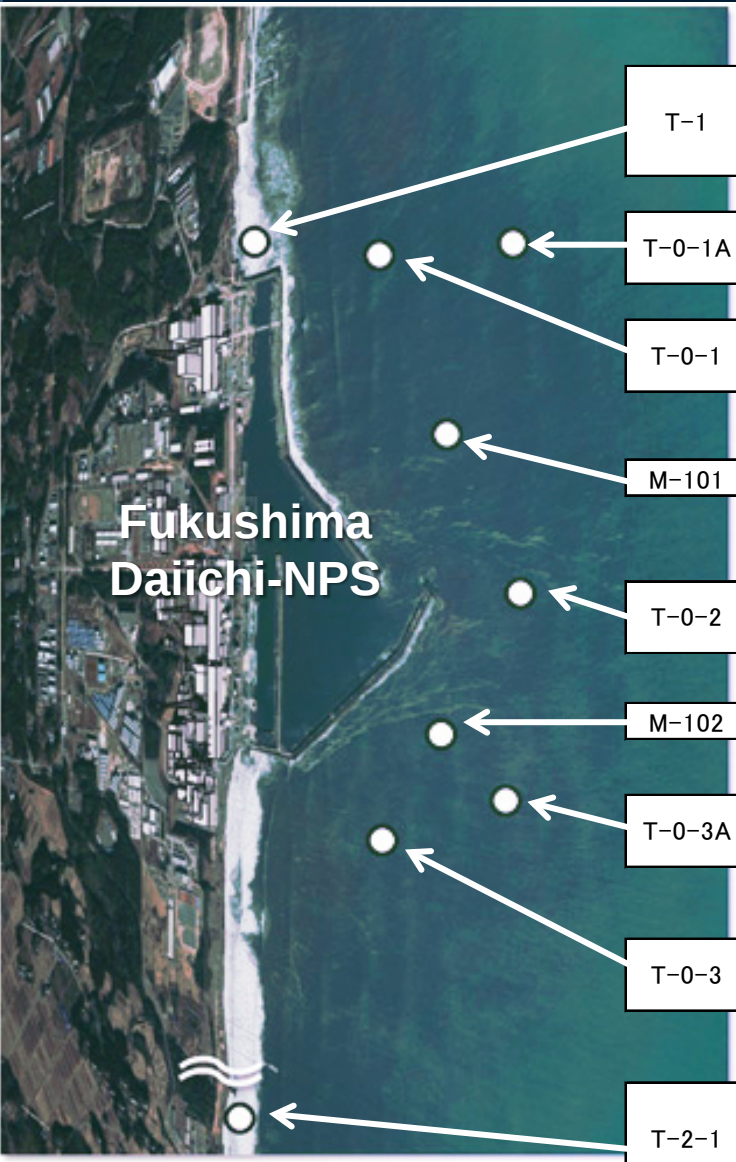


# Sea Area Monitoring

April 8 , 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

Total  $\beta$ : including K-40

|        |           |          |          |        |             |       |         |                            |                                    |
|--------|-----------|----------|----------|--------|-------------|-------|---------|----------------------------|------------------------------------|
| T-1    | 2014/3/24 | ND(0.74) | ND(0.72) | 11     | ND(1.7)     |       |         |                            |                                    |
|        | 2014/2/10 | ND(0.80) | ND(0.81) | 12     | ND(1.7)     | 0.017 | ND(1.6) |                            |                                    |
|        | 2014/2/4  | ND(0.81) | ND(0.68) |        |             |       |         | ND( $5.7 \times 10^{-6}$ ) | ( $9.0 \pm 2.3$ ) $\times 10^{-6}$ |
| T-0-1A | 2014/3/24 | ND(0.84) | ND(0.71) | ND(15) | In progress |       |         |                            |                                    |
|        | 2014/3/19 | ND(0.76) | ND(0.64) | ND(17) | ND(1.6)     |       |         |                            |                                    |
| T-0-1  | 2014/3/24 | ND(0.68) | ND(0.71) | ND(15) | In progress |       |         |                            |                                    |
|        | 2014/3/19 | ND(0.56) | ND(0.76) | ND(17) | ND(1.6)     |       |         |                            |                                    |
| M-101  | 2014/1/15 | 0.030    | 0.078    |        | 0.17        | 0.022 |         |                            |                                    |
| T-0-2  | 2014/3/24 | ND(0.76) | ND(0.59) | ND(15) | In progress |       |         |                            |                                    |
|        | 2014/3/19 | ND(0.52) | ND(0.71) | ND(17) | ND(1.6)     |       |         |                            |                                    |
| M-102  | 2014/1/16 | 0.054    | 0.13     |        | 0.47        | 0.063 |         |                            |                                    |
| T-0-3A | 2014/3/24 | ND(0.73) | ND(0.72) | ND(15) | In progress |       |         |                            |                                    |
|        | 2014/3/19 | ND(0.62) | ND(0.71) | ND(17) | ND(1.6)     |       |         |                            |                                    |
| T-0-3  | 2014/3/24 | ND(0.66) | ND(0.58) | ND(15) | In progress |       |         |                            |                                    |
|        | 2014/3/19 | ND(0.71) | ND(0.68) | ND(17) | ND(1.6)     |       |         |                            |                                    |
| T-2-1  | 2014/3/24 | ND(0.66) | ND(0.60) | 10     | ND(1.7)     |       |         |                            |                                    |
|        | 2014/2/17 | ND(0.71) | 0.64     | 11     | ND(1.4)     | 0.030 | ND(1.6) |                            |                                    |
|        | 2014/2/4  | ND(0.73) | ND(0.64) | 10     |             |       |         | ND( $5.8 \times 10^{-6}$ ) | ( $9.5 \pm 2.4$ ) $\times 10^{-6}$ |

