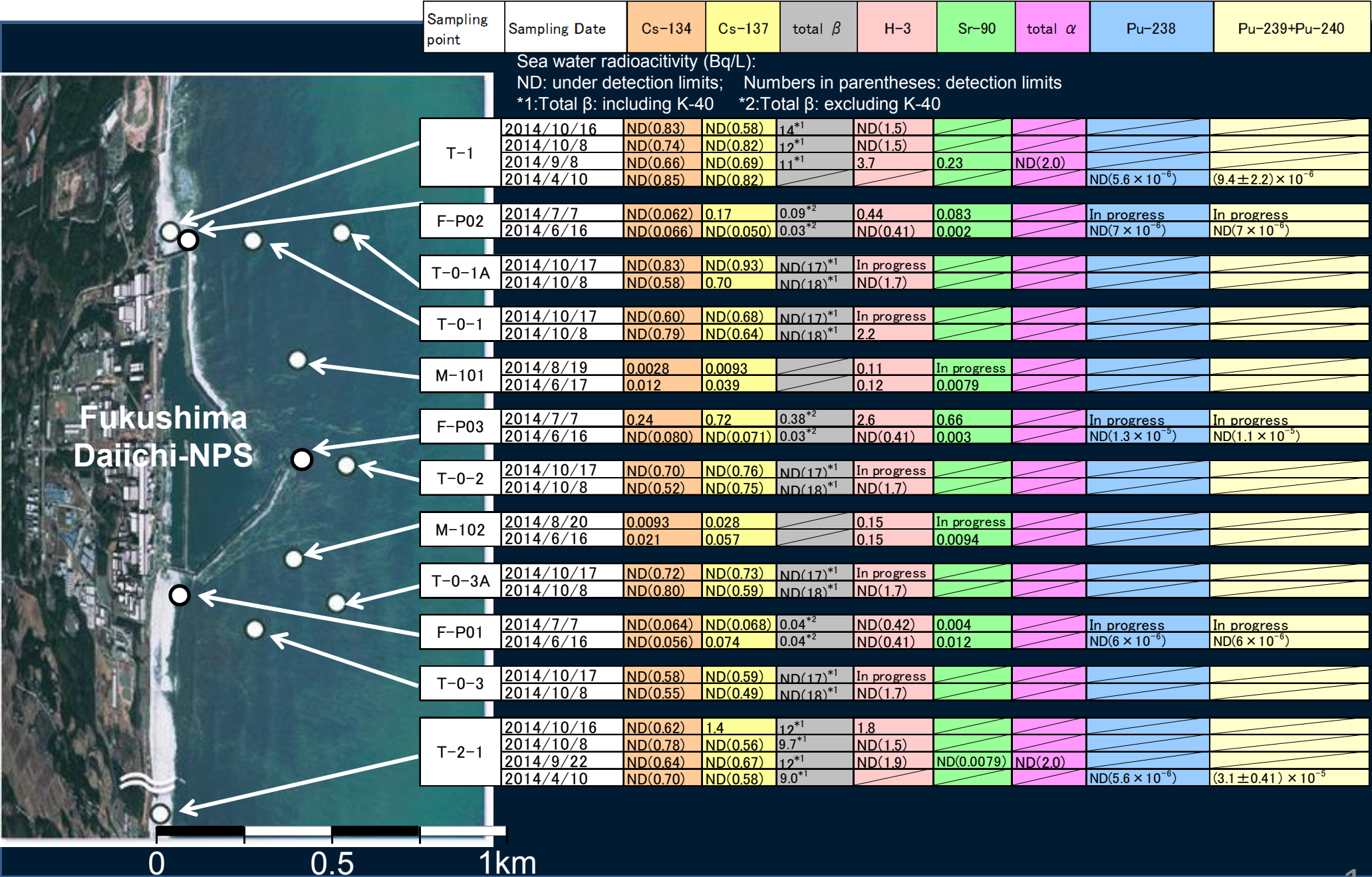


# Sea Area Monitoring

October 28, 2014

Nuclear Regulation Authority (NRA), Japan

# Sea area within 2km radius from the NPS



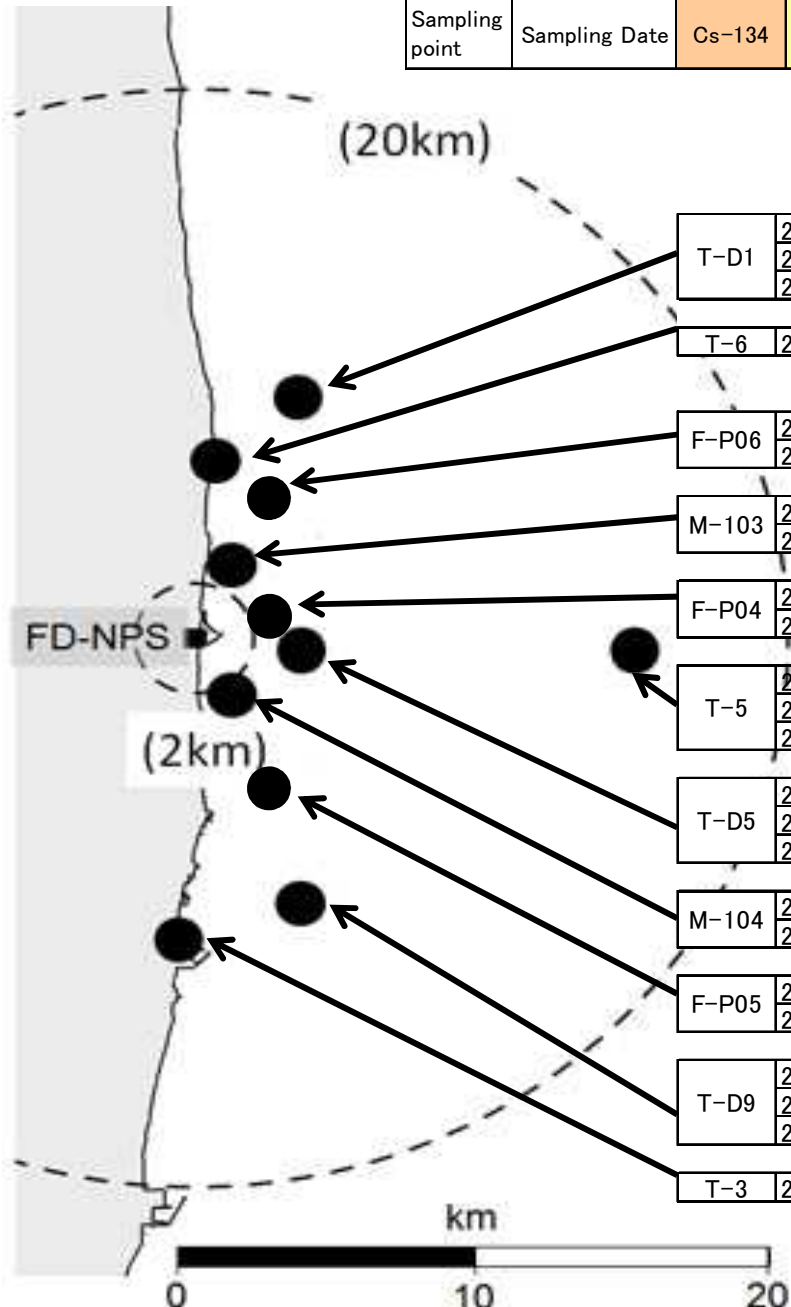
# Sea area between 2-20km radius from the NPS (1)

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	2014/9/1	0.0031	0.0099	ND(16) <sup>*1</sup>	0.56	ND(0.01)	ND(2.0)			S
	2014/8/18	0.0022	0.0069	ND(17) <sup>*1</sup>	0.89					S
	2014/4/1	0.0027	0.0086	ND(17) <sup>*1</sup>	ND(0.30)	ND(0.009)	ND(1.9)	ND(5.3 × 10 <sup>-6</sup> )	(5.7 ± 1.7) × 10 <sup>-6</sup>	S
T-6	2014/9/2	0.020	0.055	ND(17) <sup>*1</sup>	ND(0.31)					S
F-P06	2014/7/7	ND(0.056)	ND(0.051)	0.02 <sup>*2</sup>	ND(0.42)	0.003		In progress	In progress	S
	2014/6/16	ND(0.055)	ND(0.055)	0.03 <sup>*2</sup>	ND(0.40)	0.001		ND(1.4 × 10 <sup>-5</sup> )	ND(1.3 × 10 <sup>-5</sup> )	S
M-103	2014/8/19	0.0025	0.0090		0.11	In progress				0.5m
	2014/6/17	0.010	0.033		0.13	0.0019				0.5m
F-P04	2014/7/7	ND(0.065)	ND(0.065)	0.04 <sup>*2</sup>	ND(0.42)	0.004		In progress	In progress	S
	2014/6/16	ND(0.074)	ND(0.053)	0.03 <sup>*2</sup>	ND(0.41)	0.004		ND(6 × 10 <sup>-6</sup> )	6 × 10 <sup>-6</sup>	S
