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# Supplementary Material

# Distribution and source estimation of polycyclic aromatic hydrocarbons in coastal sediments from Seto Inland Sea, Japan

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**Table S1.** Description of the 2015 sampling sites.

| Sampling Site | Latitude | Longitude | Water depth (m) | Sediment core length (cm) | Sediment grain size |
|---|---|---|---|---|---|
| Osaka Bay | | | | | |
| St. 7a | N 34.38.092 | E 135.20.010 | 16.0 | 40 | Clay / Silt |
| St. 8a | N 34.34.995 | E 135.15.037 | 19.7 | 20 | Clay / Silt |
| St. 9a | N 34.29.957 | E 135.10.118 | 35.9 | 10 | Sand / Silt |
| St. 10a | N 34.25.097 | E 135.05.050 | 36.0 | 10 | Clay / Silt |

**Table S2.** Description of the 2016 sampling sites.

| Sampling Site | Latitude | Longitude | Water depth (m) | Sediment core length (cm) | Sediment grain size | Water content (%) |
|---|---|---|---|---|---|---|
| Aki-Nada | | | | | | |
| St. 1 | N 34.12.010 | E 132.36.121 | 13.8 | 10 | Clay / Silt | 60.7 |
| St. 2 | N 34.09.040 | E 132.36.425 | 22.5 | 6 | Clay / Silt | 49.7 |
| St. 3 | N 34.05.471 | E 132.37.232 | 46.6 | 6 | Clay / Silt | 45.4 |
| Harima-Nada | | | | | | |
| St. 4 | N 34.35.075 | E 134.39.033 | 27.0 | 18 | Clay / Silt | 74.0 |
| St. 5 | N 34.30.885 | E 134.35.040 | 35.0 | 24 | Clay / Silt | 79.4 |
| St. 6 | N 34.24.969 | E 134.35.046 | 40.0 | 22 | Clay / Silt | 78.7 |
| Osaka Bay | | | | | | |
| St. 7b | N 34.38.348 | E 135.19.792 | 15.0 | 22 | Clay / Silt | 75.3 |
| St. 7c | N 34.35.874 | E 135.22.506 | 12.3 | 30 | Clay / Silt | 77.4 |
| St. 8b | N 34.34.803 | E 135.15.118 | 19.0 | 18 | Clay / Silt | 61.0 |
| St. 9b | N 34.30.045 | E 135.09.968 | 36.0 | 8 | Sand / Silt | 31.9 |
| St. 10b | N 34.24.868 | E 135.04.920 | 36.9 | 14 | Clay / Silt | 67.0 |
| Kii Channel | | | | | | |
| St. 11 | N 34.09.765 | E 134.55.117 | 64.0 | 10 | Sand / Silt | 44.0 |
| St. 12 | N 33.59.960 | E 134.55.081 | 68.8 | 8 | Sand / Silt | 35.5 |

**Table S3.** Linear calibration curves and detection limits of 17 PAHs.

| PAH | Correlation coefficient (n=17) | Detection Limit (pg $g^{-1}$ dw) |
|---|---|---|
| Nap | 0.9970 | 51.9 |
| Acy | 0.9963 | 37.9 |
| Ace | 0.9962 | 33.3 |
| Flu | 0.9956 | 78.7 |
| Phe | 0.9954 | 27.5 |
| Ant | 0.9949 | 64.5 |
| Flt | 0.9957 | 31.9 |
| Pyr | 0.9959 | 31.6 |
| BaA | 0.9840 | 19.7 |
| Chr | 0.9898 | 111 |
| BbF | 0.9881 | 40.2 |
| BkF | 0.9919 | 50.5 |
| BeP | 0.9937 | 49.8 |
| BaP | 0.9885 | 43.2 |
| IncdP | 0.9901 | 41.4 |
| DahA | 0.9740 | 31.0 |
| BghiP | 0.9910 | 49.5 |

**Table S4.** The concentrations of 17 PAHs in surface sediments at each sampling site in 2015 (ng $g^{-1}$ dw, nd: not detected).