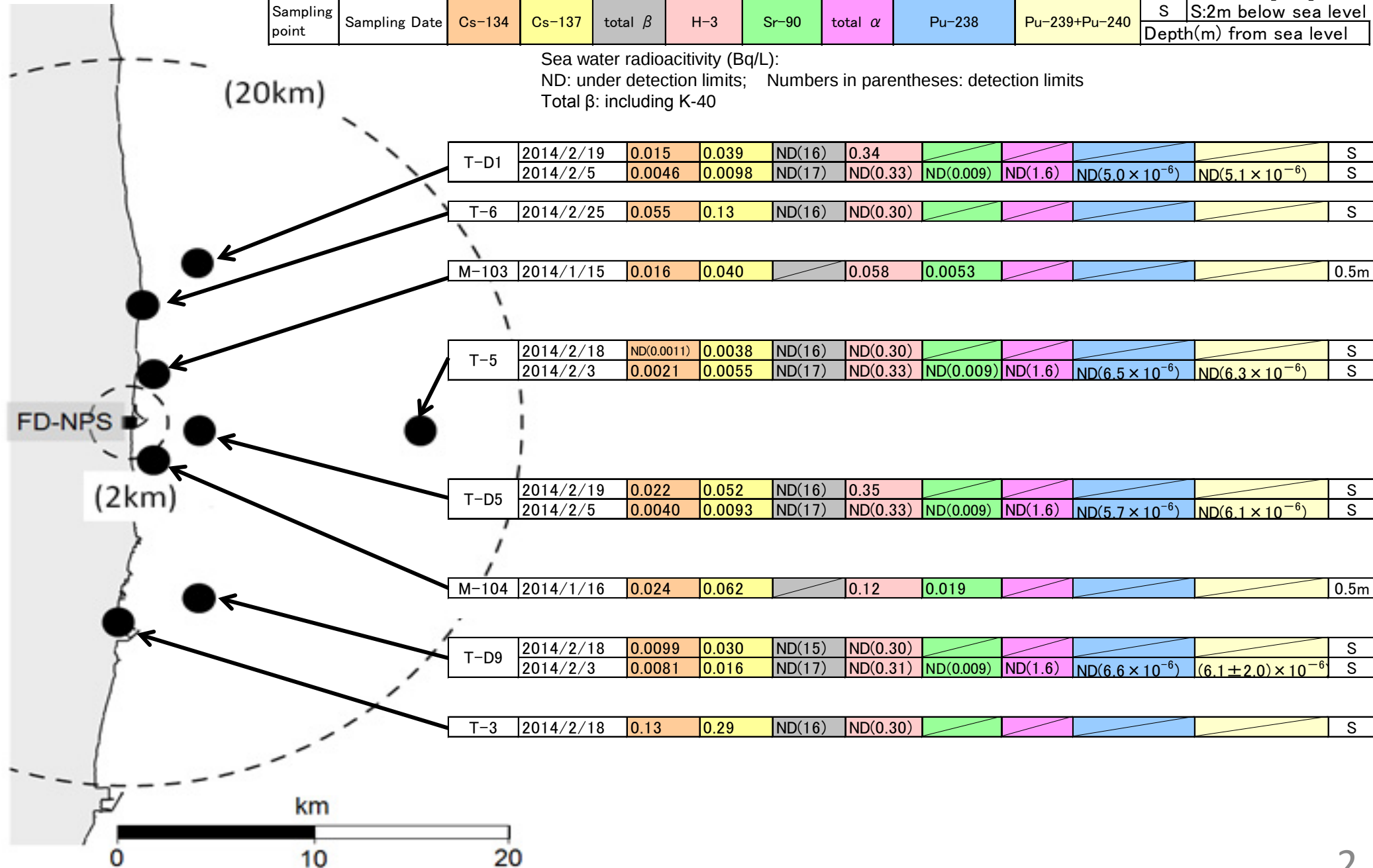
# Sea area between 2-20km radius from the NPS (1)