T-5	2014/9/2	ND(0.0012)	0.0018	ND(16) <sup>*1</sup>	ND(0.34)	ND(0.01)	ND(2.0)			S
	2014/8/18	ND(0.0017)	0.0034	ND(17) <sup>*1</sup>	0.59					S
	2014/4/2	ND(0.0014)	0.0044	ND(17) <sup>*1</sup>	ND(0.30)	ND(0.009)	ND(1.9)	ND(5.5 × 10 <sup>-6</sup> )	(8.3 ± 2.1) × 10 <sup>-6</sup>	S
T-D5	2014/9/1	0.010	0.030	ND(16) <sup>*1</sup>	0.38	ND(0.01)	ND(2.0)			S
	2014/8/18	0.0025	0.0066	ND(17) <sup>*1</sup>	0.60					S
	2014/4/1	0.0058	0.012	ND(17) <sup>*1</sup>	ND(0.30)	ND(0.009)	ND(1.9)	ND(5.2 × 10 <sup>-6</sup> )	ND(4.5 × 10 <sup>-6</sup> )	S
M-104	2014/8/20	0.0059	0.019		0.13	In progress				0.5m
	2014/6/16	0.029	0.081		0.19	0.030				0.5m
F-P05	2014/7/7	ND(0.056)	ND(0.059)	0.04 <sup>*2</sup>	ND(0.41)	0.006		In progress	In progress	S
	2014/6/16	ND(0.060)	ND(0.076)	0.03 <sup>*2</sup>	ND(0.41)	0.001		ND(6 × 10 <sup>-6</sup> )	6 × 10 <sup>-6</sup>	S
T-D9	2014/9/2	0.0017	0.0059	ND(16) <sup>*1</sup>	ND(0.34)	ND(0.009)	ND(1.9)			S
	2014/8/18	ND(0.0017)	0.0039	ND(17) <sup>*1</sup>	0.49					S
	2014/4/2	0.0041	0.010	ND(16) <sup>*1</sup>	ND(0.30)	ND(0.008)	ND(1.9)	ND(4.7 × 10 <sup>-6</sup> )	ND(4.5 × 10 <sup>-6</sup> )	S
T-3	2014/9/2	0.027	0.11	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				

