

1 **Draft annotated outline of the guidance on monitoring for the effectiveness**
2 **evaluation of the Minamata Convention**
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4 **1. Acknowledgements**

5 *To be drafted by the Secretariat. Briefly describe how the guidance was developed.*

6 **2. List of abbreviations and glossary of terms**

7 *To be developed by the Secretariat after the completion of the text.*

8 **3. Introduction and objectives**

9 *To be drafted by the Secretariat. Explain the provision of the Convention (Articles 1 and 22) and*
10 *guidance from COP on monitoring in the effectiveness evaluation. Explain the objectives of the*
11 *document, which is to support the arrangements for providing COP with comparable monitoring*
12 *data for the effectiveness evaluation. Explain the structure of the document.*

13 **4. Use of comparable monitoring data for the effectiveness evaluation**

14 *To be drafted by the Secretariat, based on the input from the consultants. Discuss the use of*
15 *monitoring data in informing indicators on the level of mercury in the environment, biotic media*
16 *and vulnerable populations for the purpose of the effectiveness evaluation. Explain the selected*
17 *media for monitoring – air, biota and humans. Discuss how the data can be aggregated to*
18 *understand the overall level of mercury, geographical patterns, temporal trends and*
19 *environmental and health risk.*

20 **5. Air monitoring**

21 *To be drafted by a consultant under the guidance of the Secretariat. Following is a tentative*
22 *structure of the chapter, to be adjusted as appropriate.*

- 23 (1) *Mercury monitoring in air – rationale (Describe the recommendation for total gaseous*
24 *mercury in air and wet deposition of mercury. Also mention the possible use of speciated*
25 *monitoring data)*
- 26 (2) *Consideration of monitoring sites (representativeness, influence of local emissions,*
27 *description of sites etc. Existing monitoring networks or programmes may have their own*
28 *site selection policies.)*
- 29 (3) *Sampling and measurement: methods (continuous measurement, active sampling,*
30 *passive sampling), timing (frequency and duration), sampling equipment, sampling*
31 *procedure, sample preparation, in-situ or laboratory measurements, etc)*
- 32 (4) *Quality assurance (requirement for sampling and analytical operations, control samples,*
33 *inter-laboratory comparison, intercomparison of measurements, etc)*
- 34 (5) *Data collection (data elements that need to be available, ancillary data can be collected to*
35 *make the data more useful for interpretation, data quality, data extraction, etc)*
- 36 (6) *Data management (data storage and dissemination)*
- 37 (7) *Statistical consideration (how the monitoring data can be aggregated to understand the*
38 *overall level of mercury, geographical patterns, temporal trends and environmental and*
39 *health risk, and to identify gaps)*

40 **6. Biota monitoring**

41 *To be drafted by a consultant under the guidance of the Secretariat. Following is a tentative*
42 *structure of the chapter, to be adjusted as appropriate.*

- 43 (1) *Mercury monitoring in biotic media – rationale (What organisms and tissue types are*
44 *selected for monitoring for different assessment frameworks: (A) Ocean Framework:*
45 *e.g., total mercury in muscle tissue of fish and marine mammals at trophic level 4. (B)*
46 *Continental Framework: e.g., total mercury in muscle tissue of fish and relevant tissues of*
47 *birds*

- 48 (2) *Consideration of monitoring sites (representativeness, identification of ecosystem*
49 *sensitivity spots, etc)*
- 50 (3) *Sampling and measurement: sampling methods, timing, sample size, transport, laboratory*
51 *analysis, etc.*
- 52 (4) *Quality assurance (requirement for sampling and analytical operations, control samples,*
53 *inter-laboratory comparison, intercomparison of measurements, etc)*
- 54 (5) *Data collection (data elements that need to be available, data quality, data extraction, etc)*
- 55 (6) *Data management (data storage and dissemination)*
- 56 (7) *Statistical considerations ((how the monitoring data can be aggregated to understand the*
57 *overall level of mercury, geographical patterns, temporal trends and environmental and*
58 *health risk, and to identify gaps)*

59 **7. Human biomonitoring**

60 *To be drafted by a consultant under the guidance of the Secretariat. Following is a tentative*
61 *structure of the chapter, proposed by WHO. To be adjusted as appropriate.*

- 62 (1) *Ethical considerations in, and requirements for, human biomonitoring studies (short*
63 *overview. WHO is preparing guidance on this issue that can be referred to).*
- 64 (2) *Human biomonitoring for mercury exposure – rationale. Short summary of the different*
65 *purposes for biomonitoring of Hg (can include some references eg the WHO document on*
66 *identifying populations at risk from mercury exposure), Describe the recommendations for*
67 *total mercury level in scalp hair as a primary matrix and total mercury in (cord) blood as*
68 *an alternative for general population exposure most vulnerable group (foetal exposure).*
- 69 (3) *Development of a survey protocol (general considerations in developing a protocol and*
70 *refer to WHO protocol which contains a statement about adapting to national needs; other*
71 *protocols such as AMAP, HBM4U could also be referenced as examples of protocols for*
72 *larger scale programmes).*
- 73 (4) *Data management, analysis and evaluation in the context of the Minamata Convention*
74 *(the WHO survey protocol includes guidance on the topic, therefore the Minamata*
75 *guidance should set out considerations that will support sharing and compilation of data*
76 *for effectiveness evaluation).*
- 77 (5) *Communication of results in the context of the Minamata Convention (same point as*
78 *above – should not go into details covered in more detailed technical guidance).*
- 79 (6) *Periodicity of survey implementation (see UNEP/MC/COP.3/14/Add.1 for the guidance on*
80 *this).*

81 **8. Data compilation and analysis**

82 *To be drafted by the Secretariat, based on the input from the consultants. This chapter will*
83 *discuss how the monitoring data can be compiled, analyzed and synthesized, and how*
84 *conclusions on the changes in mercury levels in environmental and human media can be drawn.*

85 **9. References**

86 *To be developed during the drafting of the text*

87 **Annex 1: Standard operation procedures, protocols and reference materials**

88 *To be collected from existing networks*

89 **Annex 2: Review of monitoring networks**

90 *To be developed by the Secretariat, building on Part I of UNEP/MC/COP.3/INF/15.*