| 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

Total  $\beta$ : including K-40

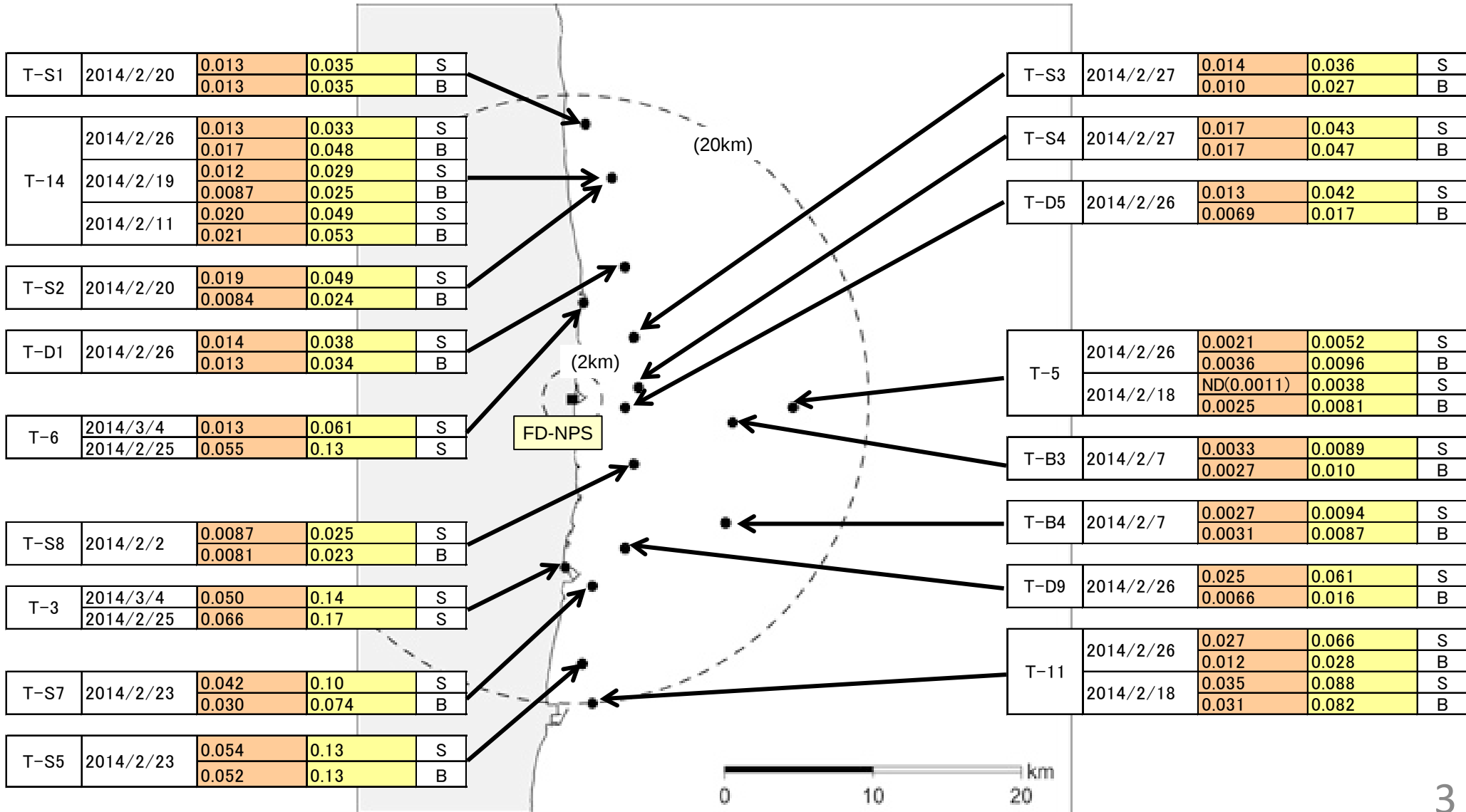


# Sea area between 2-20km radius from the NPS (2)

| 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):