| | St. 8a | St. 9a | St. 10a |
|---|---|---|---|
| Nap | nd | 1.22 | 1.17 |
| Acy | 2.18 | 0.90 | 1.72 |
| Ace | 2.40 | 0.47 | 0.62 |
| Flu | 6.18 | 20.0 | 4.80 |
| Phe | 19.3 | 3.70 | 10.1 |
| Ant | 6.77 | 1.21 | 3.00 |
| Flt | 38.6 | 6.00 | 21.1 |
| Pyr | 30.2 | 5.51 | 19.1 |
| BaA | 33.8 | 5.57 | 18.8 |
| Chr | 33.6 | 6.00 | 20.4 |
| BbF | 57.2 | 17.9 | 57.1 |
| BkF | 37.8 | 1.64 | 4.53 |
| BeP | 23.6 | 5.84 | 16.8 |
| BaP | 40.3 | 8.20 | 26.3 |
| IcdP | 70.0 | 13.0 | 52.7 |
| DahA | 19.6 | 3.74 | 6.26 |
| BghiP | 49.5 | 7.56 | 24.0 |
| Σ17PAH | 471 | 108 | 288 |

**Table S5.** The concentrations of 17 PAHs in the surface sediments at each sampling site in 2016 (ng $g^{-1}$ dw).

| | St. 1 | St. 2 | St. 3 | St. 4 | St. 5 | St. 6 | St. 11 | St. 12 |
|---|---|---|---|---|---|---|---|---|
| Nap | 4.50 | 5.38 | 3.44 | 6.74 | 3.43 | 4.11 | 2.36 | 1.11 |
| Acy | 3.24 | 2.15 | 1.41 | 3.73 | 2.26 | 2.89 | 1.16 | 0.52 |
| Ace | 2.01 | 1.53 | 1.28 | 2.59 | 1.41 | 2.27 | 1.19 | 0.61 |
| Flu | 2.85 | 3.48 | 3.13 | 3.78 | 2.56 | 2.95 | 2.82 | 1.03 |
| Phe | 26.2 | 15.6 | 11.1 | 15.6 | 14.7 | 14.7 | 10.3 | 7.04 |
| Ant | 8.72 | 4.36 | 2.74 | 5.49 | 4.52 | 3.99 | 2.08 | 1.30 |
| Flt | 59.7 | 20.7 | 11.5 | 32.0 | 26.7 | 32.7 | 7.96 | 7.06 |
| Pyr | 54.2 | 16.3 | 10.0 | 31.7 | 23.6 | 26.2 | 7.58 | 5.10 |
| BaA | 45.2 | 19.0 | 9.25 | 18.8 | 29.0 | 17.8 | 6.71 | 2.77 |
| Chr | 38.9 | 18.6 | 10.1 | 23.6 | 28.0 | 26.6 | 9.11 | 4.87 |
| BbF | 40.8 | 12.9 | 5.62 | 23.5 | 19.0 | 16.4 | 6.86 | 8.43 |
| BkF | 17.7 | 10.0 | 4.01 | 23.9 | 14.1 | 22.9 | 3.71 | 3.50 |
| BeP | 21.0 | 7.05 | 3.21 | 19.1 | 10.7 | 18.0 | 3.63 | 4.31 |
| BaP | 31.0 | 10.7 | 4.31 | 23.2 | 16.3 | 19.8 | 3.76 | 3.48 |
| IcdP | 35.7 | 16.3 | 6.20 | 21.8 | 25.5 | 31.6 | 5.95 | 5.67 |
| DahA | 4.93 | 4.53 | 2.01 | 12.5 | 6.14 | 6.22 | 2.08 | 2.30 |
| BghiP | 19.6 | 11.0 | 4.50 | 21.8 | 17.9 | 19.7 | 5.07 | 6.67 |
| Σ17PAH | 416 | 179 | 93.8 | 290 | 246 | 269 | 82.3 | 65.8 |

