

# Sea Area Monitoring

February 25, 2019

Nuclear Regulation Authority (NRA), Japan

# The most recent radioactivity data of sea area within 2km from the NPS

| Sampling point | Sampling Date | Cs-134 | Cs-137 | Gross $\beta$ | H-3 | Sr-90 | Gross $\alpha$ | Pu-238 | Pu-239+Pu-240 |
|----------------|---------------|--------|--------|---------------|-----|-------|----------------|--------|---------------|
|----------------|---------------|--------|--------|---------------|-----|-------|----------------|--------|---------------|

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   | 2018/12/3  | 0.011     | 0.13  | /                   | /        | 0.0035 | ND(2.2) | /                        | /                        |
|       | 2019/1/7   | 0.019     | 0.22  | /                   | /        | 0.0044 | ND(2.0) | /                        | /                        |
| M-101 | 2018/9/14  | 0.015     | 0.15  | /                   | 0.36     | 0.011  | /       | /                        | /                        |
|       | 2018/10/11 | 0.0014    | 0.016 | /                   | 0.10     | /      | /       | /                        | /                        |
| F-P03 | 2018/11/14 | ND(0.003) | 0.016 | 0.02 * <sup>2</sup> | ND(0.33) | 0.0008 | /       | ND( $4 \times 10^{-6}$ ) | $9 \times 10^{-6}$       |
|       | 2018/12/11 | 0.004     | 0.032 | 0.02 * <sup>2</sup> | ND(0.35) | 0.0011 | /       | ND( $7 \times 10^{-6}$ ) | ND( $7 \times 10^{-6}$ ) |
| F-P01 | 2018/11/14 | 0.004     | 0.029 | 0.02 * <sup>2</sup> | ND(0.34) | 0.0020 | /       | ND( $7 \times 10^{-6}$ ) | $1 \times 10^{-5}$       |
|       | 2018/12/11 | ND(0.002) | 0.013 | 0.02 * <sup>2</sup> | ND(0.35) | 0.0011 | /       | ND( $6 \times 10^{-6}$ ) | $1 \times 10^{-5}$       |
| T-2   | 2018/12/3  | 0.0016    | 0.017 | /                   | /        | 0.0023 | ND(2.2) | /                        | /                        |
|       | 2019/1/7   | 0.0017    | 0.021 | /                   | /        | 0.0021 | ND(2.1) | /                        | /                        |

Fukushima  
Daiichi-NPS

0 0.5 1km

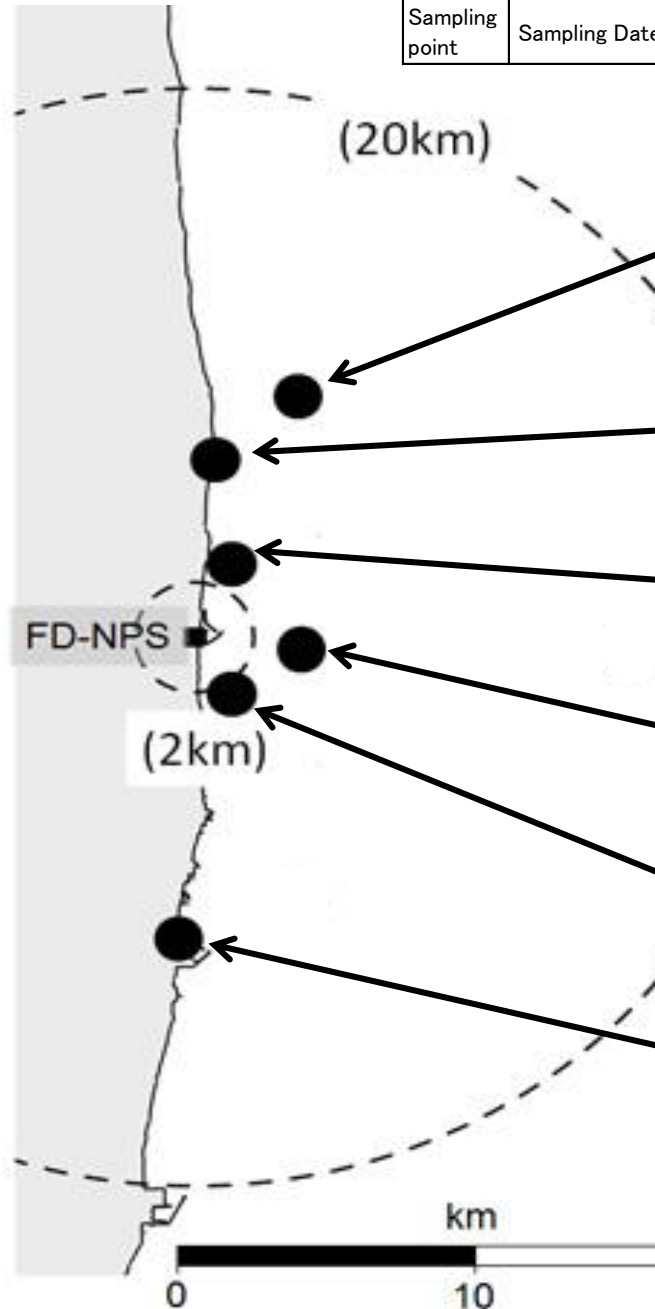
# Most recent radioactivity data of sea area between 2-20km from the NPS

