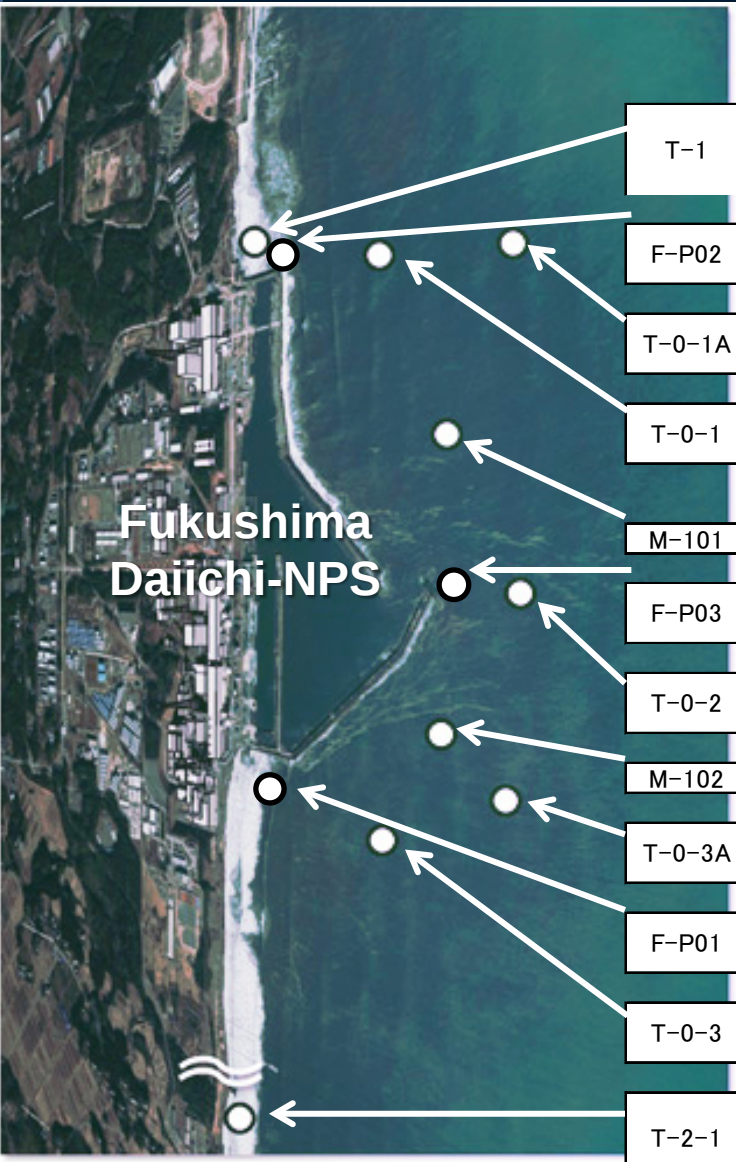


# Sea Area Monitoring

May 07 , 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 |
|----------------|---------------|--------|--------|---------------|-----|-------|----------------|--------|---------------|
|----------------|---------------|--------|--------|---------------|-----|-------|----------------|--------|---------------|