**Table S6.** The concentrations of 17 PAHs in the sediment core recovered from St. 7a in 2015 (ng $g^{-1}$ dw).

| Depth (cm) | Year | Nap | Acy | Ace | Flu | Phe | Ant | Flt | Pyr | BaA | Chr | BbF | BkF | BeP | BaP | IncdP | DahA | BghiP | Σ17PAH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0–5 | 2009.7 | 10.5 | 6.06 | 20.8 | 66.1 | 112 | 47.0 | 116 | 113 | 97.1 | 107 | 194 | 116 | 102 | 141 | 161 | 36.5 | 143 | 1590 |
| 5–10 | 2001.0 | 12.7 | 5.45 | 9.68 | 25.5 | 62.2 | 20.9 | 97.2 | 99.3 | 110 | 116 | 212 | 136 | 111 | 162 | 189 | 44.1 | 152 | 1560 |
| 10–15 | 1995.3 | 9.12 | 4.85 | 5.66 | 16.3 | 49.4 | 15.1 | 78.1 | 88.7 | 92.8 | 102 | 183 | 126 | 100 | 152 | 170 | 40.5 | 134 | 1370 |
| 15–20 | 1989.4 | 13.2 | 6.26 | 3.77 | 8.65 | 46.9 | 14.9 | 83.5 | 83.4 | 63.6 | 111 | 198 | 114 | 99.0 | 167 | 232 | 60.9 | 186 | 1490 |
| 20–25 | 1983.6 | 9.94 | 6.46 | 4.50 | 11.0 | 44.1 | 15.4 | 80.3 | 78.5 | 82.9 | 82.9 | 178 | 119 | 93.2 | 151 | 220 | 58.1 | 176 | 1410 |
| 25–30 | 1977.8 | 21.7 | 11.6 | 7.25 | 16.3 | 95.6 | 29.6 | 141 | 138 | 179 | 159 | 348 | 232 | 160 | 306 | 470 | 140 | 358 | 2810 |
| 30–35 | 1971.9 | 9.86 | 8.31 | 4.21 | 8.94 | 47.0 | 25.7 | 97.5 | 95.9 | 115 | 106 | 228 | 157 | 114 | 210 | 292 | 83.4 | 224 | 1830 |
| 35–40 | 1966.0 | 18.6 | 8.98 | 6.17 | 14.4 | 55.5 | 21.0 | 99.0 | 102 | 123 | 112 | 258 | 166 | 125 | 224 | 316 | 89.6 | 243 | 1980 |

**Table S7.** The concentrations of 17 PAHs in the sediment core recovered from St. 7b in 2016 (ng $g^{-1}$ dw).

| Depth (cm) | Nap | Acy | Ace | Flu | Phe | Ant | Flt | Pyr | BaA | Chr | BbF | BkF | BeP | BaP | IncdP | DahA | BghiP | Σ17PAH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0–2 | 4.16 | 2.64 | 1.39 | 2.58 | 13.9 | 4.79 | 22.7 | 23.1 | 30.7 | 29.0 | 24.3 | 14.8 | 11.6 | 20.3 | 28.1 | 8.12 | 19.3 | 261 |
| 2–4 | 6.96 | 4.07 | 2.14 | 4.18 | 21.5 | 7.78 | 33.7 | 34.6 | 37.6 | 37.3 | 29.0 | 17.7 | 14.9 | 24.8 | 28.3 | 7.73 | 21.3 | 334 |
| 4–6 | 5.42 | 3.40 | 1.85 | 3.40 | 17.2 | 6.18 | 28.2 | 28.3 | 30.9 | 30.8 | 21.2 | 13.1 | 11.2 | 18.6 | 21.7 | 6.03 | 16.2 | 264 |
| 6–8 | 6.83 | 4.40 | 2.34 | 4.31 | 21.8 | 7.74 | 31.8 | 32.0 | 34.5 | 34.3 | 26.0 | 15.7 | 14.2 | 23.5 | 27.1 | 7.57 | 20.3 | 314 |
| 8–10 | 9.64 | 6.22 | 3.26 | 6.07 | 30.2 | 10.9 | 49.6 | 49.7 | 51.8 | 52.8 | 35.6 | 23.1 | 19.4 | 32.1 | 37.3 | 10.4 | 27.8 | 456 |
| 10–12 | 6.44 | 4.11 | 2.21 | 4.09 | 20.6 | 7.52 | 29.7 | 29.8 | 32.6 | 32.1 | 23.1 | 15.1 | 13.0 | 21.6 | 25.5 | 7.15 | 18.8 | 293 |
| 12–14 | 6.45 | 5.85 | 2.68 | 6.26 | 62.3 | 25.1 | 120 | 103 | 81.0 | 61.6 | 113 | 50.9 | 55.2 | 61.0 | 87.1 | 21.3 | 77.9 | 941 |
| 14–16 | 6.19 | 4.08 | 2.27 | 4.18 | 32.2 | 8.30 | 60.2 | 58.5 | 47.7 | 40.1 | 78.6 | 35.3 | 38.9 | 47.9 | 64.8 | 15.7 | 58.9 | 604 |
| 16–18 | 8.51 | 5.33 | 3.26 | 4.99 | 48.6 | 12.9 | 87.5 | 87.4 | 67.2 | 52.1 | 105 | 47.2 | 52.4 | 67.6 | 87.3 | 20.8 | 78.4 | 836 |
| 18–20 | 6.52 | 4.18 | 2.08 | 4.08 | 32.3 | 8.13 | 59.1 | 62.1 | 52.0 | 42.7 | 84.7 | 38.1 | 41.8 | 52.7 | 53.6 | 19.5 | 64.6 | 628 |
| 20–22 | 6.87 | 4.20 | 2.66 | 4.37 | 36.6 | 8.02 | 69.1 | 69.3 | 54.7 | 46.5 | 91.3 | 41.1 | 45.5 | 56.3 | 60.1 | 17.8 | 66.7 | 681 |