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

Sea water radioactivity (Bq/L):

ND: Not detected; Numbers in parentheses: detection limits

Gross  $\beta$  : including K-40



|       |            |            |        |        |          |         |         |   |   |      |
|-------|------------|------------|--------|--------|----------|---------|---------|---|---|------|
| T-D1  | 2018/11/19 | ND(0.0013) | 0.0048 | ND(17) | ND(0.33) | /       | /       | / | / | S    |
|       | 2018/12/4  | ND(0.0012) | 0.0075 | ND(15) | ND(0.34) | 0.0012  | ND(1.9) | / | / | S    |
|       | 2018/12/18 | ND(0.0011) | 0.0044 | ND(16) | ND(0.29) | /       | /       | / | / | S    |
| T-6   | 2018/12/4  | 0.0017     | 0.019  | ND(16) | 0.40     | /       | /       | / | / | S    |
|       | 2018/12/18 | 0.0034     | 0.029  | ND(19) | ND(0.35) | /       | /       | / | / | S    |
|       | 2019/1/4   | ND(0.0012) | 0.015  | ND(18) | ND(0.32) | /       | /       | / | / | S    |
| M-103 | 2018/8/30  | 0.0010     | 0.0098 | /      | 0.10     | 0.00099 | /       | / | / | 0.5m |
|       | 2018/9/14  | 0.0026     | 0.032  | /      | 0.14     | 0.0022  | /       | / | / | 0.5m |
|       | 2018/10/11 | 0.0010     | 0.011  | /      | 0.077    | /       | /       | / | / | 0.5m |
| T-D5  | 2018/11/19 | ND(0.0013) | 0.0044 | ND(17) | ND(0.33) | /       | /       | / | / | S    |
|       | 2018/12/4  | ND(0.0014) | 0.0053 | ND(15) | ND(0.34) | 0.0016  | /       | / | / | S    |
|       | 2018/12/18 | ND(0.0014) | 0.0057 | ND(16) | ND(0.29) | /       | /       | / | / | S    |
| M-104 | 2018/8/29  | 0.00092    | 0.011  | /      | 0.11     | 0.0010  | /       | / | / | 0.5m |
|       | 2018/9/13  | 0.0013     | 0.018  | /      | 0.13     | 0.0010  | /       | / | / | 0.5m |
|       | 2018/10/12 | 0.0077     | 0.0098 | /      | 0.081    | /       | /       | / | / | 0.5m |
| T-3   | 2018/12/4  | 0.0023     | 0.021  | ND(15) | 0.32     | /       | /       | / | / | S    |
|       | 2018/12/18 | 0.0016     | 0.019  | ND(16) | ND(0.30) | /       | /       | / | / | S    |
|       | 2019/1/4   | 0.0026     | 0.023  | ND(15) | ND(0.34) | /       | /       | / | / | S    |