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    | 2014/4/21 | ND(0.73)  | ND(0.75) | 12 <sup>*1</sup>     | ND(1.4)     |             |         |                            |                                 |
|        | 2014/3/10 | ND(0.78)  | 0.77     | 13 <sup>*1</sup>     | 4.4         | 0.69        | ND(1.5) |                            |                                 |
|        | 2014/3/4  | ND(0.76)  | 0.71     |                      |             |             |         | ND( $8.3 \times 10^{-6}$ ) | ND( $8.1 \times 10^{-6}$ )      |
| F-P02  | 2014/3/10 | ND(0.067) | 0.085    | 0.04 <sup>*2</sup>   | In progress | 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 | 2014/4/23 | ND(0.76)  | ND(0.62) | ND(15) <sup>*1</sup> | In progress |             |         |                            |                                 |
|        | 2014/4/17 | ND(0.59)  | ND(0.62) | ND(17) <sup>*1</sup> | ND(1.9)     |             |         |                            |                                 |
| T-0-1  | 2014/4/23 | ND(0.64)  | ND(0.45) | ND(15) <sup>*1</sup> | In progress |             |         |                            |                                 |
|        | 2014/4/17 | ND(0.68)  | ND(0.59) | ND(17) <sup>*1</sup> | ND(1.9)     |             |         |                            |                                 |
| M-101  | 2014/1/15 | 0.030     | 0.078    |                      | 0.17        | 0.022       |         |                            |                                 |
| F-P03  | 2014/3/10 | ND(0.065) | 0.15     | 0.07 <sup>*2</sup>   | In progress | 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  | 2014/4/23 | ND(0.73)  | ND(0.64) | ND(15) <sup>*1</sup> | In progress |             |         |                            |                                 |
|        | 2014/4/17 | ND(0.58)  | ND(0.78) | ND(17) <sup>*1</sup> | ND(1.9)     |             |         |                            |                                 |
| M-102  | 2014/1/16 | 0.054     | 0.13     |                      | 0.47        | 0.063       |         |                            |                                 |
| T-0-3A | 2014/4/23 | ND(0.80)  | ND(0.64) | ND(15) <sup>*1</sup> | In progress |             |         |                            |                                 |
|        | 2014/4/17 | ND(0.59)  | ND(0.58) | ND(17) <sup>*1</sup> | ND(1.9)     |             |         |                            |                                 |
| F-P01  | 2014/3/10 | ND(0.069) | 0.14     | 0.06 <sup>*2</sup>   | In progress | 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  | 2014/4/23 | ND(0.67)  | ND(0.57) | ND(15) <sup>*1</sup> | In progress |             |         |                            |                                 |
|        | 2014/4/17 | ND(0.61)  | ND(0.68) | ND(17) <sup>*1</sup> | ND(1.9)     |             |         |                            |                                 |
| T-2-1  | 2014/4/21 | ND(0.66)  | ND(0.53) | 15 <sup>*1</sup>     | ND(1.4)     |             |         |                            |                                 |
|        | 2014/3/10 | ND(0.55)  | ND(0.70) | 13 <sup>*1</sup>     | ND(1.4)     | 0.032       | ND(1.5) |                            |                                 |
|        | 2014/3/4  | ND(0.73)  | ND(0.76) | 11 <sup>*1</sup>     |             |             |         | ND( $5.9 \times 10^{-6}$ ) | $(3.0 \pm 0.41) \times 10^{-5}$ |