**Table S8.** The concentrations of 17 PAHs in the sediment core recovered from St. 7c in 2016 (ng $g^{-1}$ dw).

| Depth (cm) | Nap | Acy | Ace | Flu | Phe | Ant | Flt | Pyr | BaA | Chr | BbF | BkF | BeP | BaP | IncdP | DahA | BghiP | Σ17PAH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0–2 | 9.36 | 4.83 | 3.68 | 5.18 | 33.7 | 10.7 | 50.4 | 51.3 | 38.3 | 43.9 | 77.1 | 34.5 | 36.4 | 46.1 | 89.1 | 14.6 | 55.2 | 604 |
| 2–4 | 6.99 | 3.64 | 2.84 | 3.90 | 28.6 | 10.2 | 48.4 | 48.4 | 38.4 | 37.3 | 68.8 | 30.9 | 32.8 | 39.9 | 59.5 | 12.2 | 36.5 | 509 |
| 4–6 | 12.2 | 5.81 | 4.22 | 5.70 | 44.2 | 14.9 | 74.3 | 73.2 | 60.7 | 57.2 | 129 | 58.2 | 65.0 | 87.0 | 97.8 | 27.3 | 62.1 | 879 |
| 6–8 | 7.50 | 4.32 | 3.23 | 4.18 | 33.3 | 10.4 | 53.9 | 52.6 | 44.4 | 42.1 | 78.2 | 35.1 | 36.9 | 47.2 | 64.8 | 15.4 | 41.9 | 576 |
| 8–10 | 7.30 | 3.53 | 2.15 | 3.69 | 31.2 | 9.53 | 51.6 | 52.1 | 36.1 | 29.9 | 71.0 | 31.8 | 33.1 | 41.1 | 54.7 | 12.4 | 52.3 | 524 |
| 10–12 | 9.34 | 3.76 | 2.47 | 4.27 | 32.9 | 9.64 | 59.1 | 58.7 | 42.9 | 35.6 | 85.9 | 38.5 | 40.0 | 51.1 | 64.1 | 15.7 | 60.0 | 614 |
| 12–14 | 7.83 | 3.64 | 2.27 | 3.59 | 31.8 | 9.08 | 56.7 | 55.0 | 43.5 | 34.9 | 81.6 | 36.7 | 38.5 | 49.6 | 59.1 | 15.6 | 54.1 | 584 |
| 14–16 | 5.02 | 2.55 | 1.57 | 2.72 | 14.0 | 5.97 | 23.5 | 26.5 | 31.6 | 29.3 | 26.8 | 17.2 | 13.6 | 23.2 | 29.3 | 8.40 | 22.3 | 284 |
| 16–18 | 5.06 | 2.90 | 1.74 | 2.91 | 16.0 | 6.60 | 27.5 | 29.5 | 39.1 | 34.9 | 29.4 | 19.7 | 15.2 | 27.6 | 35.4 | 10.4 | 25.5 | 329 |
| 18–20 | 8.94 | 4.69 | 2.74 | 4.57 | 23.6 | 10.2 | 42.0 | 46.1 | 58.8 | 51.6 | 41.6 | 35.2 | 23.6 | 42.1 | 53.8 | 15.8 | 39.0 | 505 |
| 20–22 | 7.36 | 4.16 | 2.44 | 3.88 | 21.8 | 10.1 | 39.0 | 42.0 | 60.2 | 51.9 | 42.1 | 30.5 | 22.4 | 42.3 | 55.2 | 15.1 | 38.6 | 489 |
| 22–24 | 6.92 | 3.85 | 2.22 | 3.65 | 20.9 | 8.70 | 39.9 | 43.1 | 58.4 | 49.1 | 42.8 | 27.4 | 21.5 | 39.6 | 48.3 | 14.0 | 34.6 | 465 |
| 24–26 | 8.28 | 4.73 | 3.43 | 4.84 | 25.5 | 11.5 | 49.7 | 52.2 | 68.7 | 58.4 | 52.4 | 32.8 | 25.8 | 48.1 | 58.7 | 17.1 | 41.4 | 564 |
| 26–28 | 6.73 | 3.58 | 2.26 | 3.80 | 20.9 | 21.5 | 6.15 | 31.1 | 121 | 44.0 | 39.3 | 26.4 | 19.6 | 37.8 | 49.8 | 14.8 | 34.7 | 484 |
| 28–30 | 6.25 | 3.16 | 1.80 | 3.38 | 18.7 | 8.37 | 32.5 | 33.6 | 47.7 | 41.8 | 38.6 | 22.5 | 18.2 | 34.2 | 42.7 | 13.1 | 29.4 | 396 |