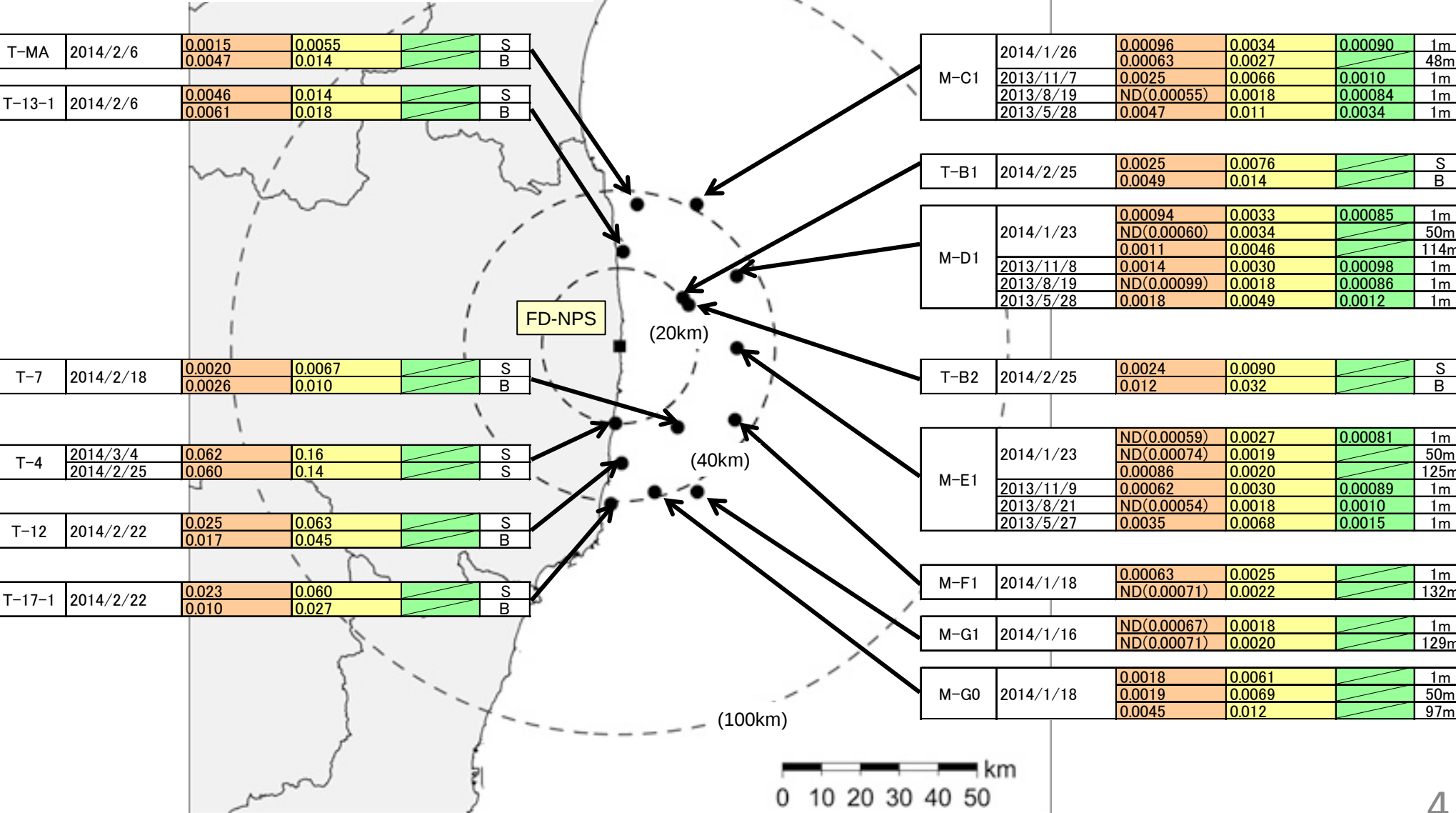
ND: under detection limits; Numbers in parentheses: detection limits