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

T-S1	2014/8/21	0.0039	0.014	S
		0.0018	0.0065	B

T-14	2014/9/1	0.0022	0.0075	S
		0.0095	0.035	B
	2014/8/26	0.0018	0.0063	S
		0.0016	0.0097	B

T-S2	2014/8/21	0.0020	0.0066	S
		ND(0.0013)	0.0067	B

T-D1	2014/9/9	0.0054	0.016	S
		0.0063	0.020	B
	2014/9/1	0.0031	0.0099	S
		0.0098	0.028	B
	2014/8/26	0.0030	0.0065	S
		0.0040	0.013	B

T-6	2014/9/9	0.026	0.078	S
	2014/9/2	0.020	0.055	S
	2014/8/26	0.010	0.032	S

T-S8	2014/8/23	0.0025	0.0080	S
		0.0018	0.011	B

T-3	2014/9/9	0.040	0.13	S
	2014/9/2	0.027	0.11	S
	2014/8/26	0.045	0.11	S

T-S7	2014/9/4	0.018	0.059	S
		0.014	0.043	B

T-S5	2014/9/4	0.021	0.058	S
		0.0058	0.018	B

T-S3	2014/8/7	0.014	0.038	S
		0.0028	0.011	B

T-S4	2014/8/7	0.0073	0.021	S
		0.0016	0.0069	B

T-D5	2014/9/9	0.0045	0.014	S
		0.0087	0.028	B
	2014/9/1	0.010	0.030	S
		0.0065	0.024	B
	2014/8/26	ND(0.0017)	0.0045	S
		0.0027	0.0090	B