km

0

10

20

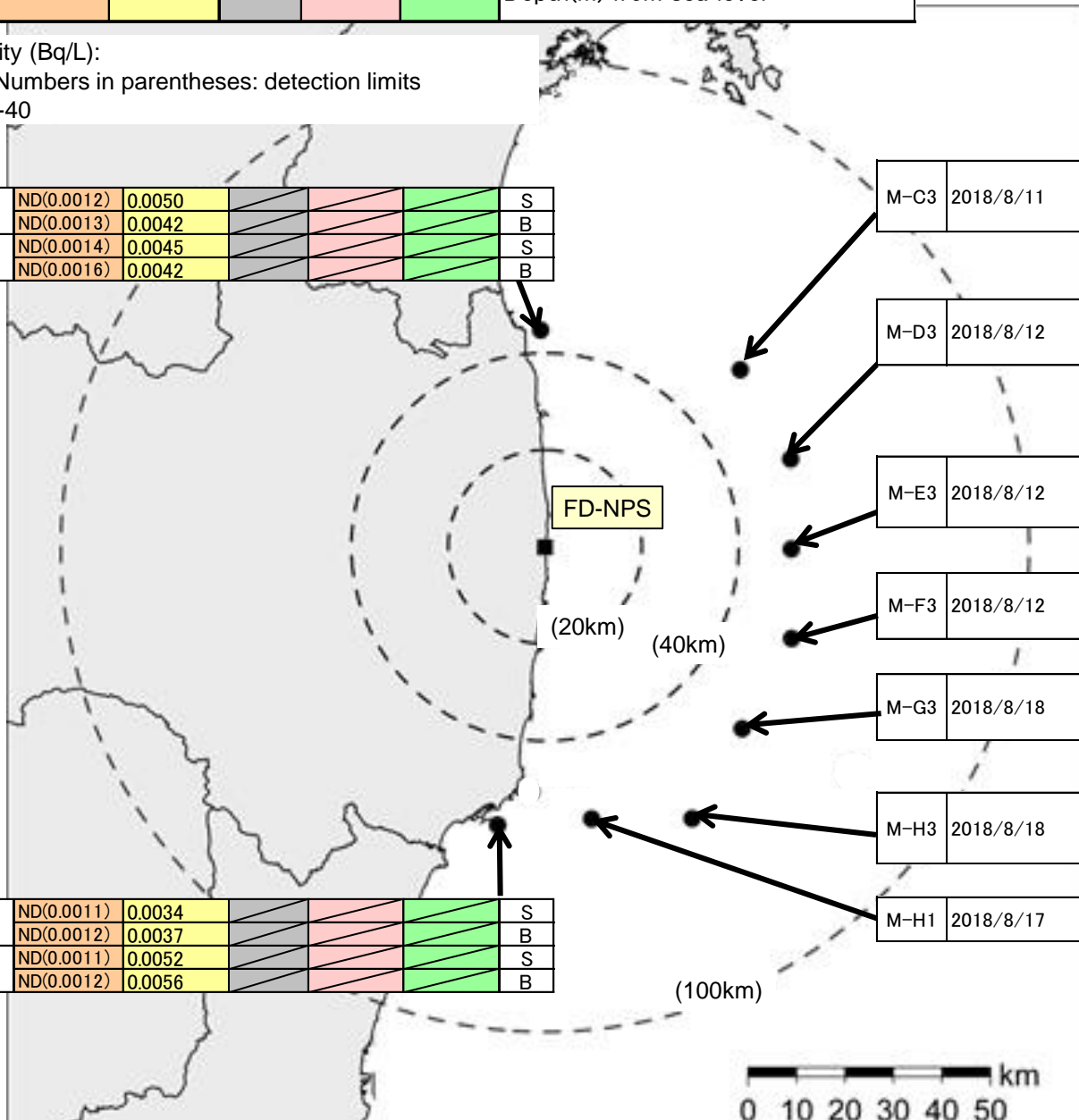
# Most recent radioactivity data of sea area between 40-100km from the NPS