# 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     | 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

|      |           |             |        |       |       |        |      |
|------|-----------|-------------|--------|-------|-------|--------|------|
| M-C3 | 2014/1/19 | 0.00086     | 0.0024 | 0.021 | 0.045 | 0.0011 | 1m   |
|      |           | ND(0.00082) | 0.0022 |       |       |        | 50m  |
|      |           | ND(0.00068) | 0.0016 |       |       |        | 123m |

|      |          |        |        |  |  |  |   |
|------|----------|--------|--------|--|--|--|---|
| T-22 | 2014/2/6 | 0.0020 | 0.0074 |  |  |  | S |
|      |          | 0.0074 | 0.017  |  |  |  | B |

|      |           |             |        |       |       |         |      |
|------|-----------|-------------|--------|-------|-------|---------|------|
| M-D3 | 2014/1/22 | ND(0.00064) | 0.0025 | 0.021 | 0.073 | 0.00099 | 1m   |
|      |           | ND(0.00073) | 0.0018 |       |       |         | 100m |
|      |           | ND(0.00074) | 0.0025 |       |       |         | 210m |

|      |           |             |        |       |       |        |      |
|------|-----------|-------------|--------|-------|-------|--------|------|
| M-F3 | 2014/1/22 | ND(0.00058) | 0.0020 | 0.027 | 0.066 | 0.0011 | 1m   |
|      |           | ND(0.00079) | 0.0021 |       |       |        | 101m |
|      |           | ND(0.00067) | 0.0016 |       |       |        | 223m |

|      |          |       |       |  |  |  |   |
|------|----------|-------|-------|--|--|--|---|
| T-18 | 2014/2/6 | 0.015 | 0.041 |  |  |  | S |
|      |          | 0.016 | 0.041 |  |  |  | B |

|      |           |        |       |  |  |  |   |
|------|-----------|--------|-------|--|--|--|---|
| T-20 | 2014/2/22 | 0.011  | 0.032 |  |  |  | S |
|      |           | 0.0039 | 0.013 |  |  |  | B |

|       |          |        |        |  |  |  |   |
|-------|----------|--------|--------|--|--|--|---|
| T-M10 | 2014/2/6 | 0.0024 | 0.0050 |  |  |  | S |
|       |          | 0.0043 | 0.014  |  |  |  | B |

|      |           |             |        |       |       |         |      |
|------|-----------|-------------|--------|-------|-------|---------|------|
| M-E3 | 2014/1/22 | ND(0.00055) | 0.0018 | 0.030 | 0.056 | 0.00099 | 1m   |
|      |           | ND(0.00061) | 0.0019 |       |       |         | 100m |
|      |           | ND(0.00067) | 0.0022 |       |       |         | 218m |