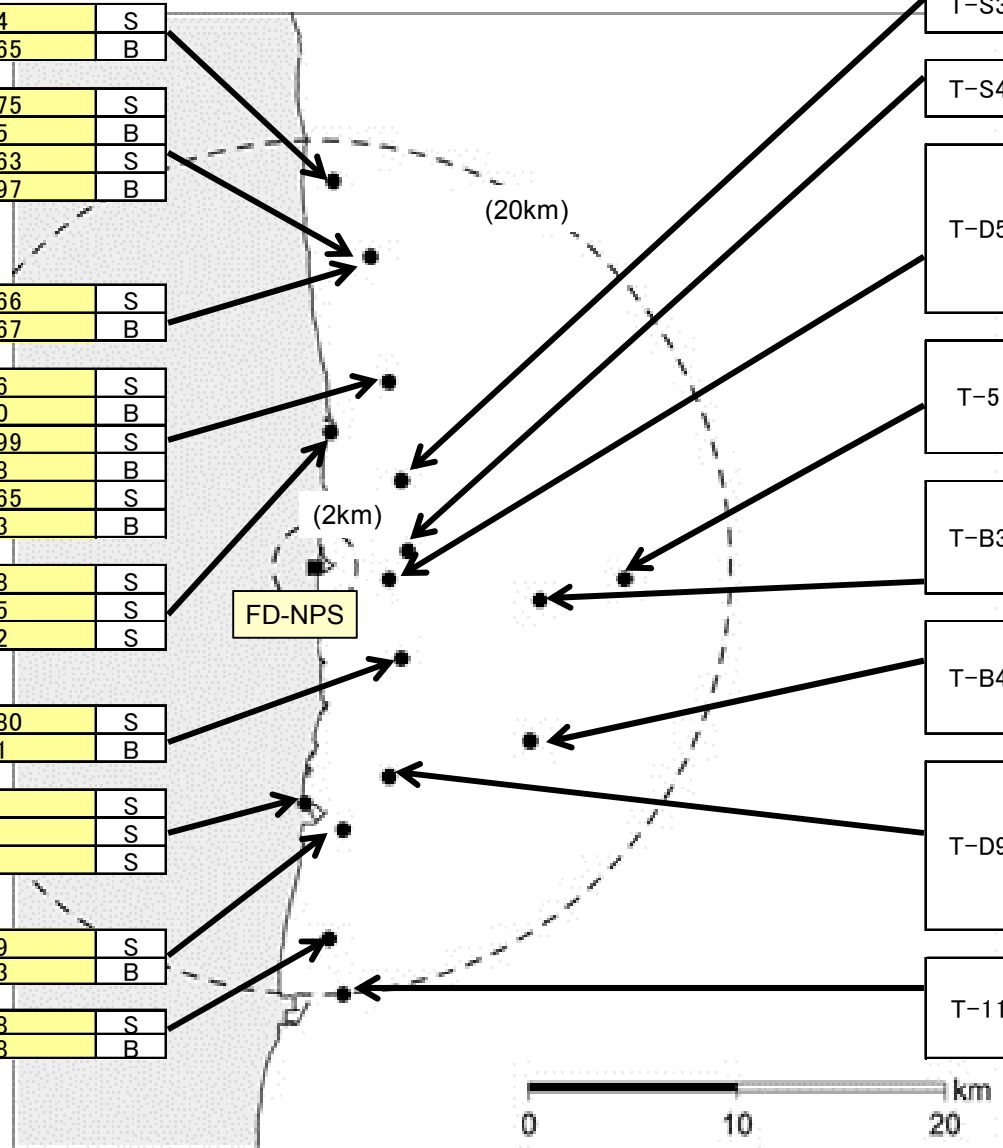
T-5	2014/9/2	ND(0.0012)	0.0018	S
		ND(0.0012)	0.0037	B
	2014/8/26	ND(0.0012)	0.0033	S
		0.0013	0.0044	B

T-B3	2014/9/6	ND(0.0014)	0.0026	S
		0.0015	0.0043	B
	2014/8/29	ND(0.0014)	0.0052	S
		ND(0.0014)	0.0049	B

T-B4	2014/9/6	ND(0.0014)	0.0029	S
		0.0016	0.0038	B
	2014/8/29	ND(0.0014)	0.0028	S
		ND(0.0014)	0.0031	B

T-D9	2014/9/9	0.0018	0.0083	S
		0.0020	0.0077	B
	2014/9/2	0.0017	0.0059	S
		0.0039	0.013	B
	2014/8/26	0.0023	0.0060	S
		0.0029	0.011	B