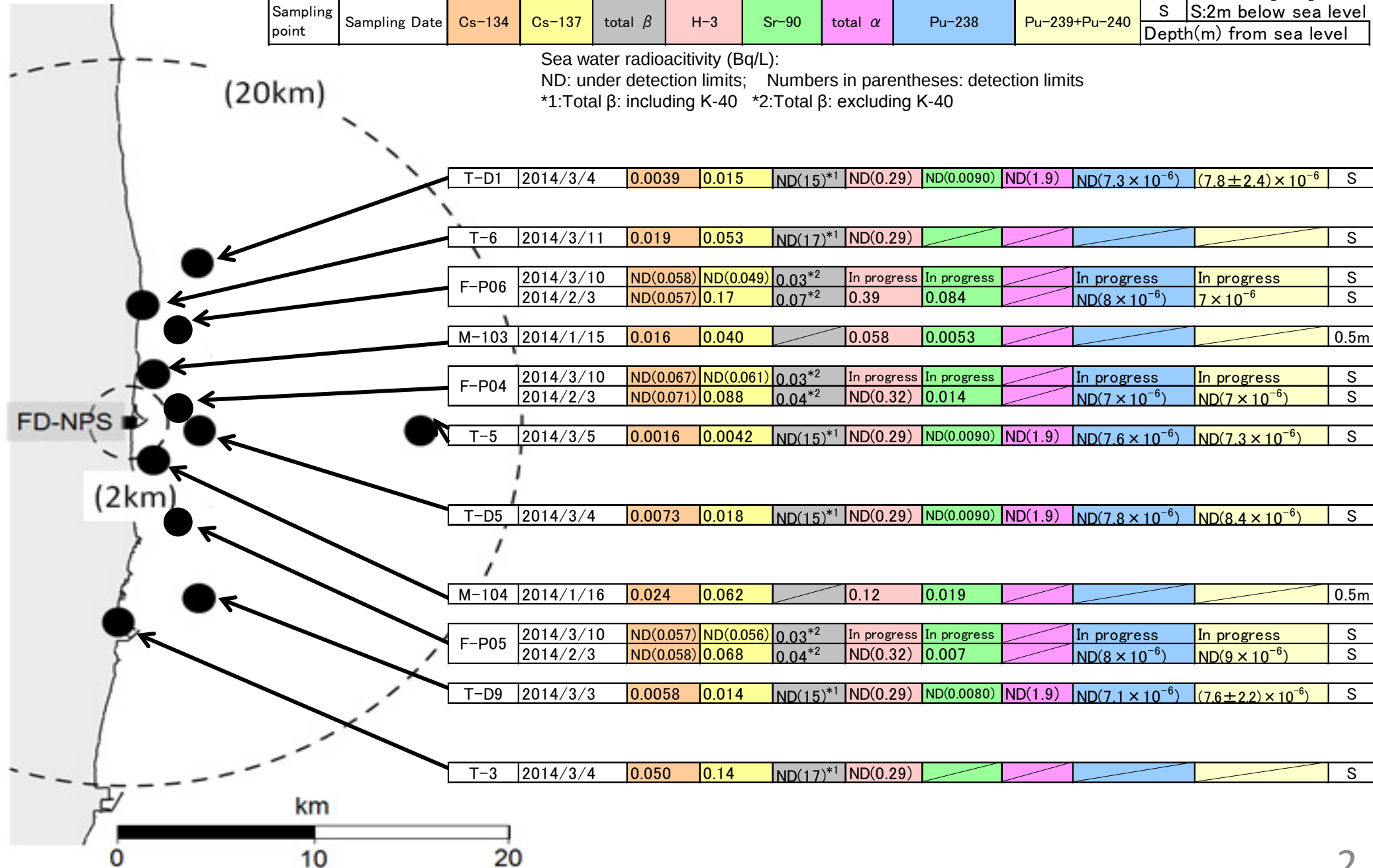
# Sea area between 2-20km radius from the NPS (1)

| 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 |
|----------------|---------------|--------|--------|---------------|-----|-------|----------------|--------|---------------|-------------------------|----------------------|
|                |               |        |        |               |     |       |                |        |               | Depth(m) from sea level |                      |