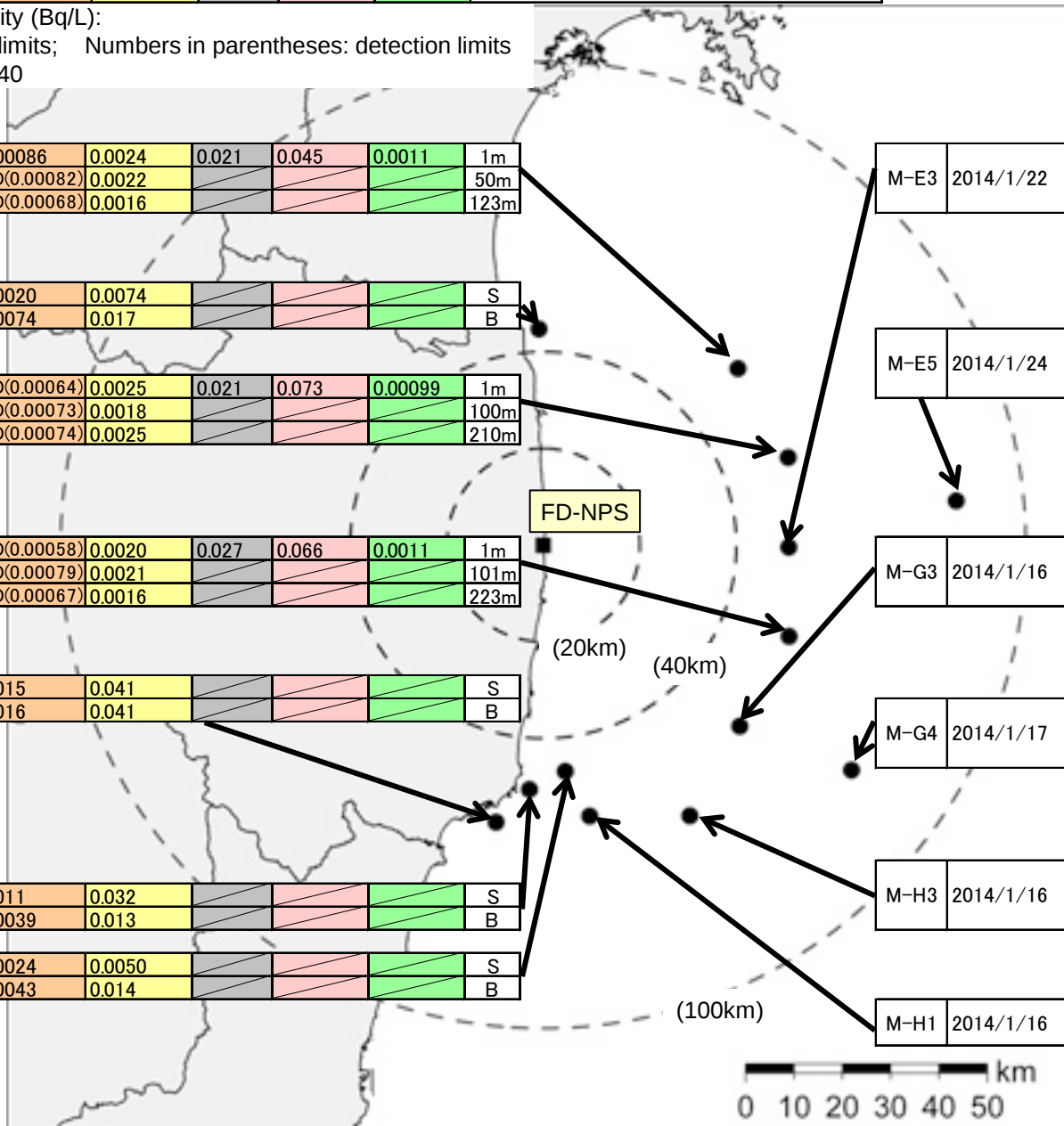
|      |           |             |         |       |       |        |      |
|------|-----------|-------------|---------|-------|-------|--------|------|
| M-E5 | 2014/1/24 | ND(0.00071) | 0.0024  | 0.031 | 0.055 | 0.0011 | 1m   |
|      |           | ND(0.00080) | 0.0021  |       |       |        | 100m |
|      |           | ND(0.00076) | 0.00062 |       |       |        | 525m |

|      |           |             |        |       |       |        |      |
|------|-----------|-------------|--------|-------|-------|--------|------|
| M-G3 | 2014/1/16 | ND(0.00071) | 0.0017 | 0.021 | 0.097 | 0.0011 | 1m   |
|      |           | ND(0.00057) | 0.0018 |       |       |        | 100m |
|      |           | ND(0.00063) | 0.0021 |       |       |        | 196m |

|      |           |             |         |       |       |        |      |
|------|-----------|-------------|---------|-------|-------|--------|------|
| M-G4 | 2014/1/17 | ND(0.00063) | 0.0019  | 0.023 | 0.063 | 0.0010 | 1m   |
|      |           | ND(0.00056) | 0.0019  |       |       |        | 100m |
|      |           | ND(0.00077) | 0.00085 |       |       |        | 665m |

|      |           |             |        |       |       |        |      |
|------|-----------|-------------|--------|-------|-------|--------|------|
| M-H3 | 2014/1/16 | ND(0.00087) | 0.0018 | 0.025 | 0.077 | 0.0010 | 1m   |
|      |           | ND(0.00058) | 0.0016 |       |       |        | 100m |
|      |           | ND(0.00069) | 0.0020 |       |       |        | 221m |

|      |           |        |        |  |  |  |      |
|------|-----------|--------|--------|--|--|--|------|
| M-H1 | 2014/1/16 | 0.0037 | 0.010  |  |  |  | 1m   |
|      |           | 0.0012 | 0.0048 |  |  |  | 121m |