**Table S9.** The concentrations of 17 PAHs in the sediment core recovered from St. 8b in 2016 (ng $g^{-1}$ dw).

| Depth (cm) | Nap | Acy | Ace | Flu | Phe | Ant | Flt | Pyr | BaA | Chr | BbF | BkF | BeP | BaP | IncdP | DahA | BghiP | Σ17PAH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0–2 | 3.20 | 3.44 | 1.27 | 2.66 | 18.2 | 6.35 | 43.9 | 42.5 | 42.2 | 38.1 | 22.0 | 20.1 | 14.8 | 26.3 | 26.8 | 7.27 | 20.1 | 339 |
| 2–4 | 4.53 | 2.60 | 1.79 | 3.32 | 15.9 | 4.62 | 26.3 | 24.5 | 27.2 | 28.0 | 22.0 | 16.1 | 13.0 | 19.3 | 26.5 | 6.94 | 17.2 | 260 |
| 4–6 | 3.66 | 2.48 | 1.52 | 3.07 | 14.8 | 4.65 | 23.2 | 21.6 | 26.4 | 26.2 | 22.0 | 13.4 | 11.8 | 18.9 | 23.1 | 6.49 | 17.3 | 240 |
| 6–8 | 4.41 | 2.45 | 1.69 | 3.22 | 15.4 | 4.81 | 24.1 | 23.3 | 29.3 | 27.8 | 21.1 | 14.6 | 11.1 | 18.1 | 21.3 | 6.62 | 15.9 | 245 |
| 8–10 | 4.00 | 2.58 | 1.87 | 3.48 | 16.4 | 6.01 | 27.3 | 25.1 | 31.7 | 29.8 | 24.4 | 14.7 | 12.2 | 19.3 | 23.8 | 7.09 | 18.1 | 268 |
| 10–12 | 3.84 | 2.46 | 1.45 | 2.92 | 13.5 | 4.28 | 21.1 | 20.1 | 23.5 | 23.2 | 18.3 | 15.7 | 11.2 | 16.6 | 20.1 | 5.95 | 15.8 | 220 |
| 12–14 | 4.50 | 3.14 | 1.85 | 3.23 | 17.4 | 5.52 | 30.4 | 29.1 | 33.9 | 33.9 | 25.7 | 21.7 | 15.5 | 23.6 | 27.3 | 8.42 | 20.8 | 306 |
| 14–16 | 4.66 | 3.59 | 1.90 | 3.58 | 19.0 | 6.56 | 37.0 | 37.1 | 48.8 | 44.8 | 33.7 | 26.6 | 19.5 | 30.7 | 37.0 | 10.7 | 26.9 | 392 |
| 16–18 | 4.56 | 3.56 | 2.08 | 3.46 | 18.2 | 6.39 | 34.2 | 33.7 | 43.9 | 42.1 | 31.1 | 25.5 | 18.5 | 29.8 | 34.8 | 10.2 | 25.2 | 367 |