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

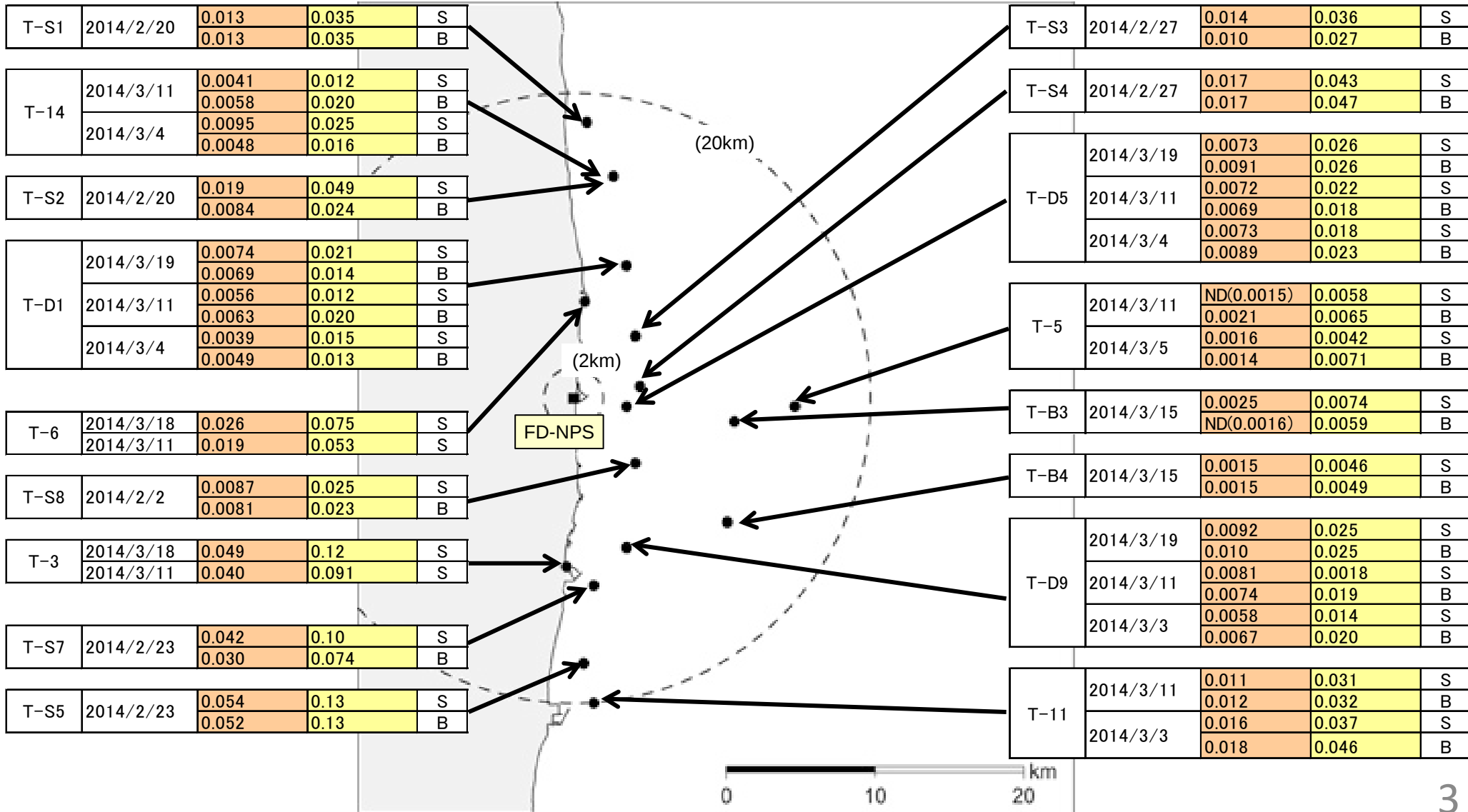


# Sea area between 2-20km radius from the NPS (2)

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

Sea water radioactivity (Bq/L):