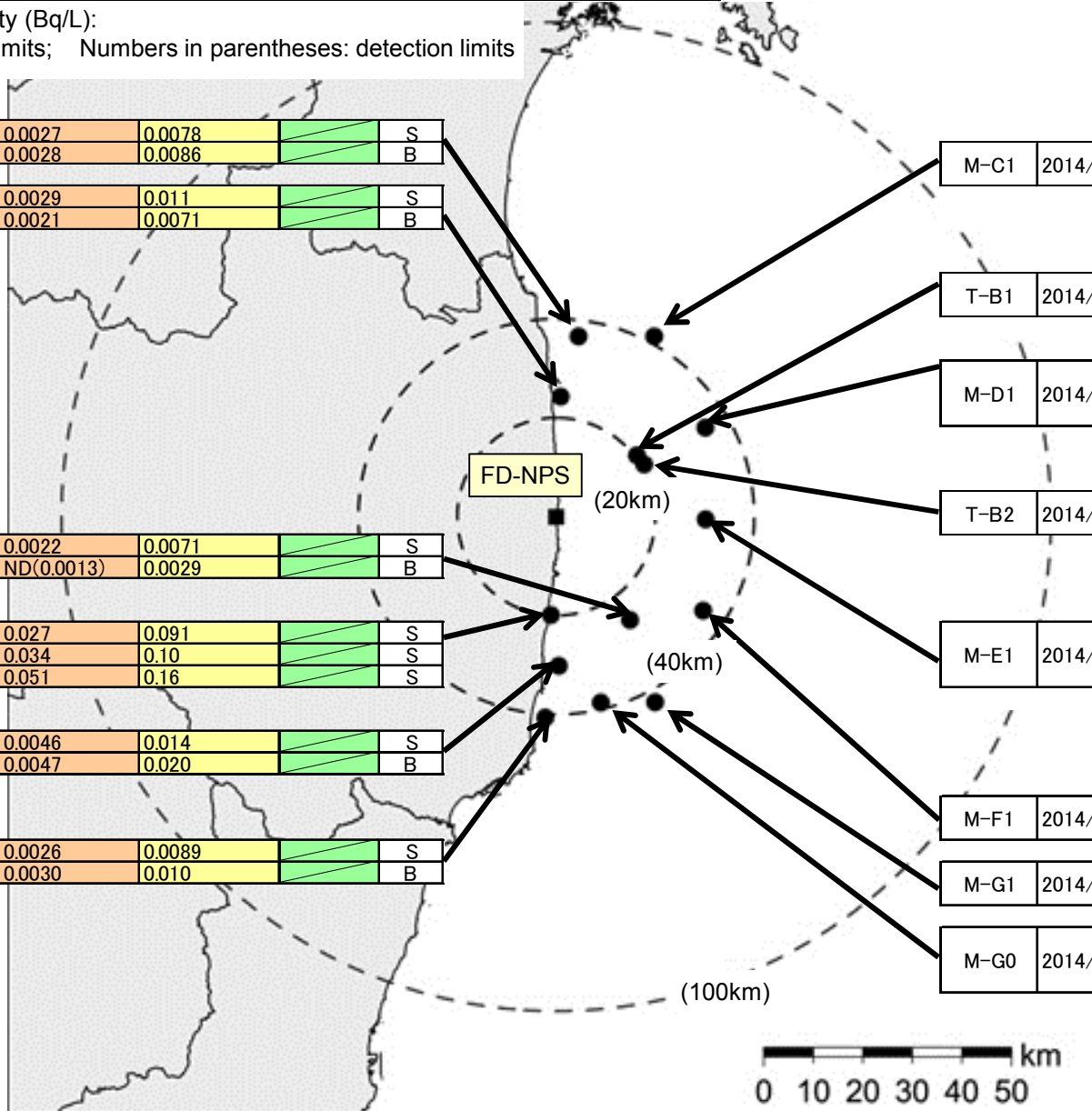
T-11	2014/9/2	0.0091	0.030	S
		0.011	0.034	B
	2014/8/26	0.0035	0.012	S
		0.0064	0.023	B



# 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	2014/8/29	0.0027	0.0078		S
		0.0028	0.0086		B
T-13-1	2014/8/29	0.0029	0.011		S
		0.0021	0.0071		B

M-C1	2014/5/13	0.0013	0.0039		1m
		0.0015	0.0050		46m

T-B1	2014/8/20	ND(0.0013)	0.0031		S
		ND(0.0013)	0.0048		B

M-D1	2014/5/20	0.0017	0.0048		1m
		0.0016	0.0051		50m
		ND(0.00056)	0.0023		116m

T-B2	2014/8/20	ND(0.0013)	0.0024		S
		ND(0.0013)	0.0043		B

T-7	2014/8/6	0.0022	0.0071		S
		ND(0.0013)	0.0029		B

M-E1	2014/5/17	0.0012	0.0046		1m
		0.00096	0.0036		50m
		ND(0.00059)	0.0020		125m

T-4	2014/9/9	0.027	0.091		S	
		2014/9/2	0.034		0.10	S
		2014/8/26	0.051		0.16	S

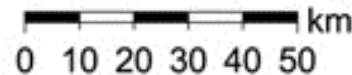
T-12	2014/8/2	0.0046	0.014		S
		0.0047	0.020		B

M-F1	2014/5/17	0.0016	0.0049		1m
		ND(0.00068)	0.0020		133m

T-17-1	2014/8/2	0.0026	0.0089		S
		0.0030	0.010		B

M-G1	2014/5/24	ND(0.00055)	0.0015		1m
		ND(0.00065)	0.0019		129m

M-G0	2014/5/24	ND(0.00055)	0.0017		1m
		ND(0.00064)	0.0028		50m
		0.00068	0.0036		93m



# 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

M-C3	2014/8/16	In progress	In progress	0.021	In progress	In progress	1m
		0.0017	0.0063	0.024	0.11	0.0011	1m
	2014/5/13	0.00071	0.0023				50m
		ND(0.00061)	0.0015				124m