**Table S10.** The concentrations of 17 PAHs in the sediment core recovered from St. 9b in 2016 (ng $g^{-1}$ dw).

| Depth (cm) | Nap | Acy | Ace | Flu | Phe | Ant | Flt | Pyr | BaA | Chr | BbF | BkF | BeP | BaP | IncdP | DahA | BghiP | Σ17PAH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0–2 | 2.74 | 1.20 | 1.03 | 1.65 | 5.75 | 2.05 | 5.82 | 5.49 | 5.31 | 6.72 | 6.38 | 4.38 | 4.00 | 4.52 | 5.54 | 3.14 | 4.86 | 70.6 |
| 2–4 | 1.83 | 1.12 | 1.00 | 1.64 | 5.48 | 1.64 | 6.10 | 5.65 | 5.67 | 6.90 | 6.12 | 4.55 | 3.76 | 4.38 | 6.34 | 2.26 | 5.45 | 69.9 |
| 4–6 | 1.44 | 1.09 | 0.73 | 1.27 | 4.59 | 1.50 | 5.48 | 5.54 | 5.61 | 5.89 | 5.02 | 4.14 | 3.07 | 4.33 | 5.63 | 1.87 | 4.56 | 61.8 |
| 6–8 | 2.60 | 1.44 | 1.21 | 2.01 | 7.60 | 2.20 | 8.39 | 7.64 | 7.71 | 9.57 | 7.42 | 5.48 | 4.24 | 5.24 | 7.95 | 2.86 | 6.27 | 89.8 |

**Table S11.** The concentrations of 17 PAHs in the sediment core recovered from St. 10b in 2016 (ng $g^{-1}$ dw).

| Depth (cm) | Nap | Acy | Ace | Flu | Phe | Ant | Flt | Pyr | BaA | Chr | BbF | BkF | BeP | BaP | IncdP | DahA | BghiP | Σ17PAH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0–2 | 3.51 | 2.44 | 1.10 | 2.98 | 23.6 | 5.69 | 30.8 | 25.1 | 19.0 | 21.1 | 33.1 | 11.5 | 15.7 | 18.0 | 30.5 | 4.56 | 18.1 | 267 |
| 2–4 | 3.20 | 1.88 | 1.58 | 2.55 | 17.2 | 2.79 | 19.5 | 16.8 | 11.8 | 14.2 | 26.1 | 10.1 | 12.3 | 12.5 | 23.0 | 3.66 | 13.8 | 193 |
| 4–6 | 3.32 | 1.93 | 1.32 | 2.59 | 16.8 | 4.03 | 22.2 | 19.5 | 13.8 | 14.7 | 24.0 | 9.93 | 12.1 | 14.5 | 20.8 | 3.48 | 12.4 | 198 |
| 6–8 | 2.95 | 1.80 | 1.39 | 2.46 | 15.1 | 2.60 | 17.5 | 15.1 | 11.2 | 13.0 | 24.4 | 6.36 | 10.2 | 12.1 | 16.1 | 2.80 | 9.50 | 164 |
| 8–10 | 3.45 | 2.18 | 1.85 | 2.80 | 19.6 | 3.68 | 29.7 | 24.6 | 20.1 | 20.2 | 29.6 | 13.1 | 14.1 | 18.6 | 25.0 | 4.19 | 15.1 | 248 |
| 10–12 | 3.12 | 2.04 | 1.32 | 2.60 | 16.6 | 3.01 | 19.7 | 17.3 | 12.8 | 14.8 | 28.8 | 9.98 | 13.2 | 15.2 | 25.5 | 4.06 | 14.8 | 205 |
| 12–14 | 3.75 | 2.38 | 1.67 | 3.02 | 19.7 | 3.49 | 30.3 | 22.9 | 17.5 | 18.4 | 33.3 | 12.8 | 15.5 | 16.9 | 33.4 | 4.68 | 19.0 | 259 |

