	199m
		ND(0.00060)	0.0019	301m
		ND(0.00063)	0.0010	500m

M-25	2015/6/5	ND(0.00060)	0.0016	1m
		ND(0.00056)	0.0023	100m
		ND(0.00069)	0.0034	200m
		ND(0.00063)	0.0034	300m
		ND(0.00062)	0.0021	500m

M-11	2016/6/8	ND(0.00064)	0.0026	1m
		ND(0.00072)	0.0027	100m
		ND(0.00065)	0.0020	200m
		ND(0.00064)	0.0014	300m
		ND(0.00072)	0.00092	500m

M-15	2016/6/8	ND(0.00058)	0.0020	1m
		ND(0.00062)	0.0027	100m
		ND(0.00070)	0.0035	200m
		ND(0.00063)	0.0031	300m
		ND(0.00059)	0.0012	500m

M-21	2016/6/6	ND(0.00059)	0.0022	1m
		ND(0.00060)	0.0025	100m
		ND(0.00062)	0.0023	200m
		ND(0.00064)	0.0015	300m
		ND(0.00063)	0.00090	501m

M-26	2016/6/5	ND(0.00060)	0.0017	1m
		ND(0.00058)	0.0025	99m
		ND(0.00066)	0.0028	200m
		ND(0.00056)	0.0037	301m
		ND(0.00064)	0.0021	500m

M-27	2016/6/6	ND(0.00056)	0.0026	1m
		ND(0.00056)	0.0032	100m
		ND(0.00055)	0.0022	200m
		ND(0.00055)	0.0022	300m
		ND(0.00057)	0.0011	500m