# 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 |

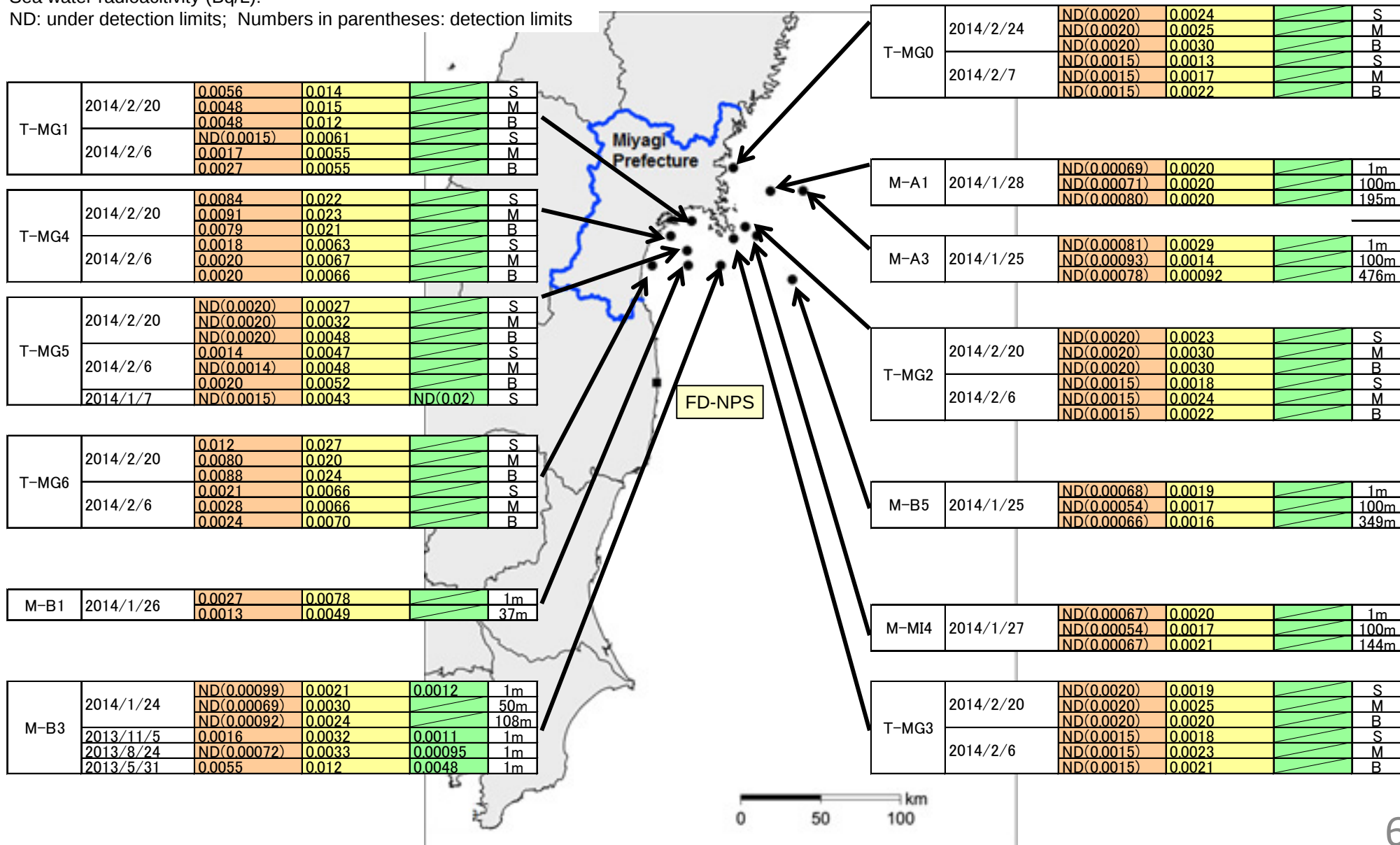
S:2m below sea level

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 |
|      | 2013/11/18 | 0.00085 | 0.0029 | 0.0011  | 1m  |
|      | 2013/8/14  | 0.0028  | 0.0068 | 0.0027  | 1m  |
|      | 2013/5/19  | 0.0071  | 0.015  | 0.0041  | 1m  |

|     |           |         |         |          |   |
|-----|-----------|---------|---------|----------|---|
| T-C | 2014/3/12 | ND(1.2) | ND(1.3) |          | S |
|     |           | ND(1.2) | ND(1.3) |          | B |
|     | 2014/1/22 | ND(1.2) | ND(1.3) | ND(0.02) | S |

|      |           |         |        |  |     |
|------|-----------|---------|--------|--|-----|
| 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 |
|      | 2013/11/11 | ND(0.00064) | 0.0033 | 0.0010 | 1m  |
|      | 2013/8/14  | ND(0.00060) | 0.0022 | 0.0011 | 1m  |
|      | 2013/5/20  | 0.0082      | 0.016  | 0.0038 | 1m  |

|      |           |        |       |  |     |
|------|-----------|--------|-------|--|-----|
| 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 |

