Spatial-temporal variations for pollution assessment of heavy metals in Hengshui Lake of China

**Running head:** Assessment of wetland heavy metal pollution

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**Table A.1** Standards for single factor pollution index and composite pollution index

|  |  |  |  |
| --- | --- | --- | --- |
| Single factor pollution index (*Pi*) | Pollution level | Composite pollution index (*Pn*) | Pollution level |
| *Pi*≤1 | Non pollution | *Pn*≤1 | Non pollution |
| 1<*Pi*≤2 | Light pollution | 1<*Pn*≤2 | Light pollution |
| 2<*Pi*≤3 | Medium pollution | 2<*Pn*≤3 | Medium pollution |
| *Pi*>3 | Severe pollution | *Pn*>3 | Severe pollution |

**Table A.2** Classes of enrichment factors

|  |  |  |
| --- | --- | --- |
| Pollution level | EF | Enrichment degree |
| Ⅰ | EF ≤ 1 | Non enrichment |
| 1 < EF ≤ 2 | Light enrichment |
| Ⅱ | 2 < EF ≤ 5 | Medium enrichment |
| Ⅲ | 5 < EF ≤ 20 | Significant enrichment |
| Ⅳ | 20 < EF ≤ 40 | Strong enrichment |
| Ⅴ | EF> 40 | Very strong enrichment |

**Table A.3** Classes of potential ecological risk indices of heavy metals

|  |  |  |  |
| --- | --- | --- | --- |
| Risk factor (*Eri*) | Potential ecological risk degree | Potential ecological risk index (*PRI*) | Ecological risk degree |
| *Eri* < 40 | Low potential ecological risk | *PRI* < 150 | Low ecological risk |
| 40 ≤ *Eri* <80 | Moderate potential ecological risk | 150 ≤*PRI* < 300 | Moderate ecological risk |
| 80 ≤ *Eri* <160 | Considerable potential ecological risk | 300 ≤*PRI* < 600 | Considerable ecological risk |
| 160 ≤ *Eri* <320 | High potential ecological risk | *PRI* ≥ 600 | Very high ecological risk |
| *Eri* ≥ 320 | Very high potential ecological risk |  |  |

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**Fig. A.1** Distribution of enrichment factor for different heavy metal in Hengshui Lake

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**Fig. A.2** Distribution of risk factor for different heavy metal in Hengshui Lake