T-22	2014/8/29	0.0028	0.010				S
		0.0032	0.012				B

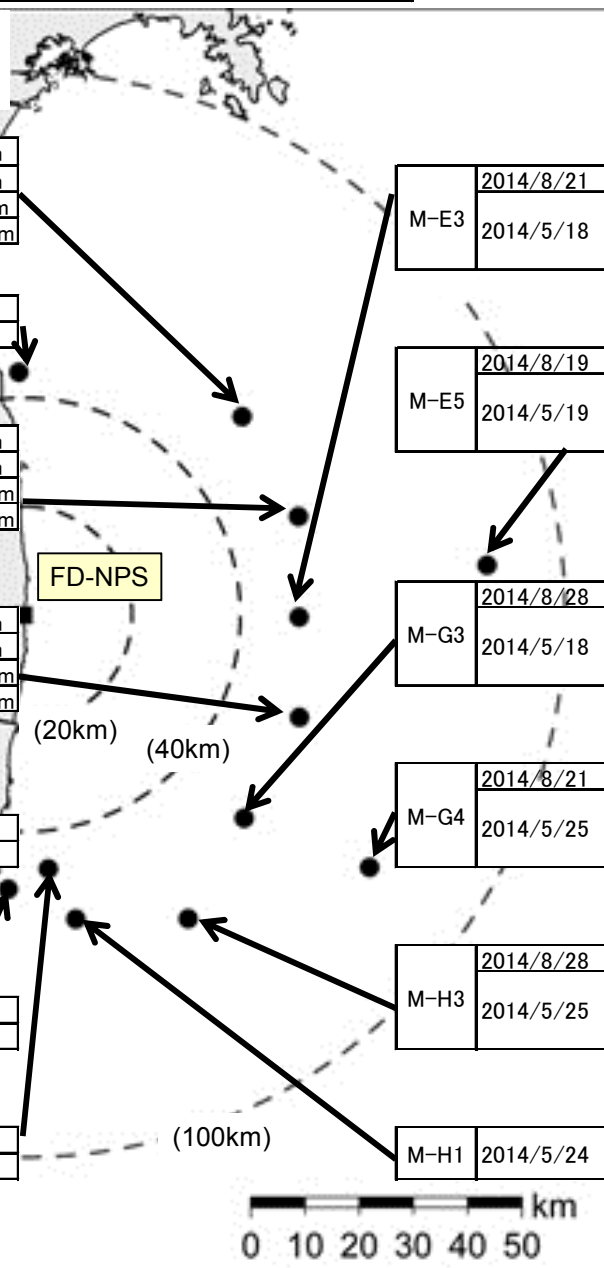
M-D3	2014/8/23	In progress	In progress	0.025	In progress	In progress	1m
		0.0017	0.0061	0.018	0.080	0.0012	1m
	2014/5/16	ND(0.00061)	0.0020				100m
		ND(0.00061)	0.0014				210m

M-F3	2014/8/21	In progress	In progress	0.026	In progress	In progress	1m
		0.0016	0.0048	0.027	0.089	0.0011	1m
	2014/5/18	ND(0.00057)	0.0015				100m
		ND(0.00066)	0.0015				222m

T-18	2014/8/6	0.0027	0.0074				S
		0.0026	0.0073				B

T-20	2014/8/2	0.0015	0.0068				S
		0.0019	0.0077				B

T-M10	2014/8/6	ND(0.0013)	0.0023				S
		ND(0.0013)	0.0038				B



M-E3	2014/8/21	In progress	In progress	0.029	In progress	In progress	1m
		0.0015	0.0038	0.024	0.10	0.00091	1m
	2014/5/18	ND(0.00064)	0.0019				100m
		ND(0.00064)	0.0014				218m

M-E5	2014/8/19	In progress	In progress	0.025	In progress	In progress	1m
		ND(0.00059)	0.0015	0.021	0.076	0.00084	1m
	2014/5/19	ND(0.00056)	0.0018				100m
		ND(0.00075)	0.00062				522m

M-G3	2014/8/28	In progress	In progress	0.022	In progress	In progress	1m
		0.0011	0.0029	0.027	0.076	0.00084	1m
	2014/5/18	ND(0.00056)	0.0016				100m
		ND(0.00064)	0.0016				196m

M-G4	2014/8/21	In progress	In progress	0.024	In progress	In progress	1m
		ND(0.00063)	0.0028	0.024	0.059	0.0011	1m
	2014/5/25	ND(0.00059)	0.0016				100m
		ND(0.00080)	0.00057				645m

M-H3	2014/8/28	In progress	In progress	0.025	In progress	In progress	1m
		ND(0.00060)	0.0021	0.020	0.084	0.0010	1m
	2014/5/25	ND(0.00056)	0.0017				100m
		ND(0.00053)	0.0017				214m