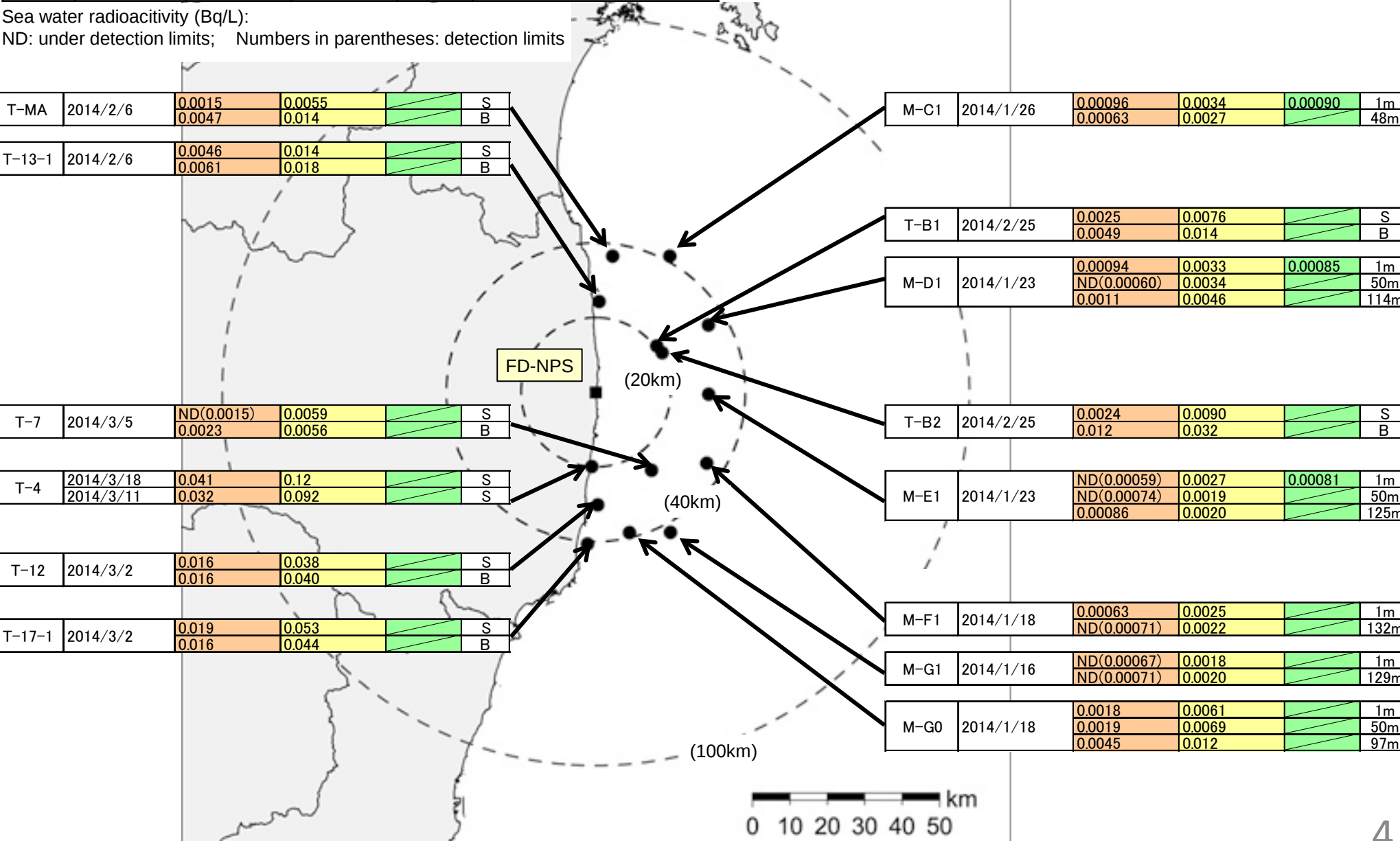
ND: under detection limits; Numbers in parentheses: detection limits