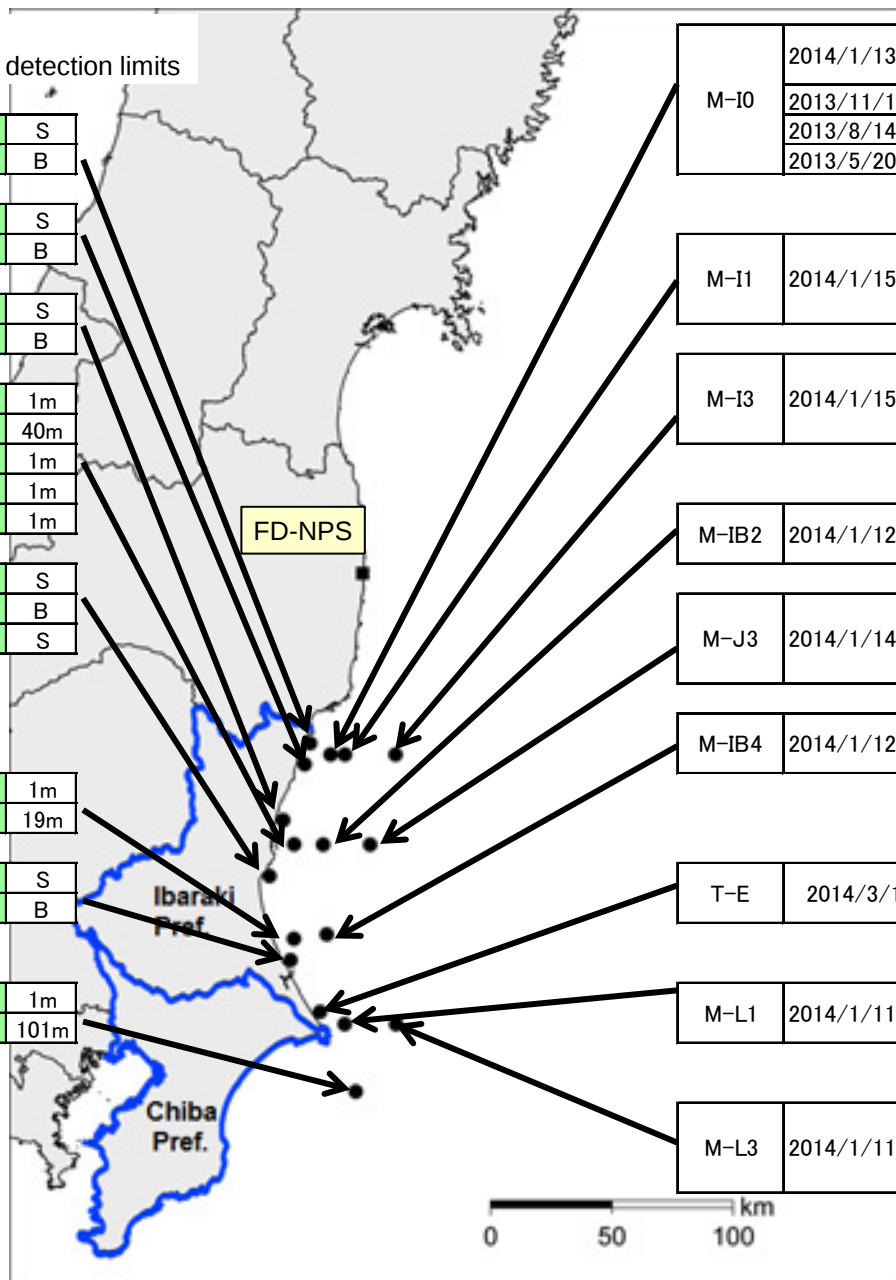
|      |           |             |        |  |      |
|------|-----------|-------------|--------|--|------|
| M-J3 | 2014/1/14 | ND(0.00069) | 0.0023 |  | 1m   |
|      |           | ND(0.00068) | 0.0025 |  | 100m |
|      |           | ND(0.00061) | 0.0011 |  | 560m |

|       |           |             |        |  |      |
|-------|-----------|-------------|--------|--|------|
| 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 |