M-H1	2014/5/24	0.0016	0.0049				1m
		ND(0.00059)	0.0020				122m

# 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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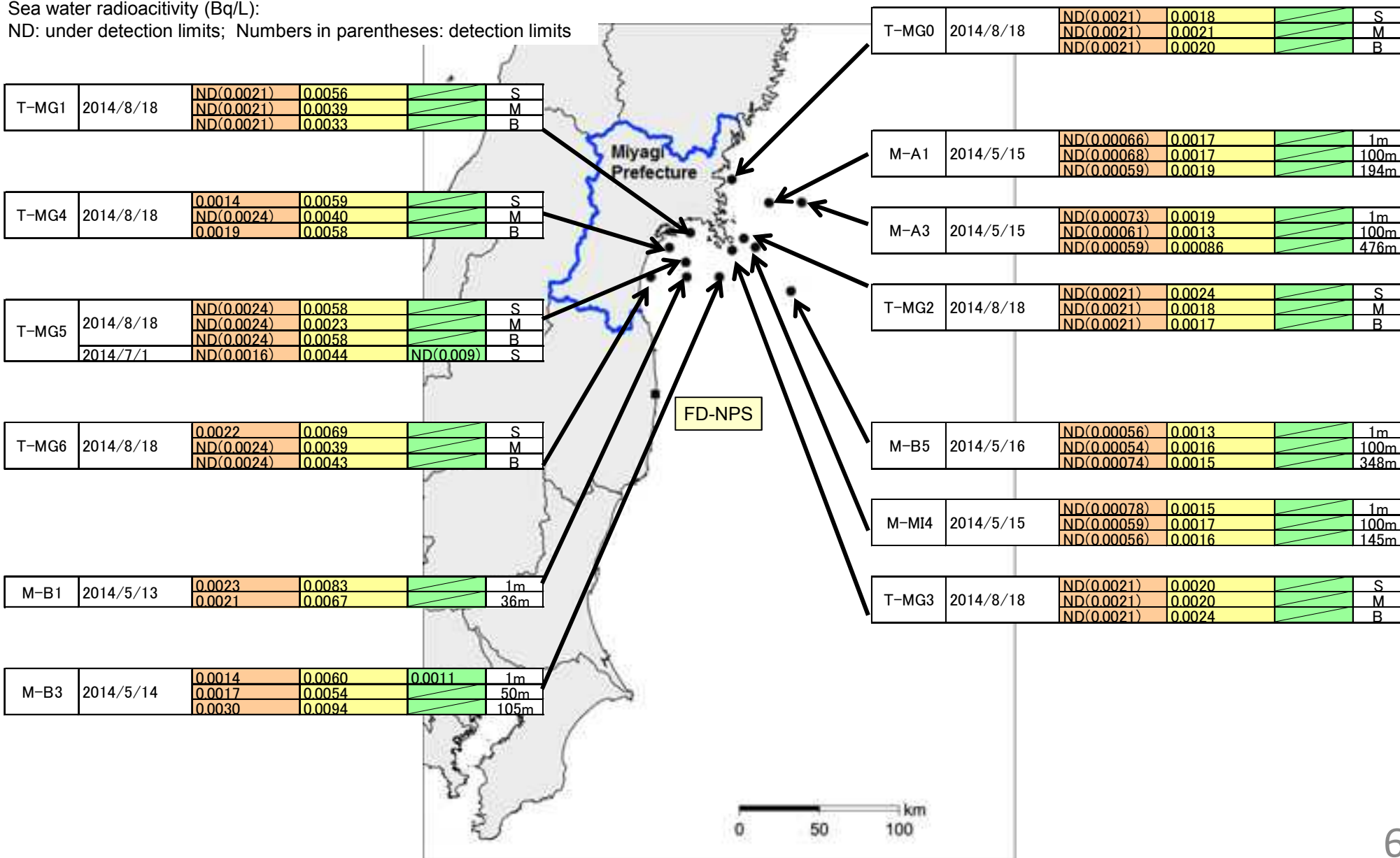
S:2m below sea level