# 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



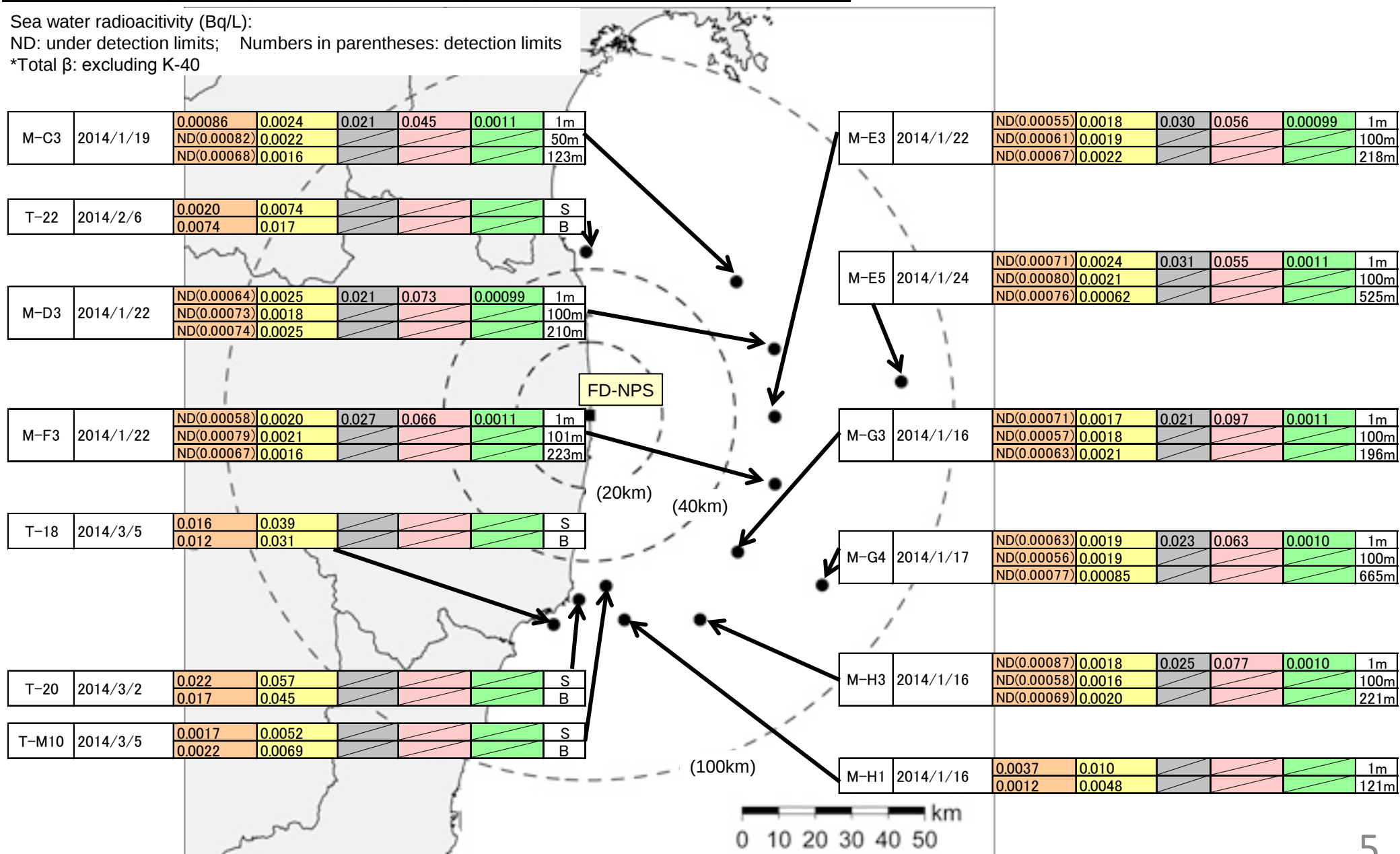
# Sea area between 20-100km radius from the NPS(2)

| Sampling point | Sampling Date | Cs-134 | Cs-137 | Total $\beta$ * | 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                   |
|----------------|---------------|--------|--------|-------|-------------------------|
|                |               |        |        |       | Depth(m) from sea level |