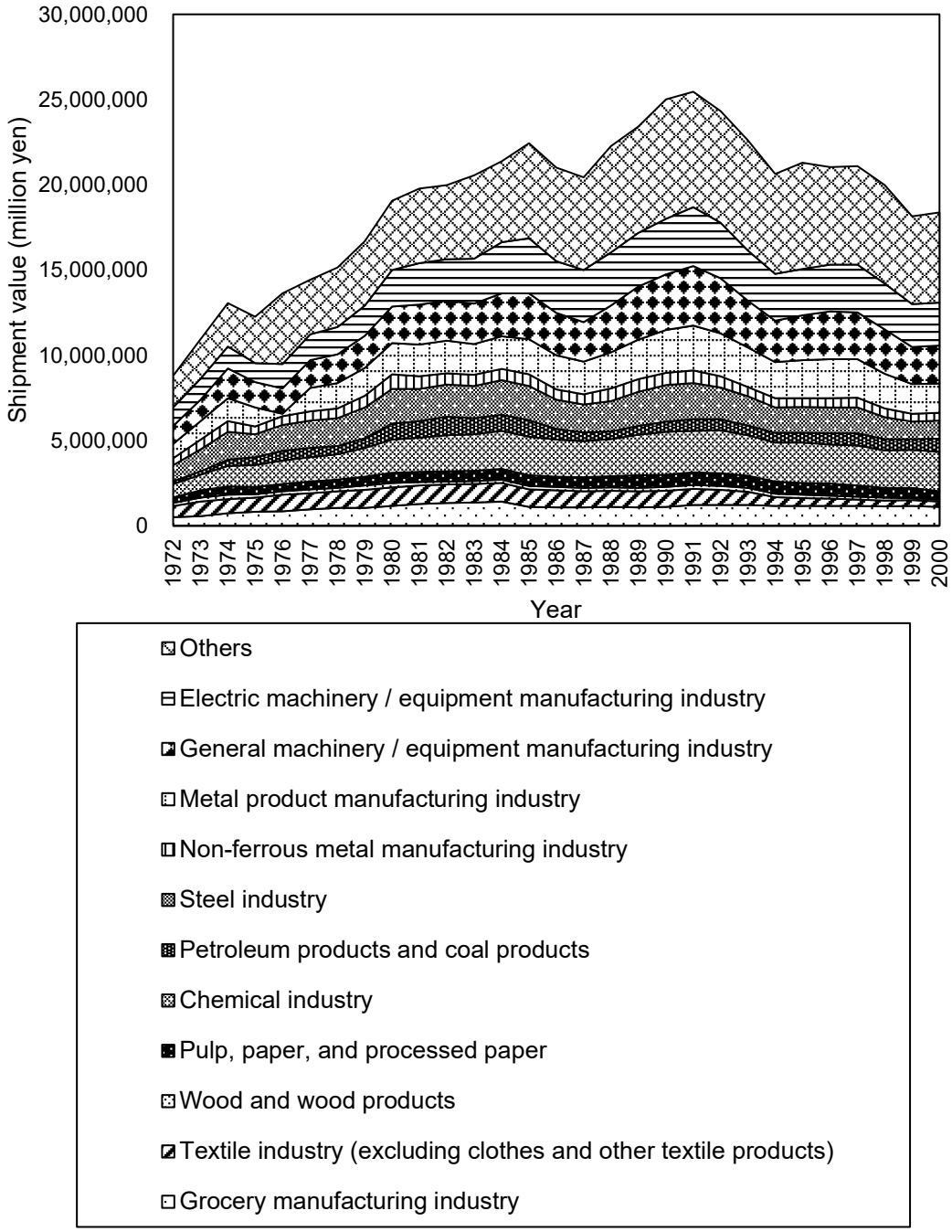


**Fig. S1.** Historical changes in shipment values of manufactured products in Osaka Prefecture.

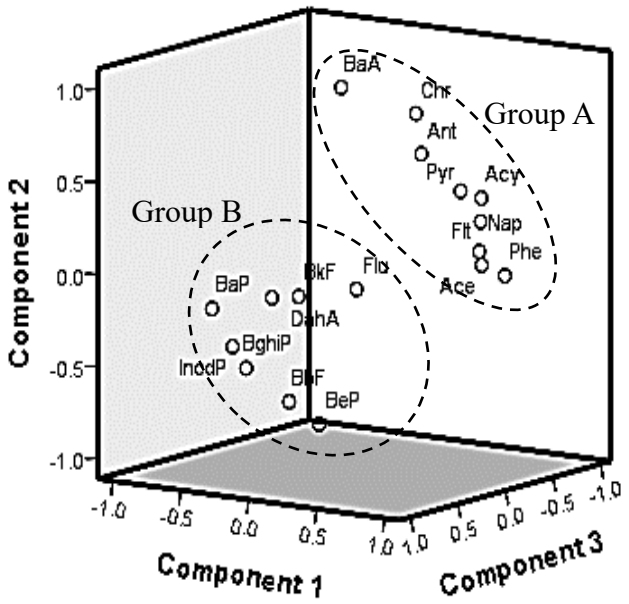


**Fig. S2.** Loading plot for the first three principal components of 17 PAHs from surface sediments and sediment cores of the Seto Inland Sea. Group A indicates the source is industry and biomass burning, and Group B indicates a vehicle source.