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

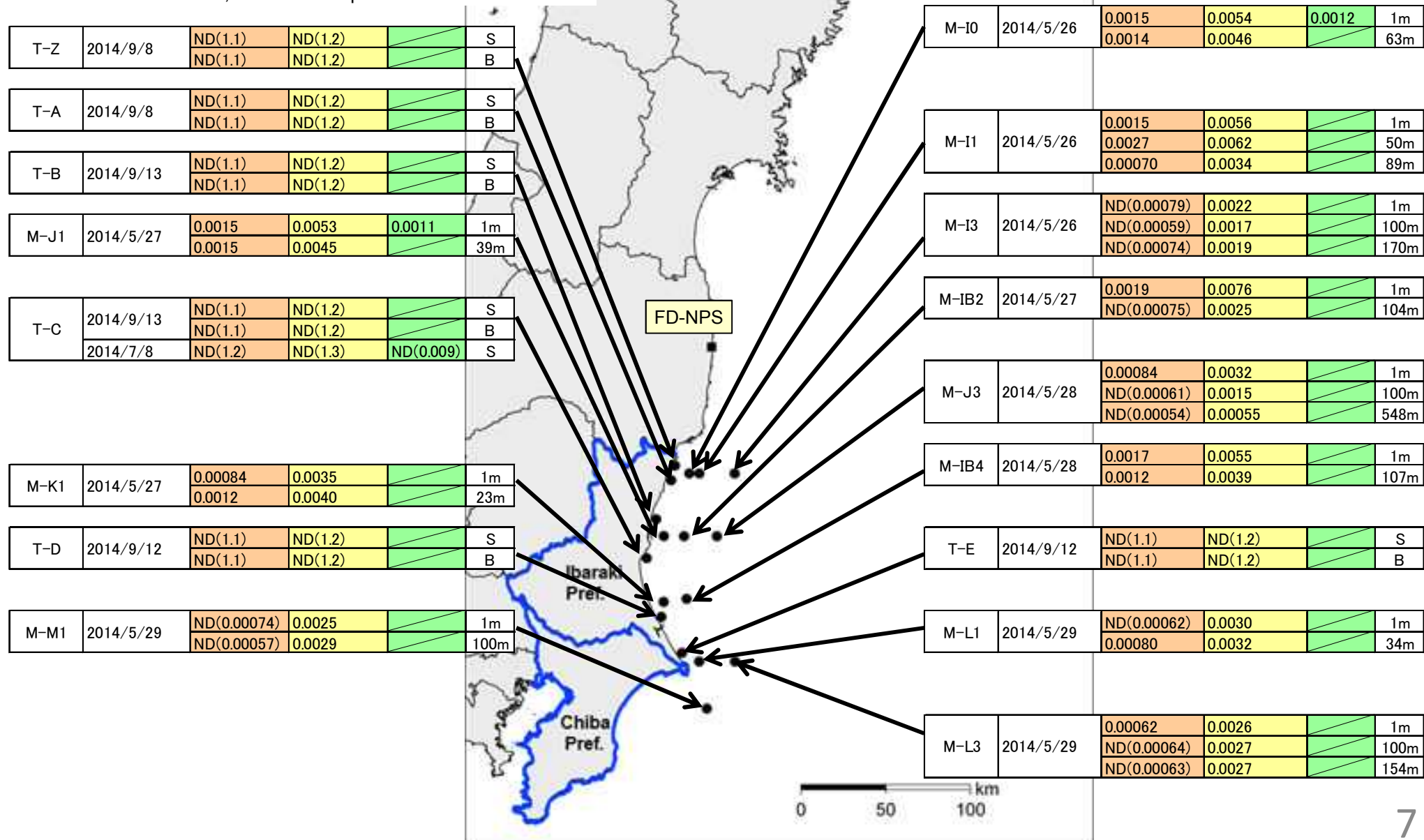


# Sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

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	2014/6/18	ND(0.00054)	0.0020	1m
		ND(0.00073)	0.0017	100m
		ND(0.00052)	0.0013	200m
		ND(0.00058)	0.0011	300m
		ND(0.00051)	0.00059	500m

M-14	2014/6/19	ND(0.00056)	0.0022	1m
		ND(0.00057)	0.0018	100m
		ND(0.00053)	0.0016	200m
		ND(0.00058)	0.00093	300m
		ND(0.00059)	0.00054	500m

M-19	2014/6/20	0.00095	0.0033	1m
		ND(0.00057)	0.0020	100m
		ND(0.00063)	0.0014	200m
		ND(0.00053)	0.0012	300m
		ND(0.00057)	0.00086	500m

M-20	2014/6/21	0.00067	0.0026	1m
		ND(0.00059)	0.0028	100m
		ND(0.00073)	0.0024	200m
		ND(0.00057)	0.0015	300m
		ND(0.00055)	0.00070	500m

M-25	2014/6/24	ND(0.00057)	0.0016	1m
		ND(0.00055)	0.0019	100m
		0.00069	0.0033	200m
		0.00097	0.0043	300m
		ND(0.00060)	0.0023	500m

M-11	2014/6/18	0.00062	0.0030	1m
		0.00078	0.0028	100m
		ND(0.00052)	0.0020	200m
		ND(0.00054)	0.0014	300m
		ND(0.00059)	0.0012	500m

M-15	2014/6/19	ND(0.00056)	0.0025	1m
		ND(0.00055)	0.0021	100m
		ND(0.00060)	0.0017	200m
		ND(0.00052)	0.0012	300m
		ND(0.00061)	0.00080	500m

M-21	2014/6/21	ND(0.00057)	0.0020	1m
		ND(0.00056)	0.0029	100m
		0.00063	0.0032	200m
		ND(0.00065)	0.0021	300m
		ND(0.00053)	0.0015	500m

M-26	2014/6/23	ND(0.00056)	0.0022	1m
		ND(0.00069)	0.0031	100m
		0.00099	0.0038	200m
		0.0013	0.0047	300m
		0.00066	0.0032	500m

M-27	2014/6/22	ND(0.00057)	0.0028	1m
		ND(0.00070)	0.0027	100m
		0.0010	0.0033	200m
		ND(0.00056)	0.0035	300m
		0.0011	0.0051	500m