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

Gross  $\beta$ : excluding K-40



|      |            |            |        |  |  |  |   |
|------|------------|------------|--------|--|--|--|---|
| T-22 | 2018/11/16 | ND(0.0012) | 0.0050 |  |  |  | S |
|      |            | ND(0.0013) | 0.0042 |  |  |  | B |
|      | 2018/12/21 | ND(0.0014) | 0.0045 |  |  |  | S |
|      |            | ND(0.0016) | 0.0042 |  |  |  | B |

|      |           |              |        |       |       |         |      |
|------|-----------|--------------|--------|-------|-------|---------|------|
| M-C3 | 2018/8/11 | 0.00012      | 0.0019 | 0.027 | 0.057 | 0.00096 | 1m   |
|      |           | ND(0.000082) | 0.0018 |       |       |         | 50m  |
|      |           | 0.000083     | 0.0021 |       |       |         | 123m |

|      |           |              |        |       |       |        |      |
|------|-----------|--------------|--------|-------|-------|--------|------|
| M-D3 | 2018/8/12 | ND(0.000077) | 0.0019 | 0.029 | 0.056 | 0.0010 | 1m   |
|      |           | ND(0.000080) | 0.0020 |       |       |        | 100m |
|      |           | ND(0.000067) | 0.0015 |       |       |        | 214m |

|      |           |              |        |       |       |         |      |
|------|-----------|--------------|--------|-------|-------|---------|------|
| M-E3 | 2018/8/12 | ND(0.000080) | 0.0020 | 0.032 | 0.065 | 0.00096 | 1m   |
|      |           | 0.000091     | 0.0020 |       |       |         | 100m |
|      |           | 0.000083     | 0.0015 |       |       |         | 216m |

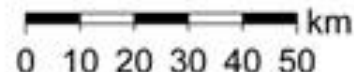
|      |           |          |        |       |       |         |      |
|------|-----------|----------|--------|-------|-------|---------|------|
| M-F3 | 2018/8/12 | 0.000070 | 0.0019 | 0.031 | 0.062 | 0.00098 | 1m   |
|      |           | 0.00010  | 0.0020 |       |       |         | 100m |
|      |           | 0.000091 | 0.0017 |       |       |         | 220m |

|      |           |              |        |       |       |         |      |
|------|-----------|--------------|--------|-------|-------|---------|------|
| M-G3 | 2018/8/18 | 0.00011      | 0.0019 | 0.032 | 0.056 | 0.00098 | 1m   |
|      |           | ND(0.000083) | 0.0019 |       |       |         | 100m |
|      |           | ND(0.000082) | 0.0017 |       |       |         | 196m |

|      |           |          |        |       |       |        |      |
|------|-----------|----------|--------|-------|-------|--------|------|
| M-H3 | 2018/8/18 | 0.000090 | 0.0019 | 0.033 | 0.050 | 0.0010 | 1m   |
|      |           | 0.00013  | 0.0020 |       |       |        | 100m |
|      |           | 0.000085 | 0.0018 |       |       |        | 218m |

|      |           |            |        |  |  |  |   |
|------|-----------|------------|--------|--|--|--|---|
| T-18 | 2018/11/1 | ND(0.0011) | 0.0034 |  |  |  | S |
|      |           | ND(0.0012) | 0.0037 |  |  |  | B |
|      | 2018/12/3 | ND(0.0011) | 0.0052 |  |  |  | S |
|      |           | ND(0.0012) | 0.0056 |  |  |  | B |

|      |           |         |        |  |  |  |      |
|------|-----------|---------|--------|--|--|--|------|
| M-H1 | 2018/8/17 | 0.00017 | 0.0033 |  |  |  | 1m   |
|      |           | 0.00011 | 0.0024 |  |  |  | 122m |