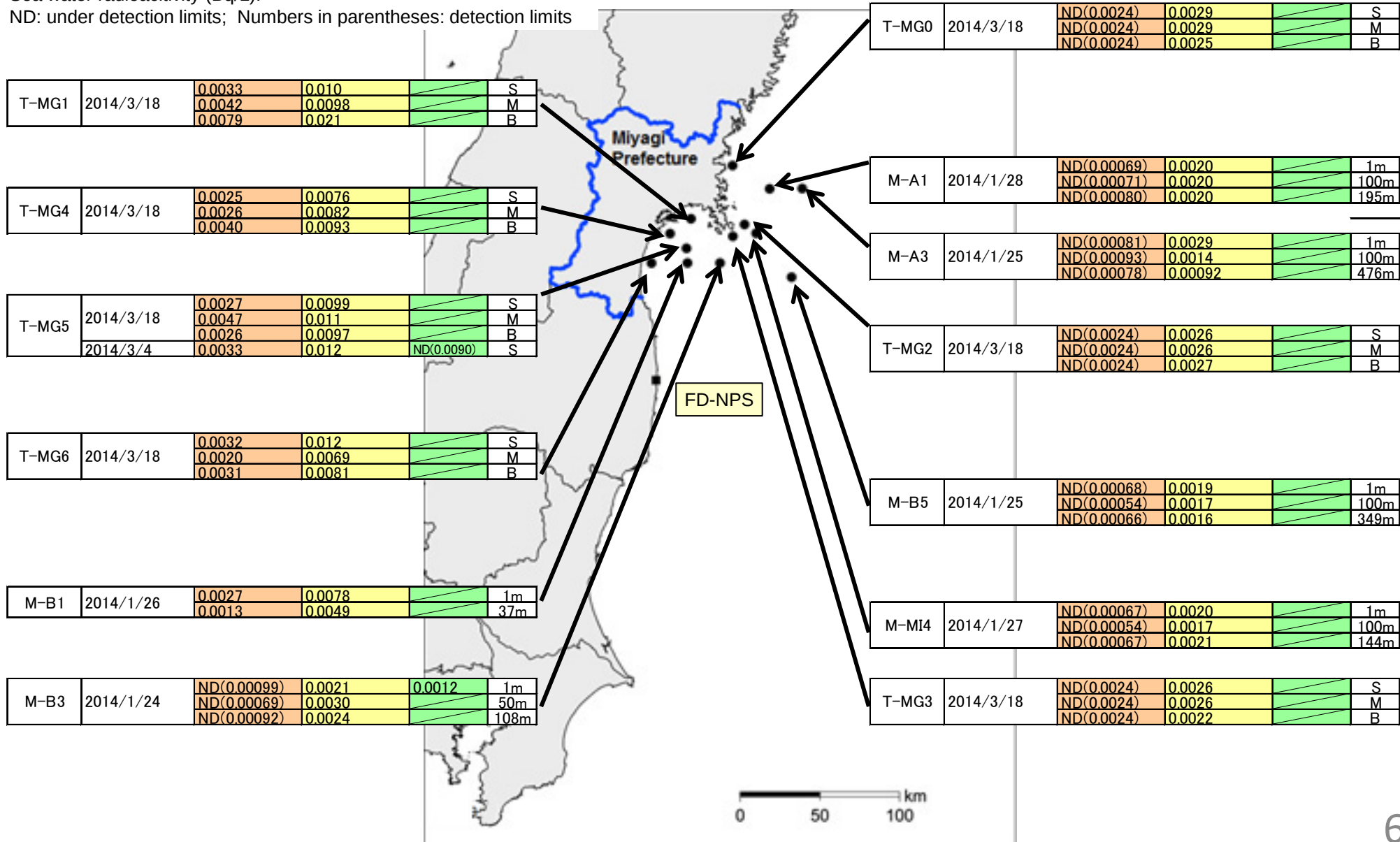
S:2m below sea level

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 | 2014/3/10 | ND(1.2) | ND(1.3) |  | S |
|     |           | ND(1.2) | ND(1.3) |  | B |

|     |           |         |         |  |   |
|-----|-----------|---------|---------|--|---|
| T-A | 2014/3/10 | ND(1.2) | ND(1.3) |  | S |
|     |           | ND(1.2) | ND(1.3) |  | B |

|     |           |         |         |  |   |
|-----|-----------|---------|---------|--|---|
| T-B | 2014/3/12 | ND(1.2) | ND(1.3) |  | S |
|     |           | ND(1.2) | ND(1.3) |  | B |