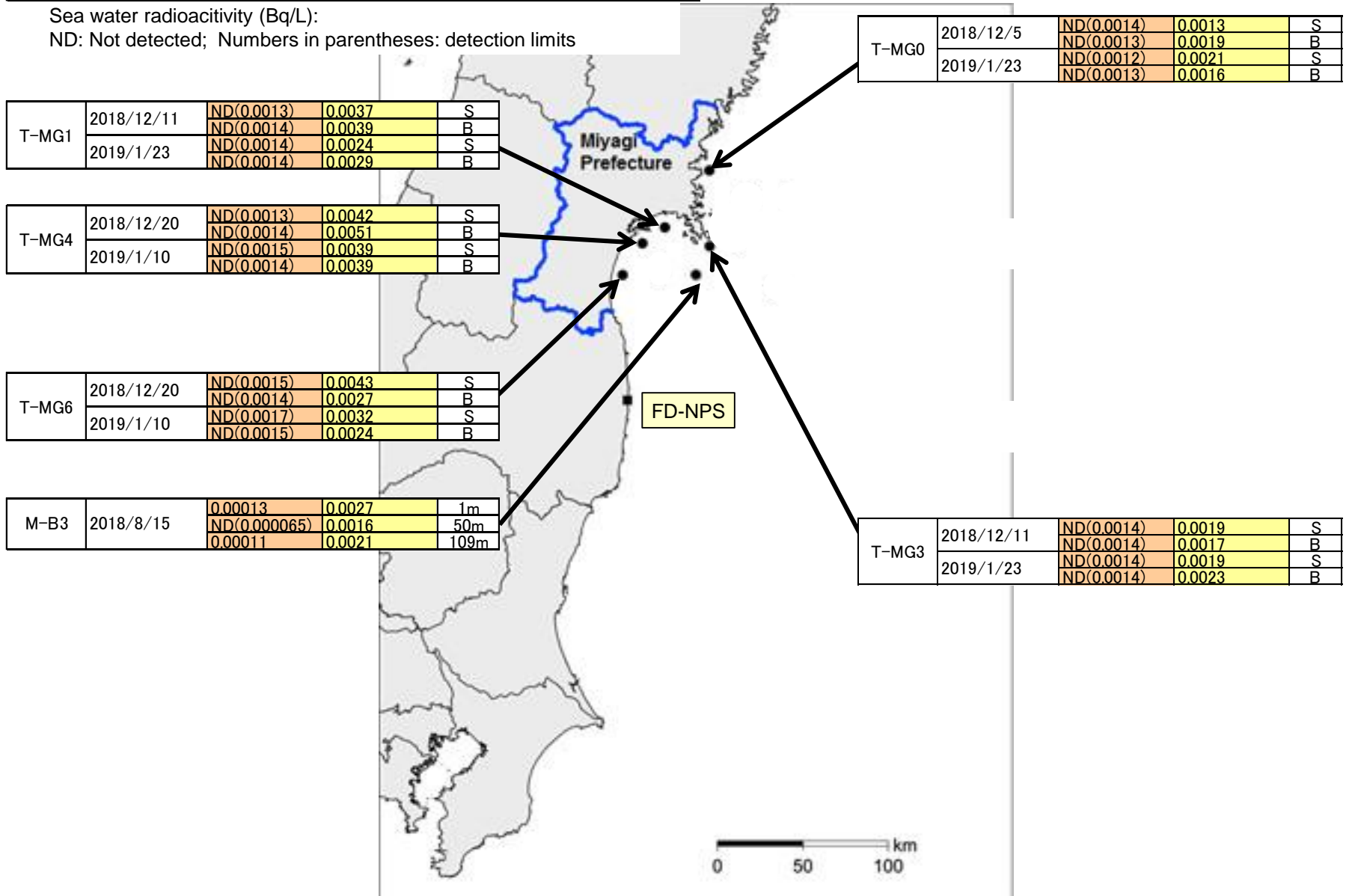


# Most recent radioactivity data of sea area along and off the coast of Miyagi Prefecture

| Sampling point | Sampling Date | Cs-134 | Cs-137 | 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



# Most recent radioactivity data of sea area along and off the coast of Ibaraki Pref. and Chiba Pref.

| Sampling point | Sampling Date | Cs-134 | Cs-137 | 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