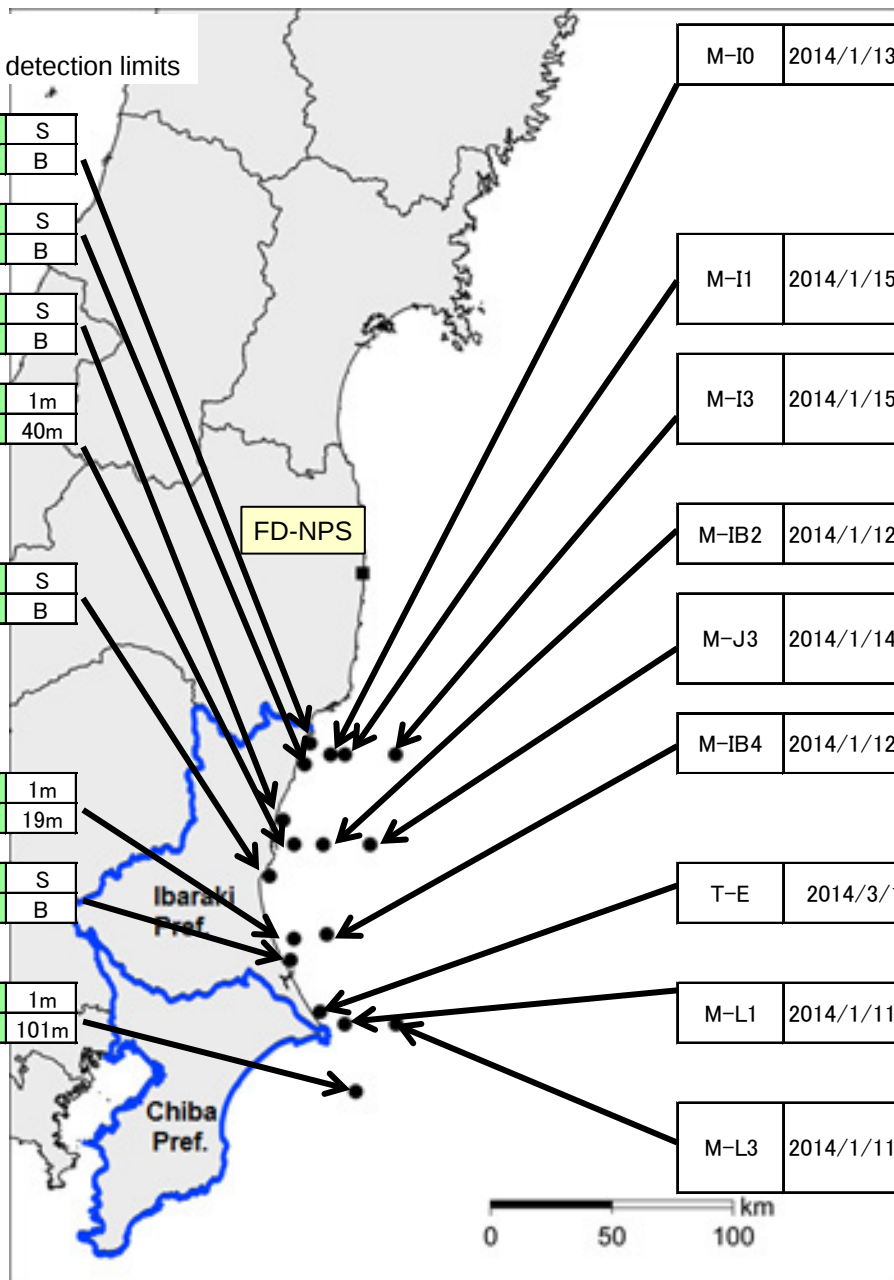
|      |           |        |        |         |     |
|------|-----------|--------|--------|---------|-----|
| M-J1 | 2014/1/13 | 0.0027 | 0.0076 | 0.00079 | 1m  |
|      |           | 0.0026 | 0.0082 |         | 40m |

|     |           |         |         |            |   |
|-----|-----------|---------|---------|------------|---|
| T-C | 2014/3/12 | ND(1.2) | ND(1.3) | ND(0.0090) | 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 | 2014/3/11 | ND(1.2) | ND(1.3) |  | S |
|     |           | ND(1.2) | 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 | 2014/3/11 | ND(1.2) | ND(1.3) |  | S |
|     |           | ND(1.2) | 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 |
|----------------|---------------|--------|--------|-------------------------|
|----------------|---------------|--------|--------|-------------------------|

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-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-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-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-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-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-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-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-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-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